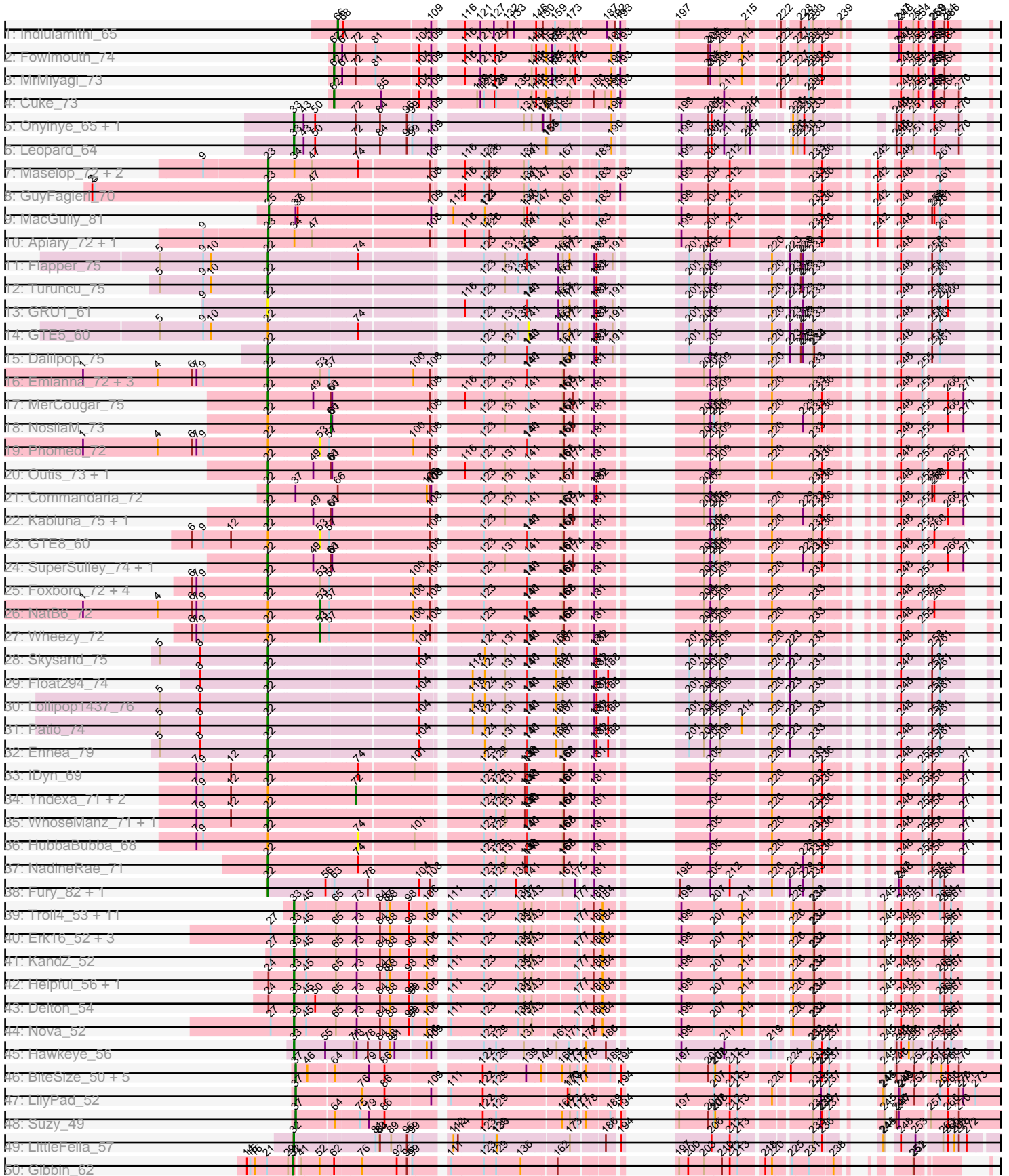


Zoomed Pham 163397



Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

Pham 163397 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163397 has 154 members, 19 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_65
- Track 2 : Fowlmouth_74
- Track 3 : MrMiyagi_73
- Track 4 : Cuke_73
- Track 5 : Onyinye_65, Aikoy_65
- Track 6 : Leopard_64
- Track 7 : Maselop_72, CoffeeBean_73, Braxoaddie_72
- Track 8 : GuyFagieri_70
- Track 9 : MacGully_81
- Track 10 : Apiary_72, Polyyuki_72
- Track 11 : Flapper_75
- Track 12 : Turuncu_75
- Track 13 : GRU1_61
- Track 14 : GTE5_60
- Track 15 : Dalilpop_75
- Track 16 : Emianna_72, Kurt_72, KidneyBean_72, Jifall16_71
- Track 17 : MerCougar_75
- Track 18 : NosilaM_73
- Track 19 : Phomeo_72
- Track 20 : Outis_73, StarStruck_73
- Track 21 : Commandaria_72
- Track 22 : Kabluna_75, Bonum_76
- Track 23 : GTE8_60
- Track 24 : SuperSulley_74, Buggaboo_74
- Track 25 : Foxboro_72, NovumRegina_72, GrootJr_74, Tracker_72, Arti_71
- Track 26 : NatB6_72
- Track 27 : Wheezy_72
- Track 28 : Skysand_75
- Track 29 : Float294_74
- Track 30 : Lollipop1437_76
- Track 31 : Patio_74
- Track 32 : Ennea_79
- Track 33 : IDyn_69
- Track 34 : Yndexa_71, BiPauneto_74, Sukkupi_71
- Track 35 : WhoseManz_71, Marietta_72
- Track 36 : HubbaBubba_68
- Track 37 : NadineRae_71

- Track 38 : Fury_82, Pleakley_82
- Track 39 : Troll4_53, BigMama_51, Chill_55, Giuseppe_53, Butterscotch_52, Mopey_54, PBI1_50, Visconti_54, WaldoWhy_55, Prager_53, Adjutor_52, Thoth_53
- Track 40 : Erk16_52, Gumball_52, PLOT_53, SirHarley_54
- Track 41 : KandZ_52
- Track 42 : Helpful_56, Penelope2018_53
- Track 43 : Delton_54
- Track 44 : Nova_52
- Track 45 : Hawkeye_56
- Track 46 : BiteSize_50, Beyoncage_50, Sienna_50, Terapin_51, Djokovic_50, Madi_50
- Track 47 : LilyPad_52
- Track 48 : Suzy_49
- Track 49 : LittleFella_57
- Track 50 : Gibbin_62
- Track 51 : GretelLyn_60
- Track 52 : Jalebi_59, Sampudon_60
- Track 53 : Genamy16_63
- Track 54 : Patos_63, NorManre_63
- Track 55 : Wojtek_56
- Track 56 : Zany_58
- Track 57 : BirthdayBoy_62
- Track 58 : Erutan_60
- Track 59 : NovaSharks_62, Alyssamiracle_63, Avian_60
- Track 60 : DoobyDoo_59
- Track 61 : GOATification_60, Fulcrum_60
- Track 62 : Ranch_60
- Track 63 : Sadboi_61
- Track 64 : Yikes_62
- Track 65 : OtterstedtS21_60
- Track 66 : Lambo_58
- Track 67 : Tillicus_57
- Track 68 : MoiGyank_66
- Track 69 : DumpTruck_58
- Track 70 : LuckyLeo_57, Apeppi_55
- Track 71 : Lila22_64
- Track 72 : Rumi_61
- Track 73 : ParvusTarda_59
- Track 74 : Xenia2_58
- Track 75 : Penjamin420_61
- Track 76 : Stickynote_71, Darwin_73
- Track 77 : C3PO_72, Cruella_72
- Track 78 : Zion_72, PeteyPab_71, PotatoChip_72
- Track 79 : Kimchi1738_73
- Track 80 : Konstantine_65
- Track 81 : Damien_61, Cborch11_63, Megatron06_64, Beckerton_60, Oaker_60
- Track 82 : Thumb_62, Phreeze_60
- Track 83 : Puissant_62
- Track 84 : Predator_60
- Track 85 : DrLupo_67
- Track 86 : Barnyard_65
- Track 87 : Papyrus_66, Rope_66
- Track 88 : Riparian_68, Zenon_68, Yelo_65, Send513_66, Weiss13_66, Nilo_68

- Track 89 : Candle_64
- Track 90 : MontyDev_66
- Track 91 : Patience_76
- Track 92 : Madruga_74
- Track 93 : Labelle_76
- Track 94 : ChewyVIII_83
- Track 95 : P1201_75

Summary of Final Annotations (See graph section above for start numbers):

The start number called the most often in the published annotations is 22, it was called in 31 of the 135 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arti_71, Bonum_76, Buggaboo_74, Commandaria_72, Dalilpop_75, Emianna_72, Ennea_79, Flapper_75, Float294_74, Foxboro_72, Fury_82, GRU1_61, GrootJr_74, IDyn_69, Jifall16_71, Kabluna_75, KidneyBean_72, Kurt_72, Lollipop1437_76, Marietta_72, MerCougar_75, NadineRae_71, NovumRegina_72, Outis_73, Patio_74, Pleakley_82, Skysand_75, StarStruck_73, SuperSulley_74, Tracker_72, Turuncu_75, WhoseManz_71,

Genes that have the "Most Annotated" start but do not call it:

- BiPauneto_74, GTE5_60, GTE8_60, HubbaBubba_68, NatB6_72, NosilaM_73, Phomeo_72, Sukkupi_71, Wheezy_72, Yndexa_71,

Genes that do not have the "Most Annotated" start:

- Adjutor_52, Aikoy_65, Alyssmiracle_63, Apeppi_55, Apiary_72, Avian_60, Barnyard_65, Beckerton_60, Beyoncage_50, BigMama_51, BirthdayBoy_62, BiteSize_50, Braxoaddie_72, Butterscotch_52, C3PO_72, Candle_64, Cborch11_63, ChewyVIII_83, Chill_55, CoffeeBean_73, Cruella_72, Cuke_73, Damien_61, Darwin_73, Delton_54, Djokovic_50, DoobyDoo_59, DrLupo_67, DumpTruck_58, Erk16_52, Erutan_60, Fowlmouth_74, Fulcrum_60, GOATification_60, Genamy16_63, Gibbin_62, Giuseppe_53, GretelLyn_60, Gumball_52, GuyFagieri_70, Hawkeye_56, Helpful_56, Indlulamithi_65, Jalebi_59, KandZ_52, Kimchi1738_73, Konstantine_65, Labelle_76, Lambo_58, Leopard_64, Lila22_64, LilyPad_52, LittleFella_57, LuckyLeo_57, MacGully_81, Madi_50, Madruga_74, Maselop_72, Megatron06_64, MoiGyank_66, MontyDev_66, Mopey_54, MrMiyagi_73, Nilo_68, NorManre_63, NovaSharks_62, Nova_52, Oaker_60, Onyinye_65, OtterstedtS21_60, P1201_75, PBI1_50, PLOT_53, Papyrus_66, ParvusTarda_59, Patience_76, Patos_63, Penelope2018_53, Penjamin420_61, PeteyPab_71, Phreeze_60, Polyyuki_72, PotatoChip_72, Prager_53, Predator_60, Puissant_62, Ranch_60, Riparian_68, Rope_66, Rumi_61, Sadboi_61, Sampudon_60, Send513_66, Sienna_50, SirHarley_54, Stickynote_71, Suzy_49, Terapin_51, Thoth_53, Thumb_62, Tillicus_57, Troll4_53, Visconti_54, WaldoWhy_55, Weiss13_66, Wojtek_56, Xenia2_58, Yelo_65, Yikes_62, Zany_58, Zenon_68, Zion_72,

Summary by start number:

Start 22:

- Found in 42 of 154 (27.3%) of genes in pham
- Manual Annotations of this start: 31 of 135
- Called 76.2% of time when present
- Phage (with cluster) where this start called: Arti_71 (CR2), Bonum_76 (CR2), Buggaboo_74 (CR2), Commandaria_72 (CR2), Dalilpop_75 (CR1), Emianna_72 (CR2), Ennea_79 (CR3), Flapper_75 (CR1), Float294_74 (CR3), Foxboro_72 (CR2), Fury_82 (CR5), GRU1_61 (CR1), GrootJr_74 (CR2), IDyn_69 (CR4), Jifall16_71 (CR2), Kabluna_75 (CR2), KidneyBean_72 (CR2), Kurt_72 (CR2), Lollipop1437_76 (CR3), Marietta_72 (CR4), MerCougar_75 (CR2), NadineRae_71 (CR4), NovumRegina_72 (CR2), Outis_73 (CR2), Patio_74 (CR3), Pleakley_82 (CR5), Skysand_75 (CR3), StarStruck_73 (CR2), SuperSulley_74 (CR2), Tracker_72 (CR2), Turuncu_75 (CR1), WhoseManz_71 (CR4),

Start 23:

- Found in 9 of 154 (5.8%) of genes in pham
- Manual Annotations of this start: 5 of 135
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Apiary_72 (CR), Braxoaddie_72 (CR), CoffeeBean_73 (CR), GuyFagieri_70 (CR), Maselop_72 (CR), Polyuyuki_72 (CR),

Start 25:

- Found in 1 of 154 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 135
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MacGully_81 (CR),

Start 26:

- Found in 1 of 154 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 135
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII_83 (singleton),

Start 29:

- Found in 9 of 154 (5.8%) of genes in pham
- Manual Annotations of this start: 1 of 135
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Barnyard_65 (H2),

Start 30:

- Found in 1 of 154 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 135
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DrLupo_67 (H2),

Start 31:

- Found in 42 of 154 (27.3%) of genes in pham
- Manual Annotations of this start: 19 of 135
- Called 61.9% of time when present
- Phage (with cluster) where this start called: Alyssamiracle_63 (DV), Apeppi_55 (DV), Avian_60 (DV), Beckerton_60 (H1), Cborch11_63 (H1), Damien_61 (H1), DoobyDoo_59 (DV), Genamy16_63 (DV), Gibbin_62 (DV), GretelLyn_60 (DV), Jalebi_59 (DV), Konstantine_65 (H1), LuckyLeo_57 (DV), Megatron06_64 (H1), MoiGyank_66 (DV), NovaSharks_62 (DV), Oaker_60 (H1), ParvusTarda_59 (DV),

Penjamin420_61 (DV), Phreeze_60 (H1), Predator_60 (H1), Puissant_62 (H1), Sampudon_60 (DV), Thumb_62 (H1), Wojtek_56 (DV), Zany_58 (DV),

Start 32:

- Found in 31 of 154 (20.1%) of genes in pham
- Manual Annotations of this start: 13 of 135
- Called 45.2% of time when present
- Phage (with cluster) where this start called: BirthdayBoy_62 (DV), Erutan_60 (DV), Fulcrum_60 (DV), GOATification_60 (DV), Lambo_58 (DV), Lila22_64 (DV), LittleFella_57 (DG2), NorManre_63 (DV), OtterstedtS21_60 (DV), Patos_63 (DV), Ranch_60 (DV), Rumi_61 (DV), Sadboi_61 (DV), Yikes_62 (DV),

Start 33:

- Found in 25 of 154 (16.2%) of genes in pham
- Manual Annotations of this start: 24 of 135
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adjutor_52 (D1), Aikoy_65 (AE), BigMama_51 (D1), Butterscotch_52 (D1), Chill_55 (D1), Delton_54 (D1), Erk16_52 (D1), Giuseppe_53 (D1), Gumball_52 (D1), Hawkeye_56 (D2), Helpful_56 (D1), KandZ_52 (D1), Leopard_64 (AE), Mopey_54 (D1), Nova_52 (D1), Onyinye_65 (AE), PBI1_50 (D1), PLOT_53 (D1), Penelope2018_53 (D1), Prager_53 (D1), SirHarley_54 (D1), Thoth_53 (D1), Troll4_53 (D1), Visconti_54 (D1), WaldoWhy_55 (D1),

Start 35:

- Found in 2 of 154 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Tillicus_57 (DV),

Start 36:

- Found in 3 of 154 (1.9%) of genes in pham
- Manual Annotations of this start: 3 of 135
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Labelle_76 (U), Madruga_74 (U), Patience_76 (U),

Start 37:

- Found in 10 of 154 (6.5%) of genes in pham
- Manual Annotations of this start: 8 of 135
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Beyoncage_50 (DG1), BiteSize_50 (DG1), Djokovic_50 (DG1), LilyPad_52 (DG1), Madi_50 (DG1), Sienna_50 (DG1), Suzy_49 (DG1), Terapin_51 (DG1),

Start 40:

- Found in 11 of 154 (7.1%) of genes in pham
- Manual Annotations of this start: 8 of 135
- Called 81.8% of time when present
- Phage (with cluster) where this start called: C3PO_72 (EN), Cruella_72 (EN), Darwin_73 (EN), Kimchi1738_73 (EN), P1201_75 (singleton), PeteyPab_71 (EN), PotatoChip_72 (EN), StickyNote_71 (EN), Zion_72 (EN),

Start 41:

- Found in 32 of 154 (20.8%) of genes in pham
- Manual Annotations of this start: 2 of 135
- Called 6.2% of time when present
- Phage (with cluster) where this start called: DumpTruck_58 (DV), Xenia2_58 (DV),

Start 53:

- Found in 13 of 154 (8.4%) of genes in pham
- Manual Annotations of this start: 2 of 135
- Called 30.8% of time when present
- Phage (with cluster) where this start called: GTE8_60 (CR2), NatB6_72 (CR2), Phomeo_72 (CR2), Wheezy_72 (CR2),

Start 60:

- Found in 8 of 154 (5.2%) of genes in pham
- Manual Annotations of this start: 1 of 135
- Called 12.5% of time when present
- Phage (with cluster) where this start called: NosilaM_73 (CR2),

Start 62:

- Found in 30 of 154 (19.5%) of genes in pham
- Manual Annotations of this start: 3 of 135
- Called 10.0% of time when present
- Phage (with cluster) where this start called: Cuke_73 (AC), Fowlmouth_74 (AC), MrMiyagi_73 (AC),

Start 66:

- Found in 2 of 154 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 135
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Indlulamithi_65 (AC),

Start 72:

- Found in 22 of 154 (14.3%) of genes in pham
- Manual Annotations of this start: 3 of 135
- Called 13.6% of time when present
- Phage (with cluster) where this start called: BiPauneto_74 (CR4), Sukkupi_71 (CR4), Yndexa_71 (CR4),

Start 74:

- Found in 15 of 154 (9.7%) of genes in pham
- No Manual Annotations of this start.
- Called 6.7% of time when present
- Phage (with cluster) where this start called: HubbaBubba_68 (CR4),

Start 105:

- Found in 10 of 154 (6.5%) of genes in pham
- Manual Annotations of this start: 8 of 135
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle_64 (R), MontyDev_66 (R), Nilo_68 (R), Papyrus_66 (R), Riparian_68 (R), Rope_66 (R), Send513_66 (R), Weiss13_66 (R), Yelo_65 (R), Zenon_68 (R),

Start 141:

- Found in 58 of 154 (37.7%) of genes in pham
- No Manual Annotations of this start.
- Called 1.7% of time when present
- Phage (with cluster) where this start called: GTE5_60 (CR1),

Summary by clusters:

There are 19 clusters represented in this pham: CR2, CR3, AC, CR1, AE, CR4, CR5, H2, H1, singleton, DG2, R, EN, U, DV, CR, DG1, D2, D1,

Info for manual annotations of cluster AC:

- Start number 62 was manually annotated 3 times for cluster AC.
- Start number 66 was manually annotated 1 time for cluster AC.

Info for manual annotations of cluster AE:

- Start number 33 was manually annotated 3 times for cluster AE.

Info for manual annotations of cluster CR:

- Start number 23 was manually annotated 5 times for cluster CR.
- Start number 25 was manually annotated 1 time for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 22 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 22 was manually annotated 17 times for cluster CR2.
- Start number 53 was manually annotated 2 times for cluster CR2.
- Start number 60 was manually annotated 1 time for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 22 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 22 was manually annotated 4 times for cluster CR4.
- Start number 72 was manually annotated 3 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 22 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster D1:

- Start number 33 was manually annotated 20 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 33 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster DG1:

- Start number 37 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 32 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:

- Start number 31 was manually annotated 11 times for cluster DV.

- Start number 32 was manually annotated 12 times for cluster DV.
- Start number 41 was manually annotated 2 times for cluster DV.

Info for manual annotations of cluster EN:

- Start number 40 was manually annotated 8 times for cluster EN.

Info for manual annotations of cluster H1:

- Start number 31 was manually annotated 8 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 29 was manually annotated 1 time for cluster H2.
- Start number 30 was manually annotated 1 time for cluster H2.

Info for manual annotations of cluster R:

- Start number 105 was manually annotated 8 times for cluster R.

Info for manual annotations of cluster U:

- Start number 36 was manually annotated 3 times for cluster U.

Gene Information:

Gene: Adjutor_52 Start: 39669, Stop: 41612, Start Num: 33

Candidate Starts for Adjutor_52:

(Start: 33 @39669 has 24 MA's), (45, 39696), (65, 39768), (73, 39822), (84, 39882), (87, 39900), (88, 39909), (98, 39960), (106, 40002), (111, 40038), (123, 40125), (135, 40218), (137, 40233), (143, 40254), (177, 40356), (180, 40389), (184, 40413), (199, 40473), (207, 40560), (214, 40635), (226, 40725), (233, 40776), (234, 40779), (245, 40869), (248, 40887), (251, 40920), (261, 40974), (264, 40986), (267, 41004), (284, 41067), (295, 41151), (310, 41268), (312, 41316), (322, 41379), (332, 41463),

Gene: Aikoy_65 Start: 45786, Stop: 47714, Start Num: 33

Candidate Starts for Aikoy_65:

(Start: 33 @45786 has 24 MA's), (43, 45807), (50, 45837), (Start: 72 @45936 has 3 MA's), (84, 45999), (96, 46071), (99, 46080), (109, 46128), (137, 46344), (143, 46365), (149, 46386), (151, 46389), (156, 46401), (165, 46428), (190, 46551), (199, 46587), (204, 46659), (206, 46668), (211, 46701), (215, 46758), (217, 46770), (226, 46839), (227, 46848), (230, 46866), (233, 46890), (246, 46986), (248, 46998), (251, 47031), (260, 47073), (270, 47136), (294, 47241), (318, 47457), (321, 47481), (322, 47484), (329, 47526), (331, 47556), (334, 47580), (358, 47697),

Gene: Alyssamiracle_63 Start: 39828, Stop: 41744, Start Num: 31

Candidate Starts for Alyssamiracle_63:

(Start: 31 @39828 has 19 MA's), (Start: 32 @39831 has 13 MA's), (Start: 41 @39843 has 2 MA's), (52, 39891), (Start: 62 @39924 has 3 MA's), (92, 40083), (96, 40110), (99, 40119), (111, 40191), (129, 40311), (136, 40374), (162, 40464), (170, 40491), (197, 40620), (200, 40644), (203, 40686), (204, 40698), (207, 40713), (210, 40734), (212, 40755), (213, 40776), (218, 40833), (220, 40851), (225, 40887), (231, 40929), (238, 40989), (251, 41085), (252, 41088), (290, 41265), (298, 41316), (310, 41406), (312, 41442), (314, 41448), (321, 41502), (328, 41541), (339, 41643), (343, 41658), (348, 41679),

Gene: Apeppi_55 Start: 40044, Stop: 41966, Start Num: 31

Candidate Starts for Apeppi_55:

(13, 39927), (14, 39948), (16, 39969), (28, 39999), (Start: 29 @40032 has 1 MA's), (Start: 31 @40044 has 19 MA's), (Start: 32 @40047 has 13 MA's), (Start: 41 @40062 has 2 MA's), (46, 40077), (52, 40110), (Start: 62 @40143 has 3 MA's), (64, 40146), (Start: 72 @40194 has 3 MA's), (76, 40212), (92, 40302), (95, 40320), (96, 40329), (99, 40338), (111, 40410), (129, 40530), (130, 40533), (136, 40593), (140, 40611), (162, 40683), (170, 40710), (199, 40845), (200, 40863), (203, 40905), (206, 40926), (207, 40932), (212, 40974), (213, 40995), (215, 41016), (218, 41052), (231, 41151), (232, 41160), (238, 41211), (251, 41307), (252, 41310), (282, 41421), (290, 41487), (295, 41511), (298, 41538), (319, 41706), (321, 41724), (326, 41748), (328, 41763), (329, 41769), (332, 41811), (334, 41826), (339, 41865), (343, 41880), (348, 41901), (361, 41958),

Gene: Apiary_72 Start: 53146, Stop: 51110, Start Num: 23

Candidate Starts for Apiary_72:

(9, 53314), (Start: 23 @53146 has 5 MA's), (34, 53080), (47, 53038), (108, 52753), (116, 52696), (123, 52645), (126, 52630), (137, 52540), (141, 52528), (167, 52435), (183, 52363), (199, 52294), (204, 52222), (212, 52165), (233, 51985), (236, 51961), (242, 51898), (248, 51862), (261, 51775), (287, 51643), (292, 51604), (293, 51601), (297, 51556), (312, 51409), (322, 51346), (329, 51304), (332, 51265), (335, 51241),

Gene: Arti_71 Start: 55496, Stop: 53430, Start Num: 22

Candidate Starts for Arti_71:

(6, 55700), (7, 55688), (9, 55670), (Start: 22 @55496 has 31 MA's), (Start: 53 @55358 has 2 MA's), (57, 55334), (100, 55130), (108, 55085), (123, 54977), (140, 54863), (141, 54860), (167, 54770), (168, 54767), (181, 54707), (203, 54569), (205, 54551), (209, 54527), (220, 54404), (233, 54299), (248, 54173), (255, 54119), (283, 53993), (284, 53984), (286, 53960), (295, 53888), (297, 53882), (300, 53852), (307, 53795), (312, 53735), (322, 53672), (332, 53591),

Gene: Avian_60 Start: 39556, Stop: 41472, Start Num: 31

Candidate Starts for Avian_60:

(Start: 31 @39556 has 19 MA's), (Start: 32 @39559 has 13 MA's), (Start: 41 @39571 has 2 MA's), (52, 39619), (Start: 62 @39652 has 3 MA's), (92, 39811), (96, 39838), (99, 39847), (111, 39919), (129, 40039), (136, 40102), (162, 40192), (170, 40219), (197, 40348), (200, 40372), (203, 40414), (204, 40426), (207, 40441), (210, 40462), (212, 40483), (213, 40504), (218, 40561), (220, 40579), (225, 40615), (231, 40657), (238, 40717), (251, 40813), (252, 40816), (290, 40993), (298, 41044), (310, 41134), (312, 41170), (314, 41176), (321, 41230), (328, 41269), (339, 41371), (343, 41386), (348, 41407),

Gene: Barnyard_65 Start: 45144, Stop: 47105, Start Num: 29

Candidate Starts for Barnyard_65:

(Start: 29 @45144 has 1 MA's), (39, 45171), (Start: 40 @45177 has 8 MA's), (42, 45183), (58, 45249), (69, 45282), (70, 45297), (Start: 72 @45312 has 3 MA's), (74, 45318), (78, 45345), (86, 45387), (96, 45447), (101, 45468), (107, 45504), (109, 45513), (116, 45576), (118, 45597), (120, 45615), (124, 45630), (125, 45636), (129, 45660), (138, 45735), (140, 45741), (186, 45924), (189, 45936), (195, 45954), (197, 45969), (204, 46047), (220, 46200), (224, 46233), (240, 46368), (245, 46395), (246, 46401), (247, 46407), (254, 46461), (264, 46527), (265, 46530), (282, 46572), (297, 46656), (301, 46689), (311, 46800), (312, 46803), (313, 46806), (315, 46812), (319, 46845), (322, 46866), (323, 46869), (329, 46908), (334, 46962), (338, 46998), (341, 47007), (351, 47064), (357, 47082),

Gene: Beckerton_60 Start: 46572, Stop: 48629, Start Num: 31

Candidate Starts for Beckerton_60:

(Start: 31 @46572 has 19 MA's), (50, 46632), (51, 46635), (Start: 72 @46728 has 3 MA's), (75, 46740), (78, 46761), (101, 46884), (102, 46887), (104, 46896), (109, 46929), (110, 46950), (113, 46998), (118, 47040), (129, 47103), (131, 47124), (132, 47130), (140, 47184), (186, 47370), (189, 47382), (195, 47400), (197, 47415), (199, 47421), (233, 47739), (234, 47742), (238, 47787), (246,

47838), (248, 47850), (261, 47940), (264, 47952), (269, 47985), (274, 48009), (280, 48018), (297, 48108), (301, 48141), (311, 48252), (312, 48255), (313, 48258), (314, 48261), (319, 48297), (321, 48315), (330, 48381), (332, 48399), (362, 48576),

Gene: Beyoncage_50 Start: 36615, Stop: 38669, Start Num: 37

Candidate Starts for Beyoncage_50:

(Start: 37 @36615 has 8 MA's), (46, 36639), (64, 36702), (79, 36786), (86, 36828), (122, 37050), (129, 37086), (139, 37161), (148, 37200), (166, 37242), (173, 37260), (177, 37281), (178, 37293), (189, 37353), (194, 37368), (197, 37386), (204, 37464), (207, 37479), (208, 37482), (212, 37521), (213, 37542), (224, 37644), (233, 37701), (235, 37722), (236, 37725), (237, 37737), (245, 37785), (246, 37791), (252, 37839), (257, 37872), (262, 37896), (266, 37914), (270, 37944), (276, 38067), (279, 38100), (281, 38112), (284, 38127), (289, 38166), (295, 38211), (298, 38238), (308, 38322), (316, 38385), (321, 38427), (324, 38436), (325, 38445), (330, 38493), (331, 38502), (332, 38514), (334, 38529), (340, 38571),

Gene: BiPauneto_74 Start: 54628, Stop: 52772, Start Num: 72

Candidate Starts for BiPauneto_74:

(7, 55045), (9, 55027), (12, 54952), (Start: 22 @54853 has 31 MA's), (Start: 72 @54628 has 3 MA's), (123, 54334), (129, 54301), (131, 54280), (138, 54226), (140, 54220), (141, 54217), (167, 54127), (168, 54124), (181, 54064), (205, 53908), (220, 53761), (233, 53653), (236, 53629), (248, 53527), (255, 53473), (258, 53458), (271, 53377), (284, 53338), (291, 53275), (295, 53236), (297, 53230), (300, 53200), (312, 53083), (322, 53020), (330, 52957), (332, 52939), (346, 52855),

Gene: BigMama_51 Start: 39745, Stop: 41688, Start Num: 33

Candidate Starts for BigMama_51:

(Start: 33 @39745 has 24 MA's), (45, 39772), (65, 39844), (73, 39898), (84, 39958), (87, 39976), (88, 39985), (98, 40036), (106, 40078), (111, 40114), (123, 40201), (135, 40294), (137, 40309), (143, 40330), (177, 40432), (180, 40465), (184, 40489), (199, 40549), (207, 40636), (214, 40711), (226, 40801), (233, 40852), (234, 40855), (245, 40945), (248, 40963), (251, 40996), (261, 41050), (264, 41062), (267, 41080), (284, 41143), (295, 41227), (310, 41344), (312, 41392), (322, 41455), (332, 41539),

Gene: BirthdayBoy_62 Start: 41143, Stop: 43056, Start Num: 32

Candidate Starts for BirthdayBoy_62:

(14, 41017), (15, 41026), (16, 41038), (21, 41071), (Start: 31 @41140 has 19 MA's), (Start: 32 @41143 has 13 MA's), (Start: 41 @41155 has 2 MA's), (52, 41203), (Start: 62 @41236 has 3 MA's), (76, 41305), (92, 41395), (96, 41422), (99, 41431), (111, 41503), (129, 41623), (136, 41686), (162, 41776), (170, 41803), (197, 41932), (200, 41956), (203, 41998), (210, 42046), (212, 42067), (213, 42088), (218, 42145), (225, 42199), (231, 42241), (238, 42301), (251, 42397), (252, 42400), (290, 42577), (298, 42628), (310, 42718), (312, 42754), (314, 42760), (321, 42814), (328, 42853), (339, 42955), (343, 42970), (348, 42991),

Gene: BiteSize_50 Start: 36701, Stop: 38755, Start Num: 37

Candidate Starts for BiteSize_50:

(Start: 37 @36701 has 8 MA's), (46, 36725), (64, 36788), (79, 36872), (86, 36914), (122, 37136), (129, 37172), (139, 37247), (148, 37286), (166, 37328), (173, 37346), (177, 37367), (178, 37379), (189, 37439), (194, 37454), (197, 37472), (204, 37550), (207, 37565), (208, 37568), (212, 37607), (213, 37628), (224, 37730), (233, 37787), (235, 37808), (236, 37811), (237, 37823), (245, 37871), (246, 37877), (252, 37925), (257, 37958), (262, 37982), (266, 38000), (270, 38030), (276, 38153), (279, 38186), (281, 38198), (284, 38213), (289, 38252), (295, 38297), (298, 38324), (308, 38408), (316, 38471), (321, 38513), (324, 38522), (325, 38531), (330, 38579), (331, 38588), (332, 38600), (334, 38615), (340, 38657),

Gene: Bonum_76 Start: 56632, Stop: 54545, Start Num: 22

Candidate Starts for Bonum_76:

(Start: 22 @56632 has 31 MA's), (49, 56512), (Start: 60 @56467 has 1 MA's), (61, 56464), (108, 56209), (123, 56101), (131, 56047), (141, 55984), (167, 55894), (168, 55891), (174, 55867), (181, 55831), (203, 55693), (205, 55675), (207, 55666), (209, 55651), (220, 55528), (229, 55444), (233, 55417), (236, 55393), (248, 55294), (255, 55240), (266, 55186), (271, 55144), (284, 55105), (293, 55036), (295, 55003), (300, 54967), (306, 54922), (307, 54910), (312, 54850), (322, 54787), (346, 54622), (349, 54598),

Gene: Braxoaddie_72 Start: 53132, Stop: 51096, Start Num: 23

Candidate Starts for Braxoaddie_72:

(9, 53300), (Start: 23 @53132 has 5 MA's), (34, 53066), (47, 53024), (74, 52919), (108, 52739), (116, 52682), (123, 52631), (126, 52616), (137, 52526), (141, 52514), (167, 52421), (183, 52349), (199, 52280), (204, 52208), (212, 52151), (233, 51971), (236, 51947), (242, 51884), (248, 51848), (261, 51761), (287, 51629), (292, 51590), (293, 51587), (297, 51542), (312, 51395), (322, 51332), (329, 51290), (332, 51251), (335, 51227),

Gene: Buggaboo_74 Start: 57198, Stop: 55111, Start Num: 22

Candidate Starts for Buggaboo_74:

(Start: 22 @57198 has 31 MA's), (49, 57078), (Start: 60 @57033 has 1 MA's), (61, 57030), (108, 56775), (123, 56667), (131, 56613), (141, 56550), (167, 56460), (168, 56457), (174, 56433), (181, 56397), (203, 56259), (205, 56241), (207, 56232), (209, 56217), (220, 56094), (229, 56010), (233, 55983), (236, 55959), (248, 55860), (255, 55806), (266, 55752), (271, 55710), (284, 55671), (293, 55602), (295, 55569), (300, 55533), (306, 55488), (307, 55476), (312, 55416), (314, 55410), (322, 55353), (346, 55188), (349, 55164),

Gene: Butterscotch_52 Start: 39729, Stop: 41672, Start Num: 33

Candidate Starts for Butterscotch_52:

(Start: 33 @39729 has 24 MA's), (45, 39756), (65, 39828), (73, 39882), (84, 39942), (87, 39960), (88, 39969), (98, 40020), (106, 40062), (111, 40098), (123, 40185), (135, 40278), (137, 40293), (143, 40314), (177, 40416), (180, 40449), (184, 40473), (199, 40533), (207, 40620), (214, 40695), (226, 40785), (233, 40836), (234, 40839), (245, 40929), (248, 40947), (251, 40980), (261, 41034), (264, 41046), (267, 41064), (284, 41127), (295, 41211), (310, 41328), (312, 41376), (322, 41439), (332, 41523),

Gene: C3PO_72 Start: 52724, Stop: 50799, Start Num: 40

Candidate Starts for C3PO_72:

(20, 52817), (Start: 40 @52724 has 8 MA's), (80, 52553), (90, 52499), (101, 52445), (123, 52295), (150, 52139), (167, 52088), (168, 52085), (198, 51956), (199, 51953), (204, 51881), (206, 51872), (248, 51515), (251, 51482), (287, 51296), (314, 51077), (316, 51065), (318, 51047), (322, 51020), (330, 50957), (334, 50924), (347, 50852),

Gene: Candle_64 Start: 47961, Stop: 49721, Start Num: 105

Candidate Starts for Candle_64:

(Start: 105 @47961 has 8 MA's), (114, 48030), (127, 48126), (130, 48135), (141, 48216), (153, 48261), (197, 48462), (202, 48510), (209, 48570), (211, 48582), (216, 48648), (230, 48771), (233, 48795), (236, 48819), (248, 49023), (251, 49056), (254, 49071), (261, 49110), (262, 49113), (264, 49122), (284, 49191), (286, 49215), (302, 49323), (312, 49446), (313, 49449), (317, 49476), (321, 49506), (323, 49512), (324, 49515), (327, 49533), (328, 49545), (348, 49680), (352, 49710),

Gene: Cborch11_63 Start: 46091, Stop: 48148, Start Num: 31

Candidate Starts for Cborch11_63:

(Start: 31 @46091 has 19 MA's), (50, 46151), (51, 46154), (Start: 72 @46247 has 3 MA's), (75, 46259), (78, 46280), (101, 46403), (102, 46406), (104, 46415), (109, 46448), (110, 46469), (113, 46517), (118, 46559), (129, 46622), (131, 46643), (132, 46649), (140, 46703), (186, 46889), (189, 46901), (195, 46919), (197, 46934), (199, 46940), (233, 47258), (234, 47261), (238, 47306), (246, 47357), (248, 47369), (261, 47459), (264, 47471), (269, 47504), (274, 47528), (280, 47537), (297, 47627), (301, 47660), (311, 47771), (312, 47774), (313, 47777), (314, 47780), (319, 47816), (321, 47834), (330, 47900), (332, 47918), (362, 48095),

Gene: ChewyVIII_83 Start: 61890, Stop: 59662, Start Num: 26

Candidate Starts for ChewyVIII_83:

(Start: 26 @61890 has 1 MA's), (90, 61581), (100, 61530), (108, 61485), (123, 61377), (131, 61323), (134, 61293), (138, 61269), (147, 61233), (154, 61212), (164, 61173), (167, 61167), (196, 60918), (204, 60777), (206, 60768), (211, 60735), (212, 60720), (217, 60666), (221, 60621), (224, 60597), (242, 60450), (245, 60432), (248, 60414), (252, 60378), (262, 60324), (266, 60306), (287, 60195), (293, 60153), (302, 60063), (312, 59958), (316, 59940), (329, 59853), (331, 59823), (332, 59814), (338, 59763), (344, 59739), (346, 59730), (349, 59706), (354, 59688),

Gene: Chill_55 Start: 39836, Stop: 41779, Start Num: 33

Candidate Starts for Chill_55:

(Start: 33 @39836 has 24 MA's), (45, 39863), (65, 39935), (73, 39989), (84, 40049), (87, 40067), (88, 40076), (98, 40127), (106, 40169), (111, 40205), (123, 40292), (135, 40385), (137, 40400), (143, 40421), (177, 40523), (180, 40556), (184, 40580), (199, 40640), (207, 40727), (214, 40802), (226, 40892), (233, 40943), (234, 40946), (245, 41036), (248, 41054), (251, 41087), (261, 41141), (264, 41153), (267, 41171), (284, 41234), (295, 41318), (310, 41435), (312, 41483), (322, 41546), (332, 41630),

Gene: CoffeeBean_73 Start: 53090, Stop: 51054, Start Num: 23

Candidate Starts for CoffeeBean_73:

(9, 53258), (Start: 23 @53090 has 5 MA's), (34, 53024), (47, 52982), (74, 52877), (108, 52697), (116, 52640), (123, 52589), (126, 52574), (137, 52484), (141, 52472), (167, 52379), (183, 52307), (199, 52238), (204, 52166), (212, 52109), (233, 51929), (236, 51905), (242, 51842), (248, 51806), (261, 51719), (287, 51587), (292, 51548), (293, 51545), (297, 51500), (312, 51353), (322, 51290), (329, 51248), (332, 51209), (335, 51185),

Gene: Commandaria_72 Start: 56463, Stop: 54385, Start Num: 22

Candidate Starts for Commandaria_72:

(Start: 22 @56463 has 31 MA's), (Start: 37 @56391 has 8 MA's), (Start: 66 @56277 has 1 MA's), (106, 56058), (108, 56049), (109, 56046), (123, 55941), (131, 55887), (141, 55824), (167, 55734), (181, 55671), (182, 55665), (203, 55533), (205, 55515), (233, 55260), (236, 55236), (248, 55134), (255, 55080), (258, 55065), (260, 55059), (271, 54984), (284, 54945), (293, 54876), (296, 54840), (297, 54837), (300, 54807), (305, 54765), (312, 54690), (322, 54627), (332, 54546), (346, 54462), (349, 54438),

Gene: Cruella_72 Start: 52724, Stop: 50799, Start Num: 40

Candidate Starts for Cruella_72:

(20, 52817), (Start: 40 @52724 has 8 MA's), (80, 52553), (90, 52499), (101, 52445), (123, 52295), (150, 52139), (167, 52088), (168, 52085), (198, 51956), (199, 51953), (204, 51881), (206, 51872), (248, 51515), (251, 51482), (287, 51296), (314, 51077), (316, 51065), (318, 51047), (322, 51020), (330, 50957), (334, 50924), (347, 50852),

Gene: Cuke_73 Start: 42303, Stop: 44156, Start Num: 62

Candidate Starts for Cuke_73:

(Start: 62 @42303 has 3 MA's), (85, 42423), (104, 42516), (109, 42549), (119, 42642), (121, 42651), (123, 42660), (128, 42690), (129, 42693), (135, 42750), (143, 42786), (146, 42798), (154, 42825), (159, 42849), (173, 42888), (180, 42942), (185, 42972), (190, 42990), (193, 43002), (211, 43143), (222, 43269), (231, 43326), (233, 43338), (248, 43440), (251, 43473), (254, 43488), (259, 43512), (260, 43515), (264, 43539), (270, 43578), (306, 43773), (312, 43863), (314, 43869), (318, 43899), (331, 43998), (337, 44058), (342, 44076), (345, 44088), (353, 44133), (355, 44139),

Gene: Dalilpop_75 Start: 57466, Stop: 55409, Start Num: 22

Candidate Starts for Dalilpop_75:

(Start: 22 @57466 has 31 MA's), (123, 56953), (131, 56899), (140, 56839), (141, 56836), (167, 56746), (172, 56728), (181, 56683), (182, 56677), (191, 56638), (201, 56584), (205, 56527), (220, 56380), (223, 56347), (228, 56317), (229, 56311), (233, 56284), (234, 56281), (248, 56161), (258, 56092), (261, 56074), (284, 55969), (285, 55960), (293, 55900), (297, 55861), (300, 55831), (307, 55774), (312, 55714), (317, 55684), (322, 55651), (329, 55609), (351, 55453),

Gene: Damien_61 Start: 46053, Stop: 48110, Start Num: 31

Candidate Starts for Damien_61:

(Start: 31 @46053 has 19 MA's), (50, 46113), (51, 46116), (Start: 72 @46209 has 3 MA's), (75, 46221), (78, 46242), (101, 46365), (102, 46368), (104, 46377), (109, 46410), (110, 46431), (113, 46479), (118, 46521), (129, 46584), (131, 46605), (132, 46611), (140, 46665), (186, 46851), (189, 46863), (195, 46881), (197, 46896), (199, 46902), (233, 47220), (234, 47223), (238, 47268), (246, 47319), (248, 47331), (261, 47421), (264, 47433), (269, 47466), (274, 47490), (280, 47499), (297, 47589), (301, 47622), (311, 47733), (312, 47736), (313, 47739), (314, 47742), (319, 47778), (321, 47796), (330, 47862), (332, 47880), (362, 48057),

Gene: Darwin_73 Start: 51965, Stop: 50040, Start Num: 40

Candidate Starts for Darwin_73:

(20, 52058), (Start: 40 @51965 has 8 MA's), (80, 51794), (90, 51740), (123, 51536), (150, 51380), (167, 51329), (168, 51326), (179, 51284), (198, 51197), (199, 51194), (204, 51122), (206, 51113), (248, 50756), (251, 50723), (262, 50666), (307, 50384), (314, 50318), (316, 50306), (318, 50288), (319, 50282), (322, 50261), (330, 50198), (334, 50165), (339, 50126),

Gene: Delton_54 Start: 40127, Stop: 42070, Start Num: 33

Candidate Starts for Delton_54:

(24, 40058), (Start: 33 @40127 has 24 MA's), (45, 40154), (50, 40178), (65, 40226), (73, 40280), (84, 40340), (88, 40367), (98, 40418), (99, 40421), (106, 40460), (111, 40496), (123, 40583), (135, 40676), (137, 40691), (143, 40712), (177, 40814), (180, 40847), (184, 40871), (199, 40931), (207, 41018), (214, 41093), (226, 41183), (233, 41234), (234, 41237), (245, 41327), (248, 41345), (251, 41378), (261, 41432), (264, 41444), (267, 41462), (284, 41525), (295, 41609), (310, 41726), (312, 41774), (322, 41837), (332, 41921),

Gene: Djokovic_50 Start: 36614, Stop: 38668, Start Num: 37

Candidate Starts for Djokovic_50:

(Start: 37 @36614 has 8 MA's), (46, 36638), (64, 36701), (79, 36785), (86, 36827), (122, 37049), (129, 37085), (139, 37160), (148, 37199), (166, 37241), (173, 37259), (177, 37280), (178, 37292), (189, 37352), (194, 37367), (197, 37385), (204, 37463), (207, 37478), (208, 37481), (212, 37520), (213, 37541), (224, 37643), (233, 37700), (235, 37721), (236, 37724), (237, 37736), (245, 37784), (246, 37790), (252, 37838), (257, 37871), (262, 37895), (266, 37913), (270, 37943), (276, 38066), (279, 38099), (281, 38111), (284, 38126), (289, 38165), (295, 38210), (298, 38237), (308, 38321), (316, 38384), (321, 38426), (324, 38435), (325, 38444), (330, 38492), (331, 38501), (332, 38513), (334, 38528), (340, 38570),

Gene: DoobyDoo_59 Start: 39770, Stop: 41686, Start Num: 31

Candidate Starts for DoobyDoo_59:

(Start: 31 @39770 has 19 MA's), (Start: 32 @39773 has 13 MA's), (Start: 41 @39785 has 2 MA's), (52, 39833), (Start: 62 @39866 has 3 MA's), (76, 39935), (92, 40025), (96, 40052), (99, 40061), (111, 40133), (123, 40220), (129, 40253), (136, 40316), (162, 40406), (197, 40562), (200, 40586), (203, 40628), (210, 40676), (212, 40697), (213, 40718), (218, 40775), (225, 40829), (231, 40871), (238, 40931), (251, 41027), (252, 41030), (290, 41207), (298, 41258), (310, 41348), (312, 41384), (314, 41390), (319, 41426), (321, 41444), (328, 41483), (339, 41585), (343, 41600), (348, 41621),

Gene: DrLupo_67 Start: 46291, Stop: 48255, Start Num: 30

Candidate Starts for DrLupo_67:

(11, 46123), (17, 46198), (18, 46204), (Start: 30 @46291 has 1 MA's), (39, 46312), (Start: 40 @46318 has 8 MA's), (42, 46324), (50, 46357), (58, 46390), (70, 46438), (74, 46459), (78, 46486), (82, 46510), (94, 46573), (97, 46591), (101, 46609), (104, 46621), (109, 46654), (113, 46696), (116, 46717), (117, 46720), (118, 46738), (124, 46771), (125, 46777), (129, 46801), (130, 46804), (138, 46876), (195, 47095), (197, 47110), (204, 47188), (213, 47266), (220, 47341), (224, 47374), (245, 47536), (246, 47542), (264, 47668), (265, 47671), (280, 47707), (282, 47713), (297, 47797), (301, 47830), (311, 47941), (312, 47944), (315, 47953), (319, 47986), (322, 48007), (329, 48049), (335, 48112), (338, 48139), (357, 48223),

Gene: DumpTruck_58 Start: 39261, Stop: 41165, Start Num: 41

Candidate Starts for DumpTruck_58:

(13, 39126), (14, 39147), (16, 39168), (28, 39198), (Start: 31 @39243 has 19 MA's), (Start: 32 @39246 has 13 MA's), (Start: 41 @39261 has 2 MA's), (52, 39309), (Start: 62 @39342 has 3 MA's), (64, 39345), (82, 39450), (96, 39528), (99, 39537), (111, 39609), (113, 39624), (115, 39633), (128, 39726), (130, 39732), (136, 39792), (189, 40005), (197, 40038), (207, 40131), (209, 40146), (212, 40173), (213, 40194), (225, 40308), (231, 40350), (232, 40359), (237, 40398), (238, 40410), (245, 40455), (246, 40461), (251, 40506), (254, 40521), (281, 40614), (295, 40707), (312, 40860), (319, 40902), (321, 40920), (322, 40923), (339, 41061), (348, 41097), (360, 41151),

Gene: Emianna_72 Start: 56707, Stop: 54641, Start Num: 22

Candidate Starts for Emianna_72:

(1, 57205), (4, 57004), (6, 56911), (7, 56899), (9, 56881), (Start: 22 @56707 has 31 MA's), (Start: 53 @56569 has 2 MA's), (57, 56545), (100, 56341), (108, 56296), (123, 56188), (140, 56074), (141, 56071), (167, 55981), (168, 55978), (181, 55918), (203, 55780), (205, 55762), (209, 55738), (220, 55615), (233, 55510), (248, 55384), (255, 55330), (283, 55204), (284, 55195), (286, 55171), (295, 55099), (297, 55093), (300, 55063), (307, 55006), (312, 54946), (322, 54883), (332, 54802),

Gene: Ennea_79 Start: 57918, Stop: 55861, Start Num: 22

Candidate Starts for Ennea_79:

(5, 58206), (8, 58098), (Start: 22 @57918 has 31 MA's), (104, 57543), (124, 57402), (131, 57351), (140, 57291), (141, 57288), (160, 57216), (167, 57198), (181, 57135), (182, 57129), (188, 57102), (201, 57036), (203, 56997), (205, 56979), (209, 56955), (220, 56832), (223, 56799), (233, 56736), (248, 56613), (258, 56544), (261, 56526), (284, 56421), (285, 56412), (293, 56352), (295, 56319), (297, 56313), (300, 56283), (307, 56226), (312, 56166), (317, 56136), (322, 56103), (346, 55938),

Gene: Erk16_52 Start: 39875, Stop: 41818, Start Num: 33

Candidate Starts for Erk16_52:

(27, 39812), (Start: 33 @39875 has 24 MA's), (45, 39902), (65, 39974), (73, 40028), (84, 40088), (88, 40115), (98, 40166), (106, 40208), (111, 40244), (123, 40331), (135, 40424), (137, 40439), (143, 40460), (177, 40562), (180, 40595), (184, 40619), (199, 40679), (207, 40766), (214, 40841), (226, 40931), (233, 40982), (234, 40985), (245, 41075), (248, 41093), (251, 41126), (264, 41192), (267, 41210), (284, 41273), (295, 41357), (310, 41474), (312, 41522), (322, 41585), (332, 41669),

Gene: Erutan_60 Start: 40423, Stop: 42336, Start Num: 32

Candidate Starts for Erutan_60:

(14, 40297), (15, 40306), (16, 40318), (21, 40351), (Start: 31 @40420 has 19 MA's), (Start: 32 @40423 has 13 MA's), (Start: 41 @40435 has 2 MA's), (52, 40483), (Start: 62 @40516 has 3 MA's), (92, 40675), (96, 40702), (99, 40711), (111, 40783), (123, 40870), (129, 40903), (136, 40966), (162, 41056), (170, 41083), (197, 41212), (200, 41236), (203, 41278), (210, 41326), (212, 41347), (213, 41368), (218, 41425), (225, 41479), (231, 41521), (238, 41581), (251, 41677), (252, 41680), (298, 41908), (310, 41998), (312, 42034), (314, 42040), (321, 42094), (328, 42133), (339, 42235), (343, 42250), (348, 42271),

Gene: Flapper_75 Start: 57019, Stop: 54962, Start Num: 22

Candidate Starts for Flapper_75:

(5, 57304), (9, 57187), (10, 57169), (Start: 22 @57019 has 31 MA's), (74, 56794), (123, 56506), (131, 56452), (135, 56416), (140, 56392), (141, 56389), (163, 56311), (167, 56299), (172, 56281), (181, 56236), (182, 56230), (191, 56191), (201, 56137), (203, 56098), (205, 56080), (220, 55933), (223, 55900), (228, 55870), (229, 55864), (233, 55837), (248, 55714), (258, 55645), (261, 55627), (284, 55522), (285, 55513), (287, 55495), (293, 55453), (297, 55414), (300, 55384), (303, 55366), (307, 55327), (312, 55267), (317, 55237), (322, 55204), (329, 55162), (351, 55006),

Gene: Float294_74 Start: 57824, Stop: 55767, Start Num: 22

Candidate Starts for Float294_74:

(8, 58004), (Start: 22 @57824 has 31 MA's), (104, 57449), (118, 57341), (124, 57308), (131, 57257), (140, 57197), (141, 57194), (160, 57122), (167, 57104), (181, 57041), (182, 57035), (188, 57008), (201, 56942), (203, 56903), (205, 56885), (209, 56861), (220, 56738), (223, 56705), (233, 56642), (248, 56519), (258, 56450), (261, 56432), (284, 56327), (293, 56258), (297, 56219), (299, 56195), (300, 56189), (307, 56132), (312, 56072), (317, 56042), (322, 56009), (346, 55844),

Gene: Fowlmouth_74 Start: 44820, Stop: 46667, Start Num: 62

Candidate Starts for Fowlmouth_74:

(Start: 62 @44820 has 3 MA's), (67, 44838), (Start: 72 @44874 has 3 MA's), (81, 44925), (104, 45033), (109, 45066), (116, 45126), (121, 45168), (128, 45207), (143, 45303), (146, 45315), (154, 45342), (157, 45357), (159, 45366), (173, 45405), (176, 45420), (190, 45507), (193, 45519), (204, 45618), (205, 45624), (209, 45648), (214, 45708), (222, 45786), (227, 45813), (231, 45843), (233, 45855), (236, 45879), (247, 45951), (248, 45957), (251, 45990), (254, 46005), (259, 46029), (260, 46032), (264, 46056), (312, 46380), (315, 46389), (318, 46416), (321, 46440), (329, 46485), (332, 46527), (337, 46575), (342, 46593), (353, 46650),

Gene: Foxboro_72 Start: 56919, Stop: 54853, Start Num: 22

Candidate Starts for Foxboro_72:

(6, 57123), (7, 57111), (9, 57093), (Start: 22 @56919 has 31 MA's), (Start: 53 @56781 has 2 MA's), (57, 56757), (100, 56553), (108, 56508), (123, 56400), (140, 56286), (141, 56283), (167, 56193), (168, 56190), (181, 56130), (203, 55992), (205, 55974), (209, 55950), (220, 55827), (233, 55722), (248, 55596), (255, 55542), (283, 55416), (284, 55407), (286, 55383), (295, 55311), (297, 55305), (300, 55275), (307, 55218), (312, 55158), (322, 55095), (332, 55014),

Gene: Fulcrum_60 Start: 40439, Stop: 42352, Start Num: 32

Candidate Starts for Fulcrum_60:

(14, 40313), (15, 40322), (16, 40334), (21, 40367), (Start: 31 @40436 has 19 MA's), (Start: 32 @40439 has 13 MA's), (Start: 41 @40451 has 2 MA's), (52, 40499), (Start: 62 @40532 has 3 MA's), (76, 40601), (92, 40691), (96, 40718), (99, 40727), (111, 40799), (129, 40919), (136, 40982), (162, 41072), (170, 41099), (197, 41228), (200, 41252), (203, 41294), (207, 41321), (210, 41342), (212, 41363), (213, 41384), (218, 41441), (220, 41459), (225, 41495), (231, 41537), (238, 41597), (251, 41693), (252, 41696), (298, 41924), (310, 42014), (312, 42050), (314, 42056), (321, 42110), (328,

42149), (339, 42251), (343, 42266), (348, 42287),

Gene: Fury_82 Start: 56141, Stop: 54093, Start Num: 22

Candidate Starts for Fury_82:

(Start: 22 @56141 has 31 MA's), (56, 55988), (63, 55973), (78, 55892), (104, 55769), (108, 55739), (123, 55631), (129, 55598), (134, 55547), (141, 55514), (167, 55424), (175, 55391), (181, 55361), (198, 55286), (205, 55205), (212, 55154), (220, 55058), (223, 55025), (229, 54989), (233, 54962), (247, 54845), (248, 54839), (258, 54770), (261, 54752), (264, 54740), (293, 54578), (297, 54545), (300, 54515), (302, 54500), (307, 54458), (322, 54335), (332, 54254), (335, 54230), (346, 54170),

Gene: GOATification_60 Start: 40439, Stop: 42352, Start Num: 32

Candidate Starts for GOATification_60:

(14, 40313), (15, 40322), (16, 40334), (21, 40367), (Start: 31 @40436 has 19 MA's), (Start: 32 @40439 has 13 MA's), (Start: 41 @40451 has 2 MA's), (52, 40499), (Start: 62 @40532 has 3 MA's), (76, 40601), (92, 40691), (96, 40718), (99, 40727), (111, 40799), (129, 40919), (136, 40982), (162, 41072), (170, 41099), (197, 41228), (200, 41252), (203, 41294), (207, 41321), (210, 41342), (212, 41363), (213, 41384), (218, 41441), (220, 41459), (225, 41495), (231, 41537), (238, 41597), (251, 41693), (252, 41696), (298, 41924), (310, 42014), (312, 42050), (314, 42056), (321, 42110), (328, 42149), (339, 42251), (343, 42266), (348, 42287),

Gene: GRU1_61 Start: 48864, Stop: 46807, Start Num: 22

Candidate Starts for GRU1_61:

(9, 49032), (Start: 22 @48864 has 31 MA's), (116, 48402), (123, 48351), (140, 48237), (141, 48234), (163, 48156), (167, 48144), (172, 48126), (181, 48081), (182, 48075), (191, 48036), (201, 47982), (203, 47943), (205, 47925), (220, 47778), (223, 47745), (229, 47709), (233, 47682), (248, 47559), (258, 47490), (261, 47472), (266, 47451), (284, 47367), (293, 47298), (297, 47259), (300, 47229), (307, 47172), (312, 47112), (317, 47082), (322, 47049), (329, 47007), (351, 46851),

Gene: GTE5_60 Start: 49067, Stop: 47640, Start Num: 141

Candidate Starts for GTE5_60:

(5, 49982), (9, 49865), (10, 49847), (Start: 22 @49697 has 31 MA's), (74, 49472), (123, 49184), (131, 49130), (135, 49094), (141, 49067), (163, 48989), (167, 48977), (172, 48959), (181, 48914), (182, 48908), (191, 48869), (201, 48815), (203, 48776), (205, 48758), (220, 48611), (223, 48578), (228, 48548), (229, 48542), (233, 48515), (248, 48392), (258, 48323), (261, 48305), (284, 48200), (285, 48191), (287, 48173), (293, 48131), (297, 48092), (300, 48062), (307, 48005), (312, 47945), (317, 47915), (322, 47882), (329, 47840), (351, 47684),

Gene: GTE8_60 Start: 49561, Stop: 47633, Start Num: 53

Candidate Starts for GTE8_60:

(6, 49903), (9, 49873), (12, 49798), (Start: 22 @49699 has 31 MA's), (Start: 53 @49561 has 2 MA's), (57, 49537), (108, 49288), (123, 49180), (140, 49066), (141, 49063), (167, 48973), (168, 48970), (181, 48910), (205, 48754), (207, 48745), (209, 48730), (220, 48607), (233, 48502), (236, 48478), (248, 48376), (255, 48322), (260, 48301), (284, 48187), (295, 48091), (297, 48085), (300, 48055), (304, 48016), (307, 47998), (312, 47938), (322, 47875), (332, 47794), (346, 47710),

Gene: Genamy16_63 Start: 39814, Stop: 41730, Start Num: 31

Candidate Starts for Genamy16_63:

(Start: 31 @39814 has 19 MA's), (Start: 32 @39817 has 13 MA's), (Start: 41 @39829 has 2 MA's), (52, 39877), (Start: 62 @39910 has 3 MA's), (88, 40051), (92, 40069), (96, 40096), (99, 40105), (111, 40177), (129, 40297), (136, 40360), (162, 40450), (170, 40477), (197, 40606), (200, 40630), (203, 40672), (204, 40684), (207, 40699), (210, 40720), (212, 40741), (213, 40762), (218, 40819), (220, 40837), (225, 40873), (231, 40915), (238, 40975), (251, 41071), (252, 41074), (290, 41251), (298, 41302), (310, 41392), (312, 41428), (314, 41434), (321, 41488), (328, 41527), (339, 41629), (343,

41644), (348, 41665),

Gene: Gibbin_62 Start: 41245, Stop: 43161, Start Num: 31

Candidate Starts for Gibbin_62:

(14, 41122), (15, 41131), (16, 41143), (21, 41176), (Start: 29 @41233 has 1 MA's), (Start: 31 @41245 has 19 MA's), (Start: 32 @41248 has 13 MA's), (Start: 41 @41260 has 2 MA's), (52, 41308), (Start: 62 @41341 has 3 MA's), (76, 41410), (92, 41500), (96, 41527), (99, 41536), (111, 41608), (123, 41695), (129, 41728), (136, 41791), (162, 41881), (197, 42037), (200, 42061), (203, 42103), (210, 42151), (212, 42172), (213, 42193), (218, 42250), (220, 42268), (225, 42304), (231, 42346), (238, 42406), (251, 42502), (252, 42505), (298, 42733), (310, 42823), (312, 42859), (314, 42865), (321, 42919), (328, 42958), (339, 43060), (343, 43075), (348, 43096),

Gene: Giuseppe_53 Start: 39718, Stop: 41661, Start Num: 33

Candidate Starts for Giuseppe_53:

(Start: 33 @39718 has 24 MA's), (45, 39745), (65, 39817), (73, 39871), (84, 39931), (87, 39949), (88, 39958), (98, 40009), (106, 40051), (111, 40087), (123, 40174), (135, 40267), (137, 40282), (143, 40303), (177, 40405), (180, 40438), (184, 40462), (199, 40522), (207, 40609), (214, 40684), (226, 40774), (233, 40825), (234, 40828), (245, 40918), (248, 40936), (251, 40969), (261, 41023), (264, 41035), (267, 41053), (284, 41116), (295, 41200), (310, 41317), (312, 41365), (322, 41428), (332, 41512),

Gene: Gretellyn_60 Start: 41292, Stop: 43208, Start Num: 31

Candidate Starts for Gretellyn_60:

(Start: 31 @41292 has 19 MA's), (Start: 32 @41295 has 13 MA's), (Start: 41 @41307 has 2 MA's), (52, 41355), (Start: 62 @41388 has 3 MA's), (76, 41457), (92, 41547), (96, 41574), (99, 41583), (111, 41655), (123, 41742), (129, 41775), (136, 41838), (162, 41928), (170, 41955), (197, 42084), (200, 42108), (203, 42150), (210, 42198), (212, 42219), (213, 42240), (218, 42297), (225, 42351), (231, 42393), (238, 42453), (251, 42549), (252, 42552), (290, 42729), (298, 42780), (310, 42870), (312, 42906), (314, 42912), (321, 42966), (328, 43005), (339, 43107), (343, 43122), (348, 43143),

Gene: GrootJr_74 Start: 56101, Stop: 54035, Start Num: 22

Candidate Starts for GrootJr_74:

(6, 56305), (7, 56293), (9, 56275), (Start: 22 @56101 has 31 MA's), (Start: 53 @55963 has 2 MA's), (57, 55939), (100, 55735), (108, 55690), (123, 55582), (140, 55468), (141, 55465), (167, 55375), (168, 55372), (181, 55312), (203, 55174), (205, 55156), (209, 55132), (220, 55009), (233, 54904), (248, 54778), (255, 54724), (283, 54598), (284, 54589), (286, 54565), (295, 54493), (297, 54487), (300, 54457), (307, 54400), (312, 54340), (322, 54277), (332, 54196),

Gene: Gumball_52 Start: 39923, Stop: 41866, Start Num: 33

Candidate Starts for Gumball_52:

(27, 39860), (Start: 33 @39923 has 24 MA's), (45, 39950), (65, 40022), (73, 40076), (84, 40136), (88, 40163), (98, 40214), (106, 40256), (111, 40292), (123, 40379), (135, 40472), (137, 40487), (143, 40508), (177, 40610), (180, 40643), (184, 40667), (199, 40727), (207, 40814), (214, 40889), (226, 40979), (233, 41030), (234, 41033), (245, 41123), (248, 41141), (251, 41174), (264, 41240), (267, 41258), (284, 41321), (295, 41405), (310, 41522), (312, 41570), (322, 41633), (332, 41717),

Gene: GuyFagieri_70 Start: 52937, Stop: 50901, Start Num: 23

Candidate Starts for GuyFagieri_70:

(2, 53405), (3, 53399), (Start: 23 @52937 has 5 MA's), (47, 52829), (108, 52544), (116, 52487), (123, 52436), (126, 52421), (137, 52331), (141, 52319), (147, 52292), (167, 52226), (183, 52154), (193, 52112), (199, 52085), (204, 52013), (212, 51956), (233, 51776), (236, 51752), (242, 51689), (248, 51653), (261, 51566), (287, 51434), (292, 51395), (293, 51392), (307, 51260), (312, 51200), (322, 51137), (329, 51095), (335, 51032),

Gene: Hawkeye_56 Start: 39560, Stop: 41506, Start Num: 33

Candidate Starts for Hawkeye_56:

(Start: 33 @39560 has 24 MA's), (55, 39638), (71, 39707), (73, 39716), (78, 39746), (84, 39776), (88, 39803), (91, 39815), (106, 39893), (109, 39905), (123, 40016), (129, 40049), (137, 40124), (161, 40202), (171, 40232), (178, 40268), (186, 40322), (199, 40373), (211, 40487), (219, 40595), (232, 40673), (233, 40676), (236, 40700), (237, 40712), (245, 40769), (246, 40775), (248, 40787), (250, 40808), (251, 40820), (258, 40856), (264, 40886), (267, 40904), (284, 40967), (295, 41051), (300, 41087), (306, 41132), (310, 41168), (312, 41216), (314, 41222), (322, 41279), (354, 41483), (356, 41489), (357, 41492),

Gene: Helpful_56 Start: 40102, Stop: 42045, Start Num: 33

Candidate Starts for Helpful_56:

(24, 40033), (Start: 33 @40102 has 24 MA's), (45, 40129), (65, 40201), (73, 40255), (84, 40315), (87, 40333), (88, 40342), (98, 40393), (106, 40435), (111, 40471), (123, 40558), (135, 40651), (137, 40666), (143, 40687), (177, 40789), (180, 40822), (184, 40846), (199, 40906), (207, 40993), (214, 41068), (226, 41158), (233, 41209), (234, 41212), (245, 41302), (248, 41320), (251, 41353), (261, 41407), (264, 41419), (267, 41437), (284, 41500), (295, 41584), (310, 41701), (312, 41749), (322, 41812), (332, 41896),

Gene: HubbaBubba_68 Start: 51470, Stop: 49620, Start Num: 74

Candidate Starts for HubbaBubba_68:

(7, 51893), (9, 51875), (Start: 22 @51701 has 31 MA's), (74, 51470), (101, 51332), (123, 51182), (129, 51149), (140, 51068), (141, 51065), (167, 50975), (168, 50972), (181, 50912), (205, 50756), (220, 50609), (233, 50501), (236, 50477), (248, 50375), (255, 50321), (258, 50306), (271, 50225), (284, 50186), (291, 50123), (295, 50084), (297, 50078), (300, 50048), (312, 49931), (322, 49868), (330, 49805), (332, 49787), (346, 49703),

Gene: IDyn_69 Start: 52448, Stop: 50367, Start Num: 22

Candidate Starts for IDyn_69:

(7, 52640), (9, 52622), (12, 52547), (Start: 22 @52448 has 31 MA's), (74, 52217), (101, 52079), (123, 51929), (129, 51896), (138, 51821), (140, 51815), (141, 51812), (167, 51722), (168, 51719), (181, 51659), (205, 51503), (220, 51356), (233, 51248), (236, 51224), (248, 51122), (255, 51068), (258, 51053), (271, 50972), (284, 50933), (291, 50870), (295, 50831), (297, 50825), (300, 50795), (312, 50678), (322, 50615), (330, 50552), (332, 50534), (346, 50450),

Gene: Indlulamithi_65 Start: 45619, Stop: 47481, Start Num: 66

Candidate Starts for Indlulamithi_65:

(Start: 66 @45619 has 1 MA's), (68, 45634), (109, 45862), (116, 45922), (121, 45964), (127, 46000), (132, 46033), (133, 46051), (146, 46111), (150, 46129), (159, 46162), (173, 46201), (187, 46291), (192, 46312), (193, 46315), (197, 46336), (215, 46513), (222, 46582), (228, 46618), (231, 46639), (233, 46651), (239, 46717), (247, 46759), (248, 46765), (251, 46798), (254, 46813), (259, 46837), (260, 46840), (264, 46864), (266, 46873), (287, 46960), (302, 47065), (316, 47206), (330, 47314), (332, 47335), (334, 47350), (342, 47401), (353, 47458), (355, 47464), (359, 47476),

Gene: Jalebi_59 Start: 41637, Stop: 43553, Start Num: 31

Candidate Starts for Jalebi_59:

(Start: 31 @41637 has 19 MA's), (Start: 32 @41640 has 13 MA's), (Start: 41 @41652 has 2 MA's), (52, 41700), (76, 41802), (92, 41892), (96, 41919), (99, 41928), (111, 42000), (129, 42120), (136, 42183), (162, 42273), (170, 42300), (197, 42429), (200, 42453), (203, 42495), (210, 42543), (212, 42564), (213, 42585), (218, 42642), (225, 42696), (231, 42738), (238, 42798), (251, 42894), (252, 42897), (290, 43074), (298, 43125), (309, 43212), (310, 43215), (312, 43251), (314, 43257), (321, 43311), (328, 43350), (339, 43452), (343, 43467), (348, 43488),

Gene: Jifall16_71 Start: 56412, Stop: 54346, Start Num: 22

Candidate Starts for Jifall16_71:

(1, 56910), (4, 56709), (6, 56616), (7, 56604), (9, 56586), (Start: 22 @56412 has 31 MA's), (Start: 53 @56274 has 2 MA's), (57, 56250), (100, 56046), (108, 56001), (123, 55893), (140, 55779), (141, 55776), (167, 55686), (168, 55683), (181, 55623), (203, 55485), (205, 55467), (209, 55443), (220, 55320), (233, 55215), (248, 55089), (255, 55035), (283, 54909), (284, 54900), (286, 54876), (295, 54804), (297, 54798), (300, 54768), (307, 54711), (312, 54651), (322, 54588), (332, 54507),

Gene: Kabluna_75 Start: 55961, Stop: 53874, Start Num: 22

Candidate Starts for Kabluna_75:

(Start: 22 @55961 has 31 MA's), (49, 55841), (Start: 60 @55796 has 1 MA's), (61, 55793), (108, 55538), (123, 55430), (131, 55376), (141, 55313), (167, 55223), (168, 55220), (174, 55196), (181, 55160), (203, 55022), (205, 55004), (207, 54995), (209, 54980), (220, 54857), (229, 54773), (233, 54746), (236, 54722), (248, 54623), (255, 54569), (266, 54515), (271, 54473), (284, 54434), (293, 54365), (295, 54332), (300, 54296), (306, 54251), (307, 54239), (312, 54179), (322, 54116), (346, 53951), (349, 53927),

Gene: KandZ_52 Start: 39857, Stop: 41800, Start Num: 33

Candidate Starts for KandZ_52:

(27, 39794), (Start: 33 @39857 has 24 MA's), (45, 39884), (65, 39956), (73, 40010), (84, 40070), (88, 40097), (98, 40148), (106, 40190), (111, 40226), (123, 40313), (135, 40406), (137, 40421), (143, 40442), (177, 40544), (180, 40577), (184, 40601), (199, 40661), (207, 40748), (214, 40823), (226, 40913), (233, 40964), (234, 40967), (245, 41057), (248, 41075), (251, 41108), (264, 41174), (267, 41192), (284, 41255), (295, 41339), (310, 41456), (312, 41504), (322, 41567), (332, 41651),

Gene: KidneyBean_72 Start: 56536, Stop: 54470, Start Num: 22

Candidate Starts for KidneyBean_72:

(1, 57034), (4, 56833), (6, 56740), (7, 56728), (9, 56710), (Start: 22 @56536 has 31 MA's), (Start: 53 @56398 has 2 MA's), (57, 56374), (100, 56170), (108, 56125), (123, 56017), (140, 55903), (141, 55900), (167, 55810), (168, 55807), (181, 55747), (203, 55609), (205, 55591), (209, 55567), (220, 55444), (233, 55339), (248, 55213), (255, 55159), (283, 55033), (284, 55024), (286, 55000), (295, 54928), (297, 54922), (300, 54892), (307, 54835), (312, 54775), (322, 54712), (332, 54631),

Gene: Kimchi1738_73 Start: 52700, Stop: 50775, Start Num: 40

Candidate Starts for Kimchi1738_73:

(20, 52793), (Start: 40 @52700 has 8 MA's), (80, 52529), (90, 52475), (123, 52271), (150, 52115), (167, 52064), (168, 52061), (179, 52019), (204, 51857), (206, 51848), (248, 51491), (251, 51458), (287, 51272), (307, 51119), (314, 51053), (316, 51041), (318, 51023), (322, 50996), (330, 50933), (334, 50900), (347, 50828),

Gene: Konstantine_65 Start: 46884, Stop: 48941, Start Num: 31

Candidate Starts for Konstantine_65:

(Start: 31 @46884 has 19 MA's), (50, 46944), (51, 46947), (Start: 72 @47040 has 3 MA's), (75, 47052), (78, 47073), (101, 47196), (102, 47199), (104, 47208), (109, 47241), (110, 47262), (113, 47310), (118, 47352), (129, 47415), (131, 47436), (132, 47442), (140, 47496), (186, 47682), (189, 47694), (195, 47712), (197, 47727), (199, 47733), (233, 48051), (234, 48054), (238, 48099), (246, 48150), (248, 48162), (261, 48252), (264, 48264), (269, 48297), (274, 48321), (280, 48330), (297, 48420), (301, 48453), (311, 48564), (312, 48567), (313, 48570), (314, 48573), (321, 48627), (330, 48693), (332, 48711), (362, 48888),

Gene: Kurt_72 Start: 56722, Stop: 54656, Start Num: 22

Candidate Starts for Kurt_72:

(1, 57220), (4, 57019), (6, 56926), (7, 56914), (9, 56896), (Start: 22 @56722 has 31 MA's), (Start: 53 @56584 has 2 MA's), (57, 56560), (100, 56356), (108, 56311), (123, 56203), (140, 56089), (141, 56086), (167, 55996), (168, 55993), (181, 55933), (203, 55795), (205, 55777), (209, 55753), (220, 55630), (233, 55525), (248, 55399), (255, 55345), (283, 55219), (284, 55210), (286, 55186), (295, 55114), (297, 55108), (300, 55078), (307, 55021), (312, 54961), (322, 54898), (332, 54817),

Gene: Labelle_76 Start: 49171, Stop: 51204, Start Num: 36

Candidate Starts for Labelle_76:

(Start: 36 @49171 has 3 MA's), (44, 49195), (59, 49258), (74, 49324), (82, 49375), (83, 49378), (104, 49486), (109, 49519), (113, 49558), (117, 49582), (126, 49645), (129, 49663), (130, 49666), (131, 49684), (132, 49690), (144, 49759), (152, 49786), (158, 49798), (169, 49831), (186, 49933), (204, 50056), (209, 50086), (218, 50191), (220, 50209), (232, 50299), (233, 50302), (241, 50404), (243, 50443), (246, 50470), (248, 50482), (254, 50530), (256, 50548), (261, 50575), (264, 50587), (266, 50596), (297, 50734), (302, 50779), (311, 50884), (330, 51013), (334, 51046), (336, 51064), (347, 51118), (354, 51157),

Gene: Lambo_58 Start: 40249, Stop: 42159, Start Num: 32

Candidate Starts for Lambo_58:

(Start: 31 @40246 has 19 MA's), (Start: 32 @40249 has 13 MA's), (Start: 41 @40261 has 2 MA's), (52, 40309), (Start: 62 @40342 has 3 MA's), (96, 40528), (101, 40543), (111, 40609), (123, 40696), (129, 40729), (140, 40810), (142, 40819), (145, 40828), (189, 41002), (191, 41008), (197, 41035), (207, 41128), (210, 41149), (211, 41155), (212, 41170), (213, 41191), (218, 41248), (220, 41266), (225, 41302), (231, 41344), (238, 41404), (251, 41500), (252, 41503), (298, 41731), (310, 41821), (312, 41857), (314, 41863), (321, 41917), (328, 41956), (339, 42058), (343, 42073), (348, 42094),

Gene: Leopard_64 Start: 46071, Stop: 48014, Start Num: 33

Candidate Starts for Leopard_64:

(Start: 33 @46071 has 24 MA's), (43, 46092), (50, 46122), (Start: 72 @46221 has 3 MA's), (84, 46284), (96, 46356), (99, 46365), (109, 46413), (154, 46686), (155, 46689), (190, 46851), (199, 46887), (204, 46959), (206, 46968), (211, 47001), (215, 47058), (217, 47070), (226, 47139), (227, 47148), (230, 47166), (233, 47190), (246, 47286), (248, 47298), (251, 47331), (260, 47373), (270, 47436), (294, 47541), (318, 47757), (321, 47781), (322, 47784), (329, 47826), (331, 47856), (334, 47880), (358, 47997),

Gene: Lila22_64 Start: 41200, Stop: 43113, Start Num: 32

Candidate Starts for Lila22_64:

(Start: 31 @41197 has 19 MA's), (Start: 32 @41200 has 13 MA's), (Start: 41 @41212 has 2 MA's), (52, 41260), (Start: 62 @41293 has 3 MA's), (96, 41479), (101, 41494), (111, 41560), (123, 41647), (128, 41677), (129, 41680), (136, 41743), (140, 41761), (142, 41770), (162, 41833), (170, 41860), (197, 41989), (200, 42013), (203, 42055), (210, 42103), (212, 42124), (213, 42145), (218, 42202), (225, 42256), (231, 42298), (238, 42358), (251, 42454), (252, 42457), (290, 42634), (298, 42685), (310, 42775), (312, 42811), (314, 42817), (321, 42871), (328, 42910), (339, 43012), (343, 43027), (348, 43048),

Gene: LilyPad_52 Start: 37853, Stop: 39895, Start Num: 37

Candidate Starts for LilyPad_52:

(Start: 37 @37853 has 8 MA's), (76, 38006), (86, 38066), (109, 38180), (111, 38204), (122, 38288), (129, 38324), (170, 38492), (173, 38498), (177, 38519), (194, 38606), (207, 38717), (212, 38759), (213, 38780), (220, 38855), (233, 38939), (235, 38960), (237, 38975), (244, 39020), (245, 39023), (247, 39035), (248, 39041), (249, 39044), (252, 39077), (261, 39131), (266, 39152), (270, 39182), (271, 39194), (273, 39227), (275, 39296), (283, 39353), (289, 39401), (295, 39446), (298, 39473), (316, 39620), (325, 39680), (330, 39728), (332, 39749), (340, 39806), (344, 39824), (348, 39839), (356, 39881),

Gene: LittleFella_57 Start: 39855, Stop: 41873, Start Num: 32

Candidate Starts for LittleFella_57:

(Start: 32 @39855 has 13 MA's), (81, 40053), (83, 40062), (84, 40065), (89, 40095), (96, 40137), (99, 40146), (112, 40224), (114, 40236), (123, 40305), (129, 40338), (130, 40341), (173, 40521), (186, 40602), (194, 40629), (206, 40734), (212, 40776), (213, 40797), (233, 40956), (236, 40980), (244, 41037), (245, 41040), (248, 41058), (253, 41097), (263, 41157), (266, 41169), (268, 41187), (270, 41199), (272, 41220), (277, 41307), (278, 41310), (279, 41313), (289, 41379), (295, 41424), (298, 41451), (310, 41544), (318, 41619), (320, 41631), (321, 41643), (324, 41652), (325, 41661), (330, 41709), (332, 41727), (340, 41784), (348, 41817), (357, 41856),

Gene: Lollipop1437_76 Start: 57598, Stop: 55541, Start Num: 22

Candidate Starts for Lollipop1437_76:

(5, 57886), (8, 57778), (Start: 22 @57598 has 31 MA's), (104, 57223), (118, 57115), (124, 57082), (131, 57031), (140, 56971), (141, 56968), (160, 56896), (167, 56878), (181, 56815), (182, 56809), (188, 56782), (201, 56716), (203, 56677), (205, 56659), (209, 56635), (220, 56512), (223, 56479), (233, 56416), (248, 56293), (258, 56224), (261, 56206), (284, 56101), (285, 56092), (293, 56032), (297, 55993), (300, 55963), (307, 55906), (312, 55846), (317, 55816), (322, 55783), (346, 55618),

Gene: LuckyLeo_57 Start: 40044, Stop: 41966, Start Num: 31

Candidate Starts for LuckyLeo_57:

(13, 39927), (14, 39948), (16, 39969), (28, 39999), (Start: 29 @40032 has 1 MA's), (Start: 31 @40044 has 19 MA's), (Start: 32 @40047 has 13 MA's), (Start: 41 @40062 has 2 MA's), (46, 40077), (52, 40110), (Start: 62 @40143 has 3 MA's), (64, 40146), (Start: 72 @40194 has 3 MA's), (76, 40212), (92, 40302), (95, 40320), (96, 40329), (99, 40338), (111, 40410), (129, 40530), (130, 40533), (136, 40593), (140, 40611), (162, 40683), (170, 40710), (199, 40845), (200, 40863), (203, 40905), (206, 40926), (207, 40932), (212, 40974), (213, 40995), (215, 41016), (218, 41052), (231, 41151), (232, 41160), (238, 41211), (251, 41307), (252, 41310), (282, 41421), (290, 41487), (295, 41511), (298, 41538), (319, 41706), (321, 41724), (326, 41748), (328, 41763), (329, 41769), (332, 41811), (334, 41826), (339, 41865), (343, 41880), (348, 41901), (361, 41958),

Gene: MacGully_81 Start: 56374, Stop: 54335, Start Num: 25

Candidate Starts for MacGully_81:

(Start: 25 @56374 has 1 MA's), (Start: 37 @56305 has 8 MA's), (38, 56299), (109, 55975), (112, 55951), (123, 55870), (124, 55867), (137, 55765), (140, 55756), (147, 55726), (167, 55660), (183, 55588), (199, 55519), (204, 55447), (212, 55390), (233, 55210), (236, 55186), (242, 55123), (248, 55087), (258, 55018), (260, 55012), (261, 55000), (293, 54826), (317, 54604), (322, 54571), (329, 54529), (331, 54499), (332, 54490), (335, 54466), (336, 54457), (344, 54415),

Gene: Madi_50 Start: 36692, Stop: 38746, Start Num: 37

Candidate Starts for Madi_50:

(Start: 37 @36692 has 8 MA's), (46, 36716), (64, 36779), (79, 36863), (86, 36905), (122, 37127), (129, 37163), (139, 37238), (148, 37277), (166, 37319), (173, 37337), (177, 37358), (178, 37370), (189, 37430), (194, 37445), (197, 37463), (204, 37541), (207, 37556), (208, 37559), (212, 37598), (213, 37619), (224, 37721), (233, 37778), (235, 37799), (236, 37802), (237, 37814), (245, 37862), (246, 37868), (252, 37916), (257, 37949), (262, 37973), (266, 37991), (270, 38021), (276, 38144), (279, 38177), (281, 38189), (284, 38204), (289, 38243), (295, 38288), (298, 38315), (308, 38399), (316, 38462), (321, 38504), (324, 38513), (325, 38522), (330, 38570), (331, 38579), (332, 38591), (334, 38606), (340, 38648),

Gene: Madruga_74 Start: 48812, Stop: 50845, Start Num: 36

Candidate Starts for Madruga_74:

(19, 48722), (Start: 36 @48812 has 3 MA's), (44, 48836), (59, 48899), (74, 48965), (82, 49016), (83, 49019), (104, 49127), (109, 49160), (113, 49199), (117, 49223), (126, 49286), (129, 49304), (131, 49325), (132, 49331), (144, 49400), (152, 49427), (158, 49439), (169, 49472), (186, 49574), (204, 49697), (209, 49727), (218, 49832), (220, 49850), (232, 49940), (233, 49943), (241, 50045), (243, 50084), (246, 50111), (248, 50123), (254, 50171), (256, 50189), (261, 50216), (264, 50228), (266, 50237), (297, 50375), (302, 50420), (311, 50525), (330, 50654), (334, 50687), (336, 50705), (347, 50759), (354, 50798),

Gene: Marietta_72 Start: 52748, Stop: 50667, Start Num: 22

Candidate Starts for Marietta_72:

(7, 52940), (9, 52922), (12, 52847), (Start: 22 @52748 has 31 MA's), (123, 52229), (129, 52196), (131, 52175), (138, 52121), (140, 52115), (141, 52112), (167, 52022), (168, 52019), (181, 51959), (205, 51803), (220, 51656), (233, 51548), (236, 51524), (248, 51422), (255, 51368), (258, 51353), (271, 51272), (284, 51233), (291, 51170), (295, 51131), (297, 51125), (300, 51095), (312, 50978), (322, 50915), (330, 50852), (332, 50834), (346, 50750),

Gene: Maselop_72 Start: 53166, Stop: 51130, Start Num: 23

Candidate Starts for Maselop_72:

(9, 53334), (Start: 23 @53166 has 5 MA's), (34, 53100), (47, 53058), (74, 52953), (108, 52773), (116, 52716), (123, 52665), (126, 52650), (137, 52560), (141, 52548), (167, 52455), (183, 52383), (199, 52314), (204, 52242), (212, 52185), (233, 52005), (236, 51981), (242, 51918), (248, 51882), (261, 51795), (287, 51663), (292, 51624), (293, 51621), (297, 51576), (312, 51429), (322, 51366), (329, 51324), (332, 51285), (335, 51261),

Gene: Megatron06_64 Start: 46630, Stop: 48687, Start Num: 31

Candidate Starts for Megatron06_64:

(Start: 31 @46630 has 19 MA's), (50, 46690), (51, 46693), (Start: 72 @46786 has 3 MA's), (75, 46798), (78, 46819), (101, 46942), (102, 46945), (104, 46954), (109, 46987), (110, 47008), (113, 47056), (118, 47098), (129, 47161), (131, 47182), (132, 47188), (140, 47242), (186, 47428), (189, 47440), (195, 47458), (197, 47473), (199, 47479), (233, 47797), (234, 47800), (238, 47845), (246, 47896), (248, 47908), (261, 47998), (264, 48010), (269, 48043), (274, 48067), (280, 48076), (297, 48166), (301, 48199), (311, 48310), (312, 48313), (313, 48316), (314, 48319), (319, 48355), (321, 48373), (330, 48439), (332, 48457), (362, 48634),

Gene: MerCougar_75 Start: 57668, Stop: 55593, Start Num: 22

Candidate Starts for MerCougar_75:

(Start: 22 @57668 has 31 MA's), (49, 57548), (Start: 60 @57503 has 1 MA's), (61, 57500), (108, 57257), (116, 57200), (123, 57149), (131, 57095), (141, 57032), (167, 56942), (168, 56939), (174, 56915), (181, 56879), (205, 56723), (209, 56699), (220, 56576), (233, 56465), (236, 56441), (248, 56342), (255, 56288), (266, 56234), (271, 56192), (284, 56153), (287, 56126), (293, 56084), (295, 56051), (300, 56015), (306, 55970), (307, 55958), (312, 55898), (332, 55754), (346, 55670),

Gene: MoiGyank_66 Start: 41573, Stop: 43489, Start Num: 31

Candidate Starts for MoiGyank_66:

(Start: 31 @41573 has 19 MA's), (Start: 32 @41576 has 13 MA's), (Start: 41 @41588 has 2 MA's), (52, 41636), (Start: 62 @41669 has 3 MA's), (76, 41738), (92, 41828), (96, 41855), (99, 41864), (111, 41936), (129, 42056), (136, 42119), (162, 42209), (197, 42365), (200, 42389), (203, 42431), (210, 42479), (212, 42500), (213, 42521), (218, 42578), (220, 42596), (225, 42632), (231, 42674), (238, 42734), (251, 42830), (252, 42833), (290, 43010), (298, 43061), (310, 43151), (312, 43187), (314, 43193), (319, 43229), (321, 43247), (328, 43286), (339, 43388), (343, 43403), (348, 43424),

Gene: MontyDev_66 Start: 47606, Stop: 49366, Start Num: 105

Candidate Starts for MontyDev_66:

(Start: 105 @47606 has 8 MA's), (114, 47675), (127, 47771), (130, 47780), (141, 47861), (153, 47906), (192, 48083), (197, 48107), (202, 48155), (209, 48215), (211, 48227), (216, 48293), (230, 48416), (233, 48440), (236, 48464), (248, 48668), (251, 48701), (254, 48716), (261, 48755), (262, 48758), (264, 48767), (284, 48836), (302, 48968), (312, 49091), (313, 49094), (317, 49121), (321, 49151), (323, 49157), (324, 49160), (327, 49178), (328, 49190), (348, 49325), (350, 49352), (352, 49355),

Gene: Mopey_54 Start: 39729, Stop: 41672, Start Num: 33

Candidate Starts for Mopey_54:

(Start: 33 @39729 has 24 MA's), (45, 39756), (65, 39828), (73, 39882), (84, 39942), (87, 39960), (88, 39969), (98, 40020), (106, 40062), (111, 40098), (123, 40185), (135, 40278), (137, 40293), (143, 40314), (177, 40416), (180, 40449), (184, 40473), (199, 40533), (207, 40620), (214, 40695), (226, 40785), (233, 40836), (234, 40839), (245, 40929), (248, 40947), (251, 40980), (261, 41034), (264, 41046), (267, 41064), (284, 41127), (295, 41211), (310, 41328), (312, 41376), (322, 41439), (332, 41523),

Gene: MrMiyagi_73 Start: 45205, Stop: 47052, Start Num: 62

Candidate Starts for MrMiyagi_73:

(Start: 62 @45205 has 3 MA's), (67, 45223), (Start: 72 @45259 has 3 MA's), (81, 45310), (104, 45418), (109, 45451), (116, 45511), (121, 45553), (128, 45592), (143, 45688), (146, 45700), (154, 45727), (157, 45742), (159, 45751), (173, 45790), (176, 45805), (190, 45892), (193, 45904), (204, 46003), (205, 46009), (209, 46033), (214, 46093), (222, 46171), (227, 46198), (231, 46228), (233, 46240), (236, 46264), (248, 46342), (251, 46375), (254, 46390), (259, 46414), (260, 46417), (264, 46441), (312, 46765), (315, 46774), (318, 46801), (321, 46825), (329, 46870), (332, 46912), (337, 46960), (342, 46978), (353, 47035),

Gene: NadineRae_71 Start: 52357, Stop: 50276, Start Num: 22

Candidate Starts for NadineRae_71:

(Start: 22 @52357 has 31 MA's), (74, 52126), (123, 51838), (129, 51805), (131, 51784), (138, 51730), (140, 51724), (141, 51721), (167, 51631), (168, 51628), (181, 51568), (205, 51412), (220, 51265), (229, 51184), (233, 51157), (236, 51133), (248, 51031), (255, 50977), (258, 50962), (271, 50881), (284, 50842), (291, 50779), (295, 50740), (297, 50734), (300, 50704), (312, 50587), (322, 50524), (330, 50461), (332, 50443), (346, 50359),

Gene: NatB6_72 Start: 55674, Stop: 53746, Start Num: 53

Candidate Starts for NatB6_72:

(1, 56310), (4, 56109), (6, 56016), (7, 56004), (9, 55986), (Start: 22 @55812 has 31 MA's), (Start: 53 @55674 has 2 MA's), (57, 55650), (100, 55446), (108, 55401), (123, 55293), (140, 55179), (141, 55176), (167, 55086), (168, 55083), (181, 55023), (203, 54885), (205, 54867), (209, 54843), (220, 54720), (233, 54615), (248, 54489), (255, 54435), (260, 54414), (284, 54300), (295, 54204), (297, 54198), (300, 54168), (307, 54111), (312, 54051), (322, 53988), (332, 53907),

Gene: Nilo_68 Start: 47960, Stop: 49720, Start Num: 105

Candidate Starts for Nilo_68:

(Start: 105 @47960 has 8 MA's), (114, 48029), (127, 48125), (130, 48134), (141, 48215), (153, 48260), (197, 48461), (202, 48509), (209, 48569), (211, 48581), (216, 48647), (230, 48770), (233, 48794), (236, 48818), (248, 49022), (251, 49055), (254, 49070), (261, 49109), (262, 49112), (264, 49121), (284, 49190), (302, 49322), (312, 49445), (313, 49448), (317, 49475), (321, 49505), (323, 49511), (324, 49514), (327, 49532), (328, 49544), (348, 49679), (352, 49709),

Gene: NorManre_63 Start: 40960, Stop: 42873, Start Num: 32

Candidate Starts for NorManre_63:

(14, 40834), (15, 40843), (16, 40855), (21, 40888), (Start: 31 @40957 has 19 MA's), (Start: 32 @40960 has 13 MA's), (Start: 41 @40972 has 2 MA's), (52, 41020), (76, 41122), (92, 41212), (96, 41239), (99, 41248), (111, 41320), (129, 41440), (136, 41503), (162, 41593), (170, 41620), (197, 41749), (200, 41773), (203, 41815), (210, 41863), (212, 41884), (213, 41905), (218, 41962), (220, 41980), (225, 42016), (231, 42058), (238, 42118), (251, 42214), (252, 42217), (290, 42394), (298, 42445), (310, 42535), (312, 42571), (314, 42577), (321, 42631), (328, 42670), (339, 42772), (343, 42787), (348, 42808), (361, 42865),

Gene: NosilaM_73 Start: 56110, Stop: 54188, Start Num: 60

Candidate Starts for NosilaM_73:

(Start: 22 @56275 has 31 MA's), (Start: 60 @56110 has 1 MA's), (61, 56107), (108, 55852), (123, 55744), (131, 55690), (141, 55627), (167, 55537), (168, 55534), (174, 55510), (181, 55474), (203, 55336), (205, 55318), (207, 55309), (209, 55294), (220, 55171), (229, 55087), (233, 55060), (236, 55036), (248, 54937), (255, 54883), (266, 54829), (271, 54787), (284, 54748), (293, 54679), (295, 54646), (300, 54610), (306, 54565), (307, 54553), (312, 54493), (322, 54430), (346, 54265),

Gene: Nova_52 Start: 40183, Stop: 42126, Start Num: 33

Candidate Starts for Nova_52:

(27, 40120), (Start: 33 @40183 has 24 MA's), (45, 40210), (65, 40282), (73, 40336), (84, 40396), (88, 40423), (98, 40474), (99, 40477), (106, 40516), (111, 40552), (123, 40639), (135, 40732), (137, 40747), (143, 40768), (177, 40870), (180, 40903), (184, 40927), (199, 40987), (207, 41074), (214, 41149), (226, 41239), (233, 41290), (234, 41293), (245, 41383), (248, 41401), (251, 41434), (264, 41500), (267, 41518), (284, 41581), (295, 41665), (310, 41782), (312, 41830), (322, 41893), (332, 41977),

Gene: NovaSharks_62 Start: 39405, Stop: 41321, Start Num: 31

Candidate Starts for NovaSharks_62:

(Start: 31 @39405 has 19 MA's), (Start: 32 @39408 has 13 MA's), (Start: 41 @39420 has 2 MA's), (52, 39468), (Start: 62 @39501 has 3 MA's), (92, 39660), (96, 39687), (99, 39696), (111, 39768), (129, 39888), (136, 39951), (162, 40041), (170, 40068), (197, 40197), (200, 40221), (203, 40263), (204, 40275), (207, 40290), (210, 40311), (212, 40332), (213, 40353), (218, 40410), (220, 40428), (225, 40464), (231, 40506), (238, 40566), (251, 40662), (252, 40665), (290, 40842), (298, 40893), (310, 40983), (312, 41019), (314, 41025), (321, 41079), (328, 41118), (339, 41220), (343, 41235), (348, 41256),

Gene: NovumRegina_72 Start: 56100, Stop: 54034, Start Num: 22

Candidate Starts for NovumRegina_72:

(6, 56304), (7, 56292), (9, 56274), (Start: 22 @56100 has 31 MA's), (Start: 53 @55962 has 2 MA's), (57, 55938), (100, 55734), (108, 55689), (123, 55581), (140, 55467), (141, 55464), (167, 55374), (168, 55371), (181, 55311), (203, 55173), (205, 55155), (209, 55131), (220, 55008), (233, 54903), (248, 54777), (255, 54723), (283, 54597), (284, 54588), (286, 54564), (295, 54492), (297, 54486), (300, 54456), (307, 54399), (312, 54339), (322, 54276), (332, 54195),

Gene: Oaker_60 Start: 46344, Stop: 48401, Start Num: 31

Candidate Starts for Oaker_60:

(Start: 31 @46344 has 19 MA's), (50, 46404), (51, 46407), (Start: 72 @46500 has 3 MA's), (75, 46512), (78, 46533), (101, 46656), (102, 46659), (104, 46668), (109, 46701), (110, 46722), (113, 46770), (118, 46812), (129, 46875), (131, 46896), (132, 46902), (140, 46956), (186, 47142), (189, 47154), (195, 47172), (197, 47187), (199, 47193), (233, 47511), (234, 47514), (238, 47559), (246, 47610), (248, 47622), (261, 47712), (264, 47724), (269, 47757), (274, 47781), (280, 47790), (297, 47880), (301, 47913), (311, 48024), (312, 48027), (313, 48030), (314, 48033), (319, 48069), (321, 48087), (330, 48153), (332, 48171), (362, 48348),

Gene: Onyinye_65 Start: 45953, Stop: 47881, Start Num: 33

Candidate Starts for Onyinye_65:

(Start: 33 @45953 has 24 MA's), (43, 45974), (50, 46004), (Start: 72 @46103 has 3 MA's), (84, 46166), (96, 46238), (99, 46247), (109, 46295), (137, 46511), (143, 46532), (149, 46553), (151, 46556), (156, 46568), (165, 46595), (190, 46718), (199, 46754), (204, 46826), (206, 46835), (211, 46868), (215, 46925), (217, 46937), (226, 47006), (227, 47015), (230, 47033), (233, 47057), (246, 47153), (248, 47165), (251, 47198), (260, 47240), (270, 47303), (294, 47408), (318, 47624), (321, 47648), (322, 47651), (329, 47693), (331, 47723), (334, 47747), (358, 47864),

Gene: OtterstedtS21_60 Start: 40582, Stop: 42495, Start Num: 32

Candidate Starts for OtterstedtS21_60:

(Start: 31 @40579 has 19 MA's), (Start: 32 @40582 has 13 MA's), (Start: 41 @40594 has 2 MA's), (52, 40642), (Start: 62 @40675 has 3 MA's), (76, 40744), (92, 40834), (96, 40861), (99, 40870), (111, 40942), (123, 41029), (129, 41062), (136, 41125), (162, 41215), (197, 41371), (200, 41395), (203, 41437), (210, 41485), (212, 41506), (213, 41527), (218, 41584), (225, 41638), (231, 41680), (238, 41740), (251, 41836), (252, 41839), (290, 42016), (298, 42067), (310, 42157), (312, 42193), (314, 42199), (321, 42253), (328, 42292), (339, 42394), (343, 42409), (348, 42430),

Gene: Outis_73 Start: 56760, Stop: 54685, Start Num: 22

Candidate Starts for Outis_73:

(Start: 22 @56760 has 31 MA's), (49, 56640), (Start: 60 @56595 has 1 MA's), (61, 56592), (108, 56349), (116, 56292), (123, 56241), (131, 56187), (141, 56124), (167, 56034), (168, 56031), (174, 56007), (181, 55971), (205, 55815), (209, 55791), (220, 55668), (233, 55557), (236, 55533), (248, 55434), (255, 55380), (266, 55326), (271, 55284), (284, 55245), (293, 55176), (295, 55143), (300, 55107), (306, 55062), (307, 55050), (312, 54990), (322, 54927), (332, 54846), (346, 54762),

Gene: P1201_75 Start: 57035, Stop: 55065, Start Num: 40

Candidate Starts for P1201_75:

(Start: 40 @57035 has 8 MA's), (Start: 72 @56897 has 3 MA's), (77, 56873), (103, 56741), (119, 56618), (123, 56600), (124, 56597), (167, 56390), (199, 56249), (225, 55979), (228, 55955), (231, 55934), (237, 55886), (248, 55790), (251, 55757), (262, 55700), (263, 55694), (264, 55691), (297, 55502), (318, 55319), (322, 55292), (330, 55229), (332, 55211),

Gene: PBI1_50 Start: 39660, Stop: 41603, Start Num: 33

Candidate Starts for PBI1_50:

(Start: 33 @39660 has 24 MA's), (45, 39687), (65, 39759), (73, 39813), (84, 39873), (87, 39891), (88, 39900), (98, 39951), (106, 39993), (111, 40029), (123, 40116), (135, 40209), (137, 40224), (143, 40245), (177, 40347), (180, 40380), (184, 40404), (199, 40464), (207, 40551), (214, 40626), (226, 40716), (233, 40767), (234, 40770), (245, 40860), (248, 40878), (251, 40911), (261, 40965), (264, 40977), (267, 40995), (284, 41058), (295, 41142), (310, 41259), (312, 41307), (322, 41370), (332, 41454),

Gene: PLOT_53 Start: 39756, Stop: 41699, Start Num: 33

Candidate Starts for PLOT_53:

(27, 39693), (Start: 33 @39756 has 24 MA's), (45, 39783), (65, 39855), (73, 39909), (84, 39969), (88, 39996), (98, 40047), (106, 40089), (111, 40125), (123, 40212), (135, 40305), (137, 40320), (143, 40341), (177, 40443), (180, 40476), (184, 40500), (199, 40560), (207, 40647), (214, 40722), (226, 40812), (233, 40863), (234, 40866), (245, 40956), (248, 40974), (251, 41007), (264, 41073), (267, 41091), (284, 41154), (295, 41238), (310, 41355), (312, 41403), (322, 41466), (332, 41550),

Gene: Papyrus_66 Start: 47571, Stop: 49331, Start Num: 105

Candidate Starts for Papyrus_66:

(Start: 105 @47571 has 8 MA's), (114, 47640), (127, 47736), (130, 47745), (141, 47826), (153, 47871), (197, 48072), (202, 48120), (209, 48180), (211, 48192), (216, 48258), (230, 48381), (233, 48405), (236, 48429), (248, 48633), (251, 48666), (254, 48681), (261, 48720), (262, 48723), (264, 48732), (284, 48801), (302, 48933), (312, 49056), (313, 49059), (317, 49086), (321, 49116), (323, 49122), (324, 49125), (327, 49143), (328, 49155), (348, 49290), (350, 49317), (352, 49320),

Gene: ParvusTarda_59 Start: 39954, Stop: 41870, Start Num: 31

Candidate Starts for ParvusTarda_59:

(14, 39831), (15, 39840), (16, 39852), (21, 39885), (Start: 31 @39954 has 19 MA's), (Start: 32 @39957 has 13 MA's), (Start: 41 @39969 has 2 MA's), (52, 40017), (Start: 62 @40050 has 3 MA's), (76, 40119), (92, 40209), (96, 40236), (99, 40245), (111, 40317), (123, 40404), (129, 40437), (136, 40500), (162, 40590), (197, 40746), (200, 40770), (203, 40812), (210, 40860), (212, 40881), (213, 40902), (218, 40959), (225, 41013), (231, 41055), (238, 41115), (251, 41211), (252, 41214), (290, 41391), (298, 41442), (310, 41532), (312, 41568), (314, 41574), (321, 41628), (328, 41667), (339, 41769), (343, 41784), (348, 41805),

Gene: Patience_76 Start: 49716, Stop: 51749, Start Num: 36

Candidate Starts for Patience_76:

(Start: 36 @49716 has 3 MA's), (44, 49740), (59, 49803), (74, 49869), (82, 49920), (83, 49923), (104, 50031), (109, 50064), (113, 50103), (117, 50127), (126, 50190), (129, 50208), (130, 50211), (131, 50229), (132, 50235), (144, 50304), (152, 50331), (158, 50343), (169, 50376), (186, 50478), (204, 50601), (209, 50631), (218, 50736), (220, 50754), (232, 50844), (233, 50847), (241, 50949), (243, 50988), (246, 51015), (247, 51021), (248, 51027), (254, 51075), (256, 51093), (261, 51120), (264, 51132), (266, 51141), (311, 51429), (330, 51558), (334, 51591), (336, 51609), (347, 51663), (354, 51702),

Gene: Patio_74 Start: 56655, Stop: 54598, Start Num: 22

Candidate Starts for Patio_74:

(5, 56943), (8, 56835), (Start: 22 @56655 has 31 MA's), (104, 56280), (118, 56172), (124, 56139), (131, 56088), (140, 56028), (141, 56025), (160, 55953), (167, 55935), (181, 55872), (182, 55866), (188, 55839), (201, 55773), (203, 55734), (205, 55716), (209, 55692), (214, 55632), (220, 55569), (223, 55536), (233, 55473), (248, 55350), (258, 55281), (261, 55263), (284, 55158), (285, 55149), (293, 55089), (295, 55056), (297, 55050), (300, 55020), (307, 54963), (312, 54903), (317, 54873), (322, 54840), (346, 54675),

Gene: Patos_63 Start: 40959, Stop: 42872, Start Num: 32

Candidate Starts for Patos_63:

(14, 40833), (15, 40842), (16, 40854), (21, 40887), (Start: 31 @40956 has 19 MA's), (Start: 32 @40959 has 13 MA's), (Start: 41 @40971 has 2 MA's), (52, 41019), (76, 41121), (92, 41211), (96, 41238), (99, 41247), (111, 41319), (129, 41439), (136, 41502), (162, 41592), (170, 41619), (197, 41748), (200, 41772), (203, 41814), (210, 41862), (212, 41883), (213, 41904), (218, 41961), (220, 41979), (225, 42015), (231, 42057), (238, 42117), (251, 42213), (252, 42216), (290, 42393), (298, 42444), (310, 42534), (312, 42570), (314, 42576), (321, 42630), (328, 42669), (339, 42771), (343, 42786), (348, 42807), (361, 42864),

Gene: Penelope2018_53 Start: 39774, Stop: 41717, Start Num: 33

Candidate Starts for Penelope2018_53:

(24, 39705), (Start: 33 @39774 has 24 MA's), (45, 39801), (65, 39873), (73, 39927), (84, 39987), (87, 40005), (88, 40014), (98, 40065), (106, 40107), (111, 40143), (123, 40230), (135, 40323), (137, 40338), (143, 40359), (177, 40461), (180, 40494), (184, 40518), (199, 40578), (207, 40665), (214, 40740), (226, 40830), (233, 40881), (234, 40884), (245, 40974), (248, 40992), (251, 41025), (261, 41079), (264, 41091), (267, 41109), (284, 41172), (295, 41256), (310, 41373), (312, 41421), (322, 41484), (332, 41568),

Gene: Penjamin420_61 Start: 40748, Stop: 42664, Start Num: 31

Candidate Starts for Penjamin420_61:

(Start: 29 @40736 has 1 MA's), (Start: 31 @40748 has 19 MA's), (Start: 32 @40751 has 13 MA's), (Start: 41 @40763 has 2 MA's), (52, 40811), (76, 40913), (92, 41003), (96, 41030), (99, 41039), (111, 41111), (123, 41198), (129, 41231), (136, 41294), (140, 41312), (162, 41384), (170, 41411), (197, 41540), (200, 41564), (203, 41606), (210, 41654), (212, 41675), (213, 41696), (218, 41753), (220, 41771), (225, 41807), (231, 41849), (238, 41909), (251, 42005), (252, 42008), (298, 42236), (310, 42326), (312, 42362), (314, 42368), (321, 42422), (328, 42461), (339, 42563), (343, 42578), (348, 42599),

Gene: PeteyPab_71 Start: 52509, Stop: 50584, Start Num: 40

Candidate Starts for PeteyPab_71:

(20, 52602), (Start: 23 @52596 has 5 MA's), (Start: 40 @52509 has 8 MA's), (80, 52338), (90, 52284), (123, 52080), (150, 51924), (167, 51873), (168, 51870), (179, 51828), (198, 51741), (199, 51738), (204, 51666), (206, 51657), (247, 51306), (248, 51300), (251, 51267), (307, 50928), (314, 50862), (316, 50850), (318, 50832), (322, 50805), (330, 50742), (334, 50709), (347, 50637),

Gene: Phomeo_72 Start: 56270, Stop: 54342, Start Num: 53

Candidate Starts for Phomeo_72:

(1, 56906), (4, 56705), (6, 56612), (7, 56600), (9, 56582), (Start: 22 @56408 has 31 MA's), (Start: 53 @56270 has 2 MA's), (57, 56246), (100, 56042), (108, 55997), (123, 55889), (140, 55775), (141, 55772), (167, 55682), (168, 55679), (181, 55619), (203, 55481), (205, 55463), (209, 55439), (220, 55316), (233, 55211), (248, 55085), (255, 55031), (283, 54905), (284, 54896), (286, 54872), (295, 54800), (297, 54794), (300, 54764), (307, 54707), (312, 54647), (322, 54584), (332, 54503),

Gene: Phreeze_60 Start: 45650, Stop: 47707, Start Num: 31

Candidate Starts for Phreeze_60:

(Start: 31 @45650 has 19 MA's), (50, 45710), (51, 45713), (Start: 72 @45806 has 3 MA's), (75, 45818), (78, 45839), (101, 45962), (102, 45965), (104, 45974), (109, 46007), (110, 46028), (113, 46076), (129, 46181), (131, 46202), (132, 46208), (140, 46262), (186, 46448), (189, 46460), (195, 46478), (197, 46493), (199, 46499), (233, 46817), (234, 46820), (238, 46865), (246, 46916), (248, 46928), (261, 47018), (264, 47030), (269, 47063), (274, 47087), (280, 47096), (297, 47186), (301, 47219), (311, 47330), (312, 47333), (313, 47336), (314, 47339), (321, 47393), (330, 47459), (332, 47477), (362, 47654),

Gene: Pleakley_82 Start: 56142, Stop: 54094, Start Num: 22

Candidate Starts for Pleakley_82:

(Start: 22 @56142 has 31 MA's), (56, 55989), (63, 55974), (78, 55893), (104, 55770), (108, 55740), (123, 55632), (129, 55599), (134, 55548), (141, 55515), (167, 55425), (175, 55392), (181, 55362), (198, 55287), (205, 55206), (212, 55155), (220, 55059), (223, 55026), (229, 54990), (233, 54963), (247, 54846), (248, 54840), (258, 54771), (261, 54753), (264, 54741), (293, 54579), (297, 54546), (300, 54516), (302, 54501), (307, 54459), (322, 54336), (332, 54255), (335, 54231), (346, 54171),

Gene: Polyzuki_72 Start: 53158, Stop: 51122, Start Num: 23

Candidate Starts for Polyzuki_72:

(9, 53326), (Start: 23 @53158 has 5 MA's), (34, 53092), (47, 53050), (108, 52765), (116, 52708), (123, 52657), (126, 52642), (137, 52552), (141, 52540), (167, 52447), (183, 52375), (199, 52306), (204, 52234), (212, 52177), (233, 51997), (236, 51973), (242, 51910), (248, 51874), (261, 51787), (287, 51655), (292, 51616), (293, 51613), (297, 51568), (312, 51421), (322, 51358), (329, 51316), (332, 51277), (335, 51253),

Gene: PotatoChip_72 Start: 52511, Stop: 50586, Start Num: 40

Candidate Starts for PotatoChip_72:

(20, 52604), (Start: 23 @52598 has 5 MA's), (Start: 40 @52511 has 8 MA's), (80, 52340), (90, 52286), (123, 52082), (150, 51926), (167, 51875), (168, 51872), (179, 51830), (198, 51743), (199, 51740), (204, 51668), (206, 51659), (247, 51308), (248, 51302), (251, 51269), (307, 50930), (314, 50864), (316, 50852), (318, 50834), (322, 50807), (330, 50744), (334, 50711), (347, 50639),

Gene: Prager_53 Start: 39749, Stop: 41692, Start Num: 33

Candidate Starts for Prager_53:

(Start: 33 @39749 has 24 MA's), (45, 39776), (65, 39848), (73, 39902), (84, 39962), (87, 39980), (88, 39989), (98, 40040), (106, 40082), (111, 40118), (123, 40205), (135, 40298), (137, 40313), (143, 40334), (177, 40436), (180, 40469), (184, 40493), (199, 40553), (207, 40640), (214, 40715), (226, 40805), (233, 40856), (234, 40859), (245, 40949), (248, 40967), (251, 41000), (261, 41054), (264, 41066), (267, 41084), (284, 41147), (295, 41231), (310, 41348), (312, 41396), (322, 41459), (332, 41543),

Gene: Predator_60 Start: 44295, Stop: 46307, Start Num: 31

Candidate Starts for Predator_60:

(Start: 31 @44295 has 19 MA's), (39, 44310), (48, 44349), (54, 44379), (58, 44388), (64, 44403), (74, 44457), (75, 44463), (93, 44568), (104, 44619), (106, 44640), (109, 44652), (113, 44721), (116, 44742), (125, 44802), (129, 44826), (131, 44847), (132, 44853), (186, 45093), (189, 45105), (197, 45138), (199, 45144), (209, 45246), (232, 45459), (233, 45462), (238, 45510), (246, 45561), (247, 45567), (248, 45573), (261, 45663), (264, 45675), (289, 45798), (297, 45831), (311, 45975), (315, 45987), (319, 46020), (330, 46104), (332, 46122), (333, 46125), (338, 46173), (349, 46230),

Gene: Puissant_62 Start: 45753, Stop: 47810, Start Num: 31

Candidate Starts for Puissant_62:

(Start: 31 @45753 has 19 MA's), (48, 45807), (51, 45816), (Start: 72 @45909 has 3 MA's), (74, 45915), (78, 45942), (102, 46068), (104, 46077), (109, 46110), (110, 46131), (113, 46179), (116, 46200), (129, 46284), (130, 46287), (131, 46305), (132, 46311), (140, 46365), (186, 46551), (189, 46563), (195, 46581), (197, 46596), (199, 46602), (233, 46920), (234, 46923), (238, 46968), (246, 47019), (248, 47031), (261, 47121), (264, 47133), (269, 47166), (274, 47190), (280, 47199), (297, 47289), (301, 47322), (311, 47433), (312, 47436), (313, 47439), (314, 47442), (321, 47496), (324, 47505), (332, 47580), (335, 47604), (338, 47631), (362, 47757),

Gene: Ranch_60 Start: 39414, Stop: 41327, Start Num: 32

Candidate Starts for Ranch_60:

(Start: 29 @39399 has 1 MA's), (Start: 31 @39411 has 19 MA's), (Start: 32 @39414 has 13 MA's), (Start: 41 @39426 has 2 MA's), (52, 39474), (Start: 62 @39507 has 3 MA's), (76, 39576), (92, 39666), (96, 39693), (99, 39702), (111, 39774), (129, 39894), (136, 39957), (162, 40047), (170, 40074), (197, 40203), (200, 40227), (203, 40269), (210, 40317), (211, 40323), (212, 40338), (213, 40359), (218, 40416), (225, 40470), (231, 40512), (238, 40572), (251, 40668), (252, 40671), (290, 40848), (298, 40899), (310, 40989), (312, 41025), (314, 41031), (321, 41085), (328, 41124), (339, 41226), (343, 41241), (348, 41262),

Gene: Riparian_68 Start: 47408, Stop: 49168, Start Num: 105

Candidate Starts for Riparian_68:

(Start: 105 @47408 has 8 MA's), (114, 47477), (127, 47573), (130, 47582), (141, 47663), (153, 47708), (197, 47909), (202, 47957), (209, 48017), (211, 48029), (216, 48095), (230, 48218), (233, 48242), (236, 48266), (248, 48470), (251, 48503), (254, 48518), (261, 48557), (262, 48560), (264, 48569), (284, 48638), (302, 48770), (312, 48893), (313, 48896), (317, 48923), (321, 48953), (323, 48959), (324, 48962), (327, 48980), (328, 48992), (348, 49127), (352, 49157),

Gene: Rope_66 Start: 47562, Stop: 49322, Start Num: 105

Candidate Starts for Rope_66:

(Start: 105 @47562 has 8 MA's), (114, 47631), (127, 47727), (130, 47736), (141, 47817), (153, 47862), (197, 48063), (202, 48111), (209, 48171), (211, 48183), (216, 48249), (230, 48372), (233, 48396), (236, 48420), (248, 48624), (251, 48657), (254, 48672), (261, 48711), (262, 48714), (264, 48723), (284, 48792), (302, 48924), (312, 49047), (313, 49050), (317, 49077), (321, 49107), (323, 49113), (324, 49116), (327, 49134), (328, 49146), (348, 49281), (350, 49308), (352, 49311),

Gene: Rumi_61 Start: 39105, Stop: 41018, Start Num: 32

Candidate Starts for Rumi_61:

(Start: 31 @39102 has 19 MA's), (Start: 32 @39105 has 13 MA's), (Start: 41 @39117 has 2 MA's), (52, 39165), (Start: 62 @39198 has 3 MA's), (92, 39357), (96, 39384), (99, 39393), (111, 39465), (129, 39585), (136, 39648), (162, 39738), (170, 39765), (197, 39894), (200, 39918), (203, 39960), (204, 39972), (207, 39987), (210, 40008), (212, 40029), (213, 40050), (218, 40107), (220, 40125), (225, 40161), (231, 40203), (238, 40263), (251, 40359), (252, 40362), (290, 40539), (298, 40590), (310, 40680), (312, 40716), (314, 40722), (321, 40776), (328, 40815), (339, 40917), (343, 40932), (348, 40953),

Gene: Sadboi_61 Start: 41296, Stop: 43209, Start Num: 32

Candidate Starts for Sadboi_61:

(Start: 31 @41293 has 19 MA's), (Start: 32 @41296 has 13 MA's), (Start: 41 @41308 has 2 MA's), (52, 41356), (Start: 62 @41389 has 3 MA's), (76, 41458), (92, 41548), (96, 41575), (99, 41584), (111, 41656), (123, 41743), (129, 41776), (136, 41839), (162, 41929), (170, 41956), (197, 42085), (200, 42109), (203, 42151), (210, 42199), (212, 42220), (213, 42241), (218, 42298), (225, 42352), (231, 42394), (238, 42454), (251, 42550), (252, 42553), (290, 42730), (298, 42781), (310, 42871), (312, 42907), (314, 42913), (321, 42967), (328, 43006), (339, 43108), (343, 43123), (348, 43144),

Gene: Sampudon_60 Start: 41637, Stop: 43553, Start Num: 31

Candidate Starts for Sampudon_60:

(Start: 31 @41637 has 19 MA's), (Start: 32 @41640 has 13 MA's), (Start: 41 @41652 has 2 MA's), (52, 41700), (76, 41802), (92, 41892), (96, 41919), (99, 41928), (111, 42000), (129, 42120), (136, 42183), (162, 42273), (170, 42300), (197, 42429), (200, 42453), (203, 42495), (210, 42543), (212, 42564), (213, 42585), (218, 42642), (225, 42696), (231, 42738), (238, 42798), (251, 42894), (252, 42897), (290, 43074), (298, 43125), (309, 43212), (310, 43215), (312, 43251), (314, 43257), (321, 43311), (328, 43350), (339, 43452), (343, 43467), (348, 43488),

Gene: Send513_66 Start: 47939, Stop: 49699, Start Num: 105

Candidate Starts for Send513_66:

(Start: 105 @47939 has 8 MA's), (114, 48008), (127, 48104), (130, 48113), (141, 48194), (153, 48239), (197, 48440), (202, 48488), (209, 48548), (211, 48560), (216, 48626), (230, 48749), (233, 48773), (236, 48797), (248, 49001), (251, 49034), (254, 49049), (261, 49088), (262, 49091), (264, 49100), (284, 49169), (302, 49301), (312, 49424), (313, 49427), (317, 49454), (321, 49484), (323, 49490), (324, 49493), (327, 49511), (328, 49523), (348, 49658), (352, 49688),

Gene: Sienna_50 Start: 36692, Stop: 38746, Start Num: 37

Candidate Starts for Sienna_50:

(Start: 37 @36692 has 8 MA's), (46, 36716), (64, 36779), (79, 36863), (86, 36905), (122, 37127), (129, 37163), (139, 37238), (148, 37277), (166, 37319), (173, 37337), (177, 37358), (178, 37370), (189, 37430), (194, 37445), (197, 37463), (204, 37541), (207, 37556), (208, 37559), (212, 37598), (213, 37619), (224, 37721), (233, 37778), (235, 37799), (236, 37802), (237, 37814), (245, 37862), (246, 37868), (252, 37916), (257, 37949), (262, 37973), (266, 37991), (270, 38021), (276, 38144), (279, 38177), (281, 38189), (284, 38204), (289, 38243), (295, 38288), (298, 38315), (308, 38399), (316, 38462), (321, 38504), (324, 38513), (325, 38522), (330, 38570), (331, 38579), (332, 38591), (334, 38606), (340, 38648),

Gene: SirHarley_54 Start: 39905, Stop: 41848, Start Num: 33

Candidate Starts for SirHarley_54:

(27, 39842), (Start: 33 @39905 has 24 MA's), (45, 39932), (65, 40004), (73, 40058), (84, 40118), (88, 40145), (98, 40196), (106, 40238), (111, 40274), (123, 40361), (135, 40454), (137, 40469), (143, 40490), (177, 40592), (180, 40625), (184, 40649), (199, 40709), (207, 40796), (214, 40871), (226, 40961), (233, 41012), (234, 41015), (245, 41105), (248, 41123), (251, 41156), (264, 41222), (267, 41240), (284, 41303), (295, 41387), (310, 41504), (312, 41552), (322, 41615), (332, 41699),

Gene: Skysand_75 Start: 57318, Stop: 55261, Start Num: 22

Candidate Starts for Skysand_75:

(5, 57606), (8, 57498), (Start: 22 @57318 has 31 MA's), (104, 56943), (124, 56802), (131, 56751), (140, 56691), (141, 56688), (160, 56616), (167, 56598), (181, 56535), (182, 56529), (201, 56436), (203, 56397), (205, 56379), (209, 56355), (220, 56232), (223, 56199), (233, 56136), (248, 56013), (258, 55944), (261, 55926), (284, 55821), (293, 55752), (297, 55713), (299, 55689), (300, 55683), (307, 55626), (312, 55566), (317, 55536), (322, 55503), (346, 55338), (354, 55296),

Gene: StarStruck_73 Start: 56760, Stop: 54685, Start Num: 22

Candidate Starts for StarStruck_73:

(Start: 22 @56760 has 31 MA's), (49, 56640), (Start: 60 @56595 has 1 MA's), (61, 56592), (108, 56349), (116, 56292), (123, 56241), (131, 56187), (141, 56124), (167, 56034), (168, 56031), (174, 56007), (181, 55971), (205, 55815), (209, 55791), (220, 55668), (233, 55557), (236, 55533), (248, 55434), (255, 55380), (266, 55326), (271, 55284), (284, 55245), (293, 55176), (295, 55143), (300, 55107), (306, 55062), (307, 55050), (312, 54990), (322, 54927), (332, 54846), (346, 54762),

Gene: Stickynote_71 Start: 52712, Stop: 50787, Start Num: 40

Candidate Starts for Stickynote_71:

(20, 52805), (Start: 40 @52712 has 8 MA's), (80, 52541), (90, 52487), (123, 52283), (150, 52127), (167, 52076), (168, 52073), (179, 52031), (198, 51944), (199, 51941), (204, 51869), (206, 51860), (248, 51503), (251, 51470), (262, 51413), (307, 51131), (314, 51065), (316, 51053), (318, 51035), (319, 51029), (322, 51008), (330, 50945), (334, 50912), (339, 50873),

Gene: Sukkupi_71 Start: 54175, Stop: 52319, Start Num: 72

Candidate Starts for Sukkupi_71:

(7, 54592), (9, 54574), (12, 54499), (Start: 22 @54400 has 31 MA's), (Start: 72 @54175 has 3 MA's), (123, 53881), (129, 53848), (131, 53827), (138, 53773), (140, 53767), (141, 53764), (167, 53674), (168, 53671), (181, 53611), (205, 53455), (220, 53308), (233, 53200), (236, 53176), (248, 53074), (255, 53020), (258, 53005), (271, 52924), (284, 52885), (291, 52822), (295, 52783), (297, 52777), (300, 52747), (312, 52630), (322, 52567), (330, 52504), (332, 52486), (346, 52402),

Gene: SuperSulley_74 Start: 57198, Stop: 55111, Start Num: 22

Candidate Starts for SuperSulley_74:

(Start: 22 @57198 has 31 MA's), (49, 57078), (Start: 60 @57033 has 1 MA's), (61, 57030), (108, 56775), (123, 56667), (131, 56613), (141, 56550), (167, 56460), (168, 56457), (174, 56433), (181, 56397), (203, 56259), (205, 56241), (207, 56232), (209, 56217), (220, 56094), (229, 56010), (233, 55983), (236, 55959), (248, 55860), (255, 55806), (266, 55752), (271, 55710), (284, 55671), (293, 55602), (295, 55569), (300, 55533), (306, 55488), (307, 55476), (312, 55416), (314, 55410), (322, 55353), (346, 55188), (349, 55164),

Gene: Suzy_49 Start: 37573, Stop: 39624, Start Num: 37

Candidate Starts for Suzy_49:

(Start: 37 @37573 has 8 MA's), (64, 37660), (75, 37720), (79, 37744), (86, 37786), (122, 38008), (129, 38044), (166, 38200), (173, 38218), (177, 38239), (178, 38251), (189, 38311), (194, 38326), (197,

38344), (204, 38422), (207, 38437), (208, 38440), (212, 38479), (213, 38500), (233, 38659), (235, 38680), (236, 38683), (237, 38695), (245, 38743), (246, 38749), (247, 38755), (257, 38830), (266, 38872), (270, 38902), (276, 39025), (279, 39058), (281, 39070), (289, 39124), (298, 39196), (300, 39205), (308, 39280), (315, 39334), (321, 39385), (325, 39403), (330, 39451), (331, 39460), (332, 39472), (334, 39487), (340, 39529), (347, 39559),

Gene: Terapin_51 Start: 36616, Stop: 38670, Start Num: 37

Candidate Starts for Terapin_51:

(Start: 37 @36616 has 8 MA's), (46, 36640), (64, 36703), (79, 36787), (86, 36829), (122, 37051), (129, 37087), (139, 37162), (148, 37201), (166, 37243), (173, 37261), (177, 37282), (178, 37294), (189, 37354), (194, 37369), (197, 37387), (204, 37465), (207, 37480), (208, 37483), (212, 37522), (213, 37543), (224, 37645), (233, 37702), (235, 37723), (236, 37726), (237, 37738), (245, 37786), (246, 37792), (252, 37840), (257, 37873), (262, 37897), (266, 37915), (270, 37945), (276, 38068), (279, 38101), (281, 38113), (284, 38128), (289, 38167), (295, 38212), (298, 38239), (308, 38323), (316, 38386), (321, 38428), (324, 38437), (325, 38446), (330, 38494), (331, 38503), (332, 38515), (334, 38530), (340, 38572),

Gene: Thoth_53 Start: 39727, Stop: 41670, Start Num: 33

Candidate Starts for Thoth_53:

(Start: 33 @39727 has 24 MA's), (45, 39754), (65, 39826), (73, 39880), (84, 39940), (87, 39958), (88, 39967), (98, 40018), (106, 40060), (111, 40096), (123, 40183), (135, 40276), (137, 40291), (143, 40312), (177, 40414), (180, 40447), (184, 40471), (199, 40531), (207, 40618), (214, 40693), (226, 40783), (233, 40834), (234, 40837), (245, 40927), (248, 40945), (251, 40978), (261, 41032), (264, 41044), (267, 41062), (284, 41125), (295, 41209), (310, 41326), (312, 41374), (322, 41437), (332, 41521),

Gene: Thumb_62 Start: 46085, Stop: 48142, Start Num: 31

Candidate Starts for Thumb_62:

(Start: 31 @46085 has 19 MA's), (50, 46145), (51, 46148), (Start: 72 @46241 has 3 MA's), (75, 46253), (78, 46274), (101, 46397), (102, 46400), (104, 46409), (109, 46442), (110, 46463), (113, 46511), (129, 46616), (131, 46637), (132, 46643), (140, 46697), (186, 46883), (189, 46895), (195, 46913), (197, 46928), (199, 46934), (233, 47252), (234, 47255), (238, 47300), (246, 47351), (248, 47363), (261, 47453), (264, 47465), (269, 47498), (274, 47522), (280, 47531), (297, 47621), (301, 47654), (311, 47765), (312, 47768), (313, 47771), (314, 47774), (321, 47828), (330, 47894), (332, 47912), (362, 48089),

Gene: Tillicus_57 Start: 39985, Stop: 41907, Start Num: 35

Candidate Starts for Tillicus_57:

(13, 39862), (14, 39883), (16, 39904), (28, 39934), (Start: 29 @39967 has 1 MA's), (Start: 31 @39979 has 19 MA's), (35, 39985), (Start: 41 @40003 has 2 MA's), (45, 40015), (52, 40051), (Start: 62 @40084 has 3 MA's), (64, 40087), (Start: 72 @40135 has 3 MA's), (76, 40153), (92, 40243), (95, 40261), (96, 40270), (99, 40279), (111, 40351), (129, 40471), (130, 40474), (136, 40534), (140, 40552), (162, 40624), (170, 40651), (199, 40786), (200, 40804), (203, 40846), (206, 40867), (207, 40873), (212, 40915), (213, 40936), (215, 40957), (218, 40993), (225, 41050), (227, 41062), (231, 41092), (232, 41101), (238, 41152), (251, 41248), (252, 41251), (282, 41362), (288, 41410), (295, 41452), (298, 41479), (308, 41563), (319, 41647), (321, 41665), (326, 41689), (328, 41704), (332, 41752), (334, 41767), (339, 41806), (343, 41821), (348, 41842), (361, 41899),

Gene: Tracker_72 Start: 55556, Stop: 53490, Start Num: 22

Candidate Starts for Tracker_72:

(6, 55760), (7, 55748), (9, 55730), (Start: 22 @55556 has 31 MA's), (Start: 53 @55418 has 2 MA's), (57, 55394), (100, 55190), (108, 55145), (123, 55037), (140, 54923), (141, 54920), (167, 54830), (168, 54827), (181, 54767), (203, 54629), (205, 54611), (209, 54587), (220, 54464), (233, 54359), (248,

54233), (255, 54179), (283, 54053), (284, 54044), (286, 54020), (295, 53948), (297, 53942), (300, 53912), (307, 53855), (312, 53795), (322, 53732), (332, 53651),

Gene: Troll4_53 Start: 39859, Stop: 41802, Start Num: 33

Candidate Starts for Troll4_53:

(Start: 33 @39859 has 24 MA's), (45, 39886), (65, 39958), (73, 40012), (84, 40072), (87, 40090), (88, 40099), (98, 40150), (106, 40192), (111, 40228), (123, 40315), (135, 40408), (137, 40423), (143, 40444), (177, 40546), (180, 40579), (184, 40603), (199, 40663), (207, 40750), (214, 40825), (226, 40915), (233, 40966), (234, 40969), (245, 41059), (248, 41077), (251, 41110), (261, 41164), (264, 41176), (267, 41194), (284, 41257), (295, 41341), (310, 41458), (312, 41506), (322, 41569), (332, 41653),

Gene: Turuncu_75 Start: 56841, Stop: 54784, Start Num: 22

Candidate Starts for Turuncu_75:

(5, 57126), (9, 57009), (10, 56991), (Start: 22 @56841 has 31 MA's), (123, 56328), (131, 56274), (135, 56238), (141, 56211), (163, 56133), (167, 56121), (181, 56058), (182, 56052), (201, 55959), (203, 55920), (205, 55902), (220, 55755), (223, 55722), (228, 55692), (229, 55686), (233, 55659), (248, 55536), (258, 55467), (261, 55449), (284, 55344), (285, 55335), (293, 55275), (297, 55236), (300, 55206), (303, 55188), (307, 55149), (312, 55089), (317, 55059), (322, 55026), (329, 54984), (351, 54828),

Gene: Visconti_54 Start: 39739, Stop: 41682, Start Num: 33

Candidate Starts for Visconti_54:

(Start: 33 @39739 has 24 MA's), (45, 39766), (65, 39838), (73, 39892), (84, 39952), (87, 39970), (88, 39979), (98, 40030), (106, 40072), (111, 40108), (123, 40195), (135, 40288), (137, 40303), (143, 40324), (177, 40426), (180, 40459), (184, 40483), (199, 40543), (207, 40630), (214, 40705), (226, 40795), (233, 40846), (234, 40849), (245, 40939), (248, 40957), (251, 40990), (261, 41044), (264, 41056), (267, 41074), (284, 41137), (295, 41221), (310, 41338), (312, 41386), (322, 41449), (332, 41533),

Gene: WaldoWhy_55 Start: 39836, Stop: 41779, Start Num: 33

Candidate Starts for WaldoWhy_55:

(Start: 33 @39836 has 24 MA's), (45, 39863), (65, 39935), (73, 39989), (84, 40049), (87, 40067), (88, 40076), (98, 40127), (106, 40169), (111, 40205), (123, 40292), (135, 40385), (137, 40400), (143, 40421), (177, 40523), (180, 40556), (184, 40580), (199, 40640), (207, 40727), (214, 40802), (226, 40892), (233, 40943), (234, 40946), (245, 41036), (248, 41054), (251, 41087), (261, 41141), (264, 41153), (267, 41171), (284, 41234), (295, 41318), (310, 41435), (312, 41483), (322, 41546), (332, 41630),

Gene: Weiss13_66 Start: 47645, Stop: 49405, Start Num: 105

Candidate Starts for Weiss13_66:

(Start: 105 @47645 has 8 MA's), (114, 47714), (127, 47810), (130, 47819), (141, 47900), (153, 47945), (197, 48146), (202, 48194), (209, 48254), (211, 48266), (216, 48332), (230, 48455), (233, 48479), (236, 48503), (248, 48707), (251, 48740), (254, 48755), (261, 48794), (262, 48797), (264, 48806), (284, 48875), (302, 49007), (312, 49130), (313, 49133), (317, 49160), (321, 49190), (323, 49196), (324, 49199), (327, 49217), (328, 49229), (348, 49364), (352, 49394),

Gene: Wheezy_72 Start: 55632, Stop: 53704, Start Num: 53

Candidate Starts for Wheezy_72:

(6, 55974), (7, 55962), (9, 55944), (Start: 22 @55770 has 31 MA's), (Start: 53 @55632 has 2 MA's), (57, 55608), (100, 55404), (108, 55359), (123, 55251), (140, 55137), (141, 55134), (167, 55044), (168, 55041), (181, 54981), (203, 54843), (205, 54825), (209, 54801), (220, 54678), (233, 54573), (248, 54447), (255, 54393), (283, 54267), (284, 54258), (286, 54234), (295, 54162), (297, 54156), (300,

54126), (307, 54069), (312, 54009), (322, 53946), (332, 53865),

Gene: WhoseManz_71 Start: 52415, Stop: 50334, Start Num: 22

Candidate Starts for WhoseManz_71:

(7, 52607), (9, 52589), (12, 52514), (Start: 22 @52415 has 31 MA's), (123, 51896), (129, 51863), (131, 51842), (138, 51788), (140, 51782), (141, 51779), (167, 51689), (168, 51686), (181, 51626), (205, 51470), (220, 51323), (233, 51215), (236, 51191), (248, 51089), (255, 51035), (258, 51020), (271, 50939), (284, 50900), (291, 50837), (295, 50798), (297, 50792), (300, 50762), (312, 50645), (322, 50582), (330, 50519), (332, 50501), (346, 50417),

Gene: Wojtek_56 Start: 39665, Stop: 41593, Start Num: 31

Candidate Starts for Wojtek_56:

(14, 39569), (15, 39578), (16, 39590), (28, 39620), (Start: 29 @39653 has 1 MA's), (Start: 31 @39665 has 19 MA's), (35, 39671), (Start: 41 @39689 has 2 MA's), (46, 39704), (52, 39737), (Start: 62 @39770 has 3 MA's), (64, 39773), (76, 39839), (88, 39911), (92, 39929), (95, 39947), (96, 39956), (99, 39965), (111, 40037), (129, 40157), (130, 40160), (136, 40220), (140, 40238), (162, 40310), (170, 40337), (199, 40472), (200, 40490), (203, 40532), (206, 40553), (207, 40559), (212, 40601), (213, 40622), (215, 40643), (218, 40679), (225, 40736), (227, 40748), (231, 40778), (232, 40787), (238, 40838), (251, 40934), (252, 40937), (282, 41048), (295, 41138), (298, 41165), (310, 41255), (319, 41333), (321, 41351), (326, 41375), (328, 41390), (339, 41492), (343, 41507), (348, 41528),

Gene: Xenia2_58 Start: 39008, Stop: 40912, Start Num: 41

Candidate Starts for Xenia2_58:

(Start: 31 @38990 has 19 MA's), (Start: 32 @38993 has 13 MA's), (Start: 41 @39008 has 2 MA's), (52, 39056), (Start: 62 @39089 has 3 MA's), (64, 39092), (96, 39275), (99, 39284), (111, 39356), (113, 39371), (115, 39380), (130, 39479), (136, 39539), (189, 39752), (197, 39785), (207, 39878), (209, 39893), (212, 39920), (213, 39941), (225, 40055), (231, 40097), (232, 40106), (237, 40145), (238, 40157), (245, 40202), (246, 40208), (251, 40253), (254, 40268), (281, 40361), (295, 40454), (312, 40607), (319, 40649), (321, 40667), (322, 40670), (339, 40808), (348, 40844), (360, 40898),

Gene: Yelo_65 Start: 48022, Stop: 49782, Start Num: 105

Candidate Starts for Yelo_65:

(Start: 105 @48022 has 8 MA's), (114, 48091), (127, 48187), (130, 48196), (141, 48277), (153, 48322), (197, 48523), (202, 48571), (209, 48631), (211, 48643), (216, 48709), (230, 48832), (233, 48856), (236, 48880), (248, 49084), (251, 49117), (254, 49132), (261, 49171), (262, 49174), (264, 49183), (284, 49252), (302, 49384), (312, 49507), (313, 49510), (317, 49537), (321, 49567), (323, 49573), (324, 49576), (327, 49594), (328, 49606), (348, 49741), (352, 49771),

Gene: Yikes_62 Start: 41734, Stop: 43647, Start Num: 32

Candidate Starts for Yikes_62:

(14, 41608), (15, 41617), (16, 41629), (21, 41662), (Start: 29 @41719 has 1 MA's), (Start: 31 @41731 has 19 MA's), (Start: 32 @41734 has 13 MA's), (Start: 41 @41746 has 2 MA's), (52, 41794), (Start: 62 @41827 has 3 MA's), (76, 41896), (92, 41986), (96, 42013), (99, 42022), (111, 42094), (129, 42214), (136, 42277), (162, 42367), (170, 42394), (197, 42523), (200, 42547), (203, 42589), (210, 42637), (212, 42658), (213, 42679), (218, 42736), (225, 42790), (231, 42832), (238, 42892), (251, 42988), (252, 42991), (290, 43168), (298, 43219), (310, 43309), (312, 43345), (314, 43351), (321, 43405), (328, 43444), (339, 43546), (343, 43561), (348, 43582),

Gene: Yndexa_71 Start: 54175, Stop: 52319, Start Num: 72

Candidate Starts for Yndexa_71:

(7, 54592), (9, 54574), (12, 54499), (Start: 22 @54400 has 31 MA's), (Start: 72 @54175 has 3 MA's), (123, 53881), (129, 53848), (131, 53827), (138, 53773), (140, 53767), (141, 53764), (167, 53674), (168, 53671), (181, 53611), (205, 53455), (220, 53308), (233, 53200), (236, 53176), (248, 53074),

(255, 53020), (258, 53005), (271, 52924), (284, 52885), (291, 52822), (295, 52783), (297, 52777), (300, 52747), (312, 52630), (322, 52567), (330, 52504), (332, 52486), (346, 52402),

Gene: Zany_58 Start: 41140, Stop: 43056, Start Num: 31

Candidate Starts for Zany_58:

(Start: 31 @41140 has 19 MA's), (Start: 32 @41143 has 13 MA's), (Start: 41 @41155 has 2 MA's), (52, 41203), (Start: 62 @41236 has 3 MA's), (76, 41305), (92, 41395), (96, 41422), (99, 41431), (111, 41503), (129, 41623), (136, 41686), (142, 41713), (162, 41776), (170, 41803), (197, 41932), (200, 41956), (203, 41998), (210, 42046), (212, 42067), (213, 42088), (218, 42145), (225, 42199), (231, 42241), (238, 42301), (251, 42397), (252, 42400), (298, 42628), (310, 42718), (312, 42754), (314, 42760), (321, 42814), (328, 42853), (339, 42955), (343, 42970), (348, 42991),

Gene: Zenon_68 Start: 47968, Stop: 49728, Start Num: 105

Candidate Starts for Zenon_68:

(Start: 105 @47968 has 8 MA's), (114, 48037), (127, 48133), (130, 48142), (141, 48223), (153, 48268), (197, 48469), (202, 48517), (209, 48577), (211, 48589), (216, 48655), (230, 48778), (233, 48802), (236, 48826), (248, 49030), (251, 49063), (254, 49078), (261, 49117), (262, 49120), (264, 49129), (284, 49198), (302, 49330), (312, 49453), (313, 49456), (317, 49483), (321, 49513), (323, 49519), (324, 49522), (327, 49540), (328, 49552), (348, 49687), (352, 49717),

Gene: Zion_72 Start: 52509, Stop: 50584, Start Num: 40

Candidate Starts for Zion_72:

(20, 52602), (Start: 23 @52596 has 5 MA's), (Start: 40 @52509 has 8 MA's), (80, 52338), (90, 52284), (123, 52080), (150, 51924), (167, 51873), (168, 51870), (179, 51828), (198, 51741), (199, 51738), (204, 51666), (206, 51657), (247, 51306), (248, 51300), (251, 51267), (307, 50928), (314, 50862), (316, 50850), (318, 50832), (322, 50805), (330, 50742), (334, 50709), (347, 50637),