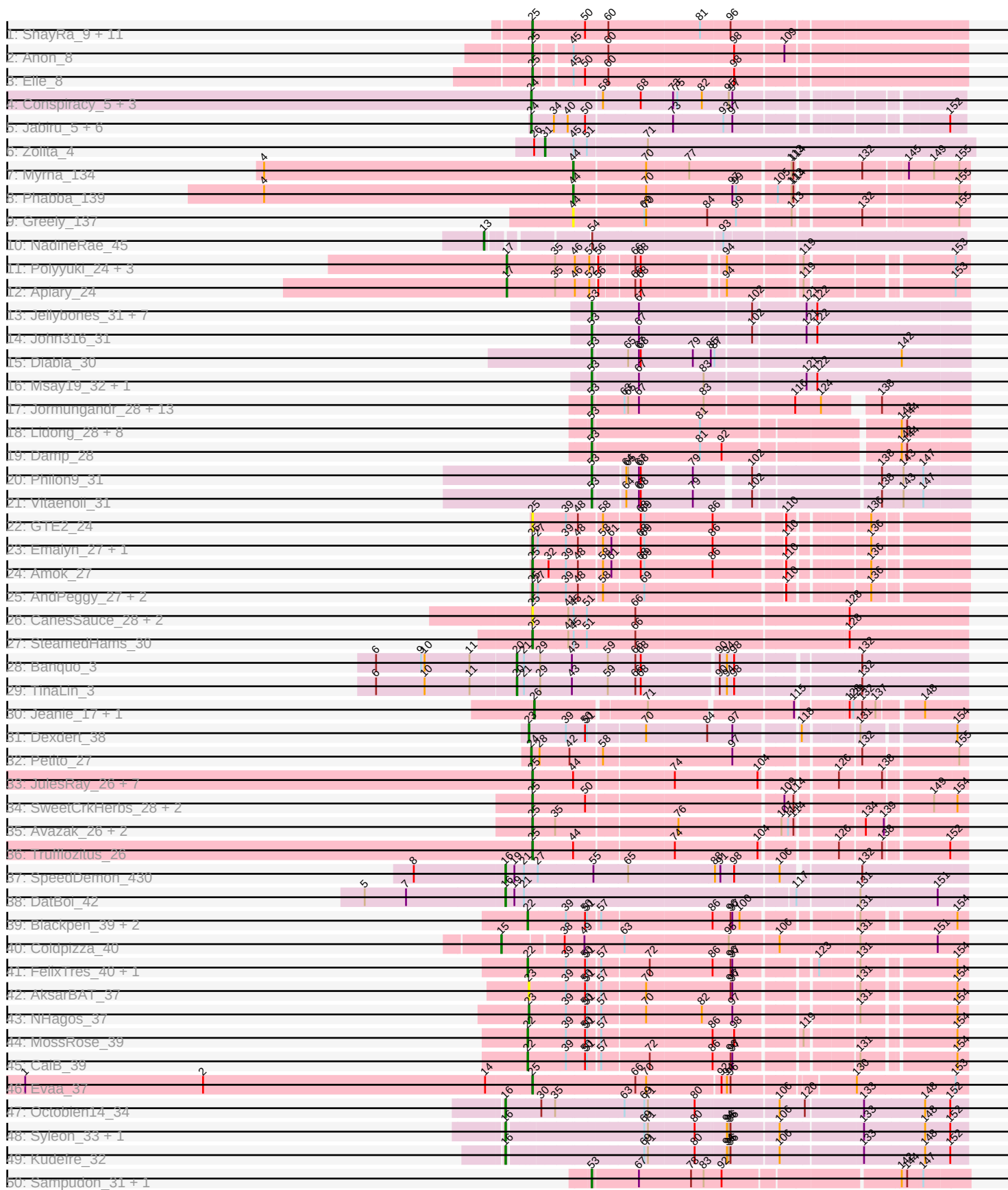
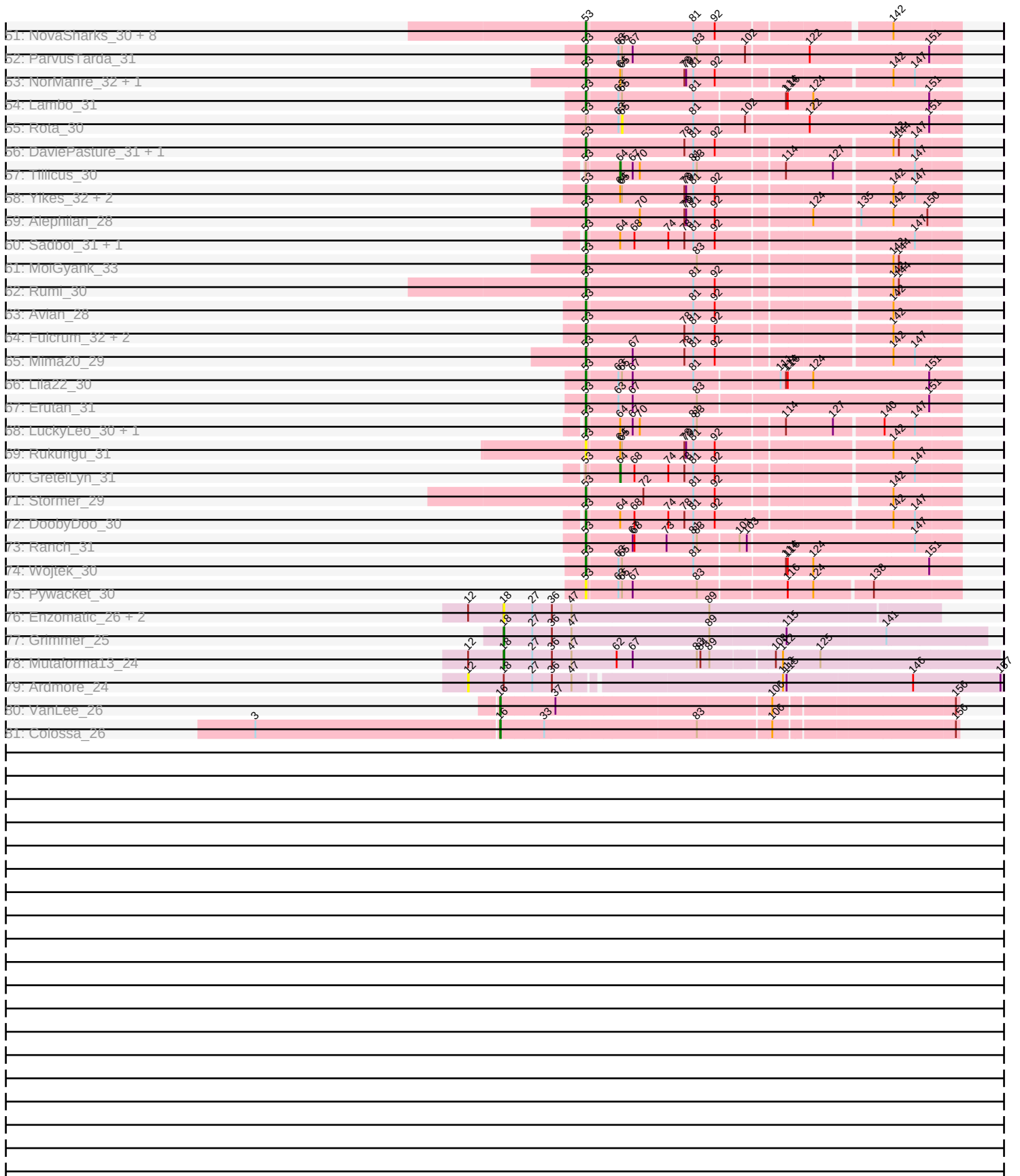


Pham 330530



Pham 330530



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 330530 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330530 has 173 members, 22 are drafts.

Phages represented in each track:

- Track 1 : ShayRa_9, Waits_8, KatherineG_8, Ravana_8, Warrior24_8, Switzerland_8, Soups_8, Rosalind_8, MinecraftSteve_9, Oofda_8, DekHockey33_8, Battleship_9
- Track 2 : Anon_8
- Track 3 : Elle_8
- Track 4 : Conspiracy_5, Lev2_5, ForGetIt_5, PickleBack_5
- Track 5 : Jabiru_5, PetterN_5, Airmid_5, Chadwick_5, Benedict_5, ElTiger69_5, Scorpia_5
- Track 6 : Zolita_4
- Track 7 : Myrna_134
- Track 8 : Phabba_139
- Track 9 : Greely_137
- Track 10 : NadineRae_45
- Track 11 : Polyyuki_24, CoffeeBean_24, Braxoaddie_24, Maselop_24
- Track 12 : Apiary_24
- Track 13 : Jellybones_31, BillyBobJr_32, Beaver_31, BirksAndSocks_31, Boneham_31, FelixAlejandro_32, CinnamonToast_32, Butterball_31
- Track 14 : John316_31
- Track 15 : Diabla_30
- Track 16 : Msay19_32, Poland_32
- Track 17 : Jormungandr_28, Harambe_28, Luker_29, Anamika_28, Nimi13_28, Sticker17_28, Hello_28, Lahirium_28, Hail2Pitt_28, Neoevie_28, Guillaume_28, GalacticEye_28, Newt_29, Teal_28
- Track 18 : Lidong_28, Minos_29, Shelley_28, Jams_28, Berries_28, Charianelly_28, Bianmat_28, MrWormie_28, Kaseim_28
- Track 19 : Damp_28
- Track 20 : Philon9_31
- Track 21 : Vitaenoi_31
- Track 22 : GTE2_24
- Track 23 : Emalyn_27, AikoCarson_27
- Track 24 : Amok_27
- Track 25 : AndPeggy_27, BillDoor_30, Yarn_27
- Track 26 : CanesSauce_28, ChocoMunchkin_28, CaramelLatte_28
- Track 27 : SteamedHams_30
- Track 28 : Banquo_3
- Track 29 : TinaLin_3
- Track 30 : Jeanie_17, McGonagall_17

- Track 31 : Dexdert_38
- Track 32 : Petite_27
- Track 33 : JulesRay_26, Dancer_26, Football_27, Tairn4Wing_28, Bugg_27, Captrips_26, ChickyNuggy_27, NoPickles_26
- Track 34 : SweetCrkHerbs_28, Perkunas_28, Talon44_27
- Track 35 : Avazak_26, FortCran_26, Artorias_26
- Track 36 : Trufflozitus_26
- Track 37 : SpeedDemon_430
- Track 38 : DatBoi_42
- Track 39 : Blackpen_39, CloverMinnie_39, MakoManhole_39
- Track 40 : Coldpizza_40
- Track 41 : FelixTres_40, AnarQue_39
- Track 42 : AksarBAT_37
- Track 43 : NHagos_37
- Track 44 : MossRose_39
- Track 45 : CaiB_39
- Track 46 : Evaa_37
- Track 47 : Octobien14_34
- Track 48 : Syleon_33, Sephiroth_33
- Track 49 : Kudefre_32
- Track 50 : Sampudon_31, Jalebi_30
- Track 51 : NovaSharks_30, Woës_28, Charminar_28, Riduram_28, Astralis_28, Genamy16_31, Alyssamiracle_31, RazorC_29, Jamemuya19_28
- Track 52 : ParvusTarda_31
- Track 53 : NorManre_32, Patos_32
- Track 54 : Lambo_31
- Track 55 : Rota_30
- Track 56 : DaviePasture_31, Zany_30
- Track 57 : Tillicus_30
- Track 58 : Yikes_32, Gibbin_32, LavAbarElk_29
- Track 59 : Alephilan_28
- Track 60 : Sadboi_31, OtterstedtS21_31
- Track 61 : MoiGyank_33
- Track 62 : Rumi_30
- Track 63 : Avian_28
- Track 64 : Fulcrum_32, BirthdayBoy_32, GOATification_32
- Track 65 : Mima20_29
- Track 66 : Lila22_30
- Track 67 : Erutan_31
- Track 68 : LuckyLeo_30, Apeppi_28
- Track 69 : Rukungu_31
- Track 70 : GretelLyn_31
- Track 71 : Stormer_29
- Track 72 : DoobyDoo_30
- Track 73 : Ranch_31
- Track 74 : Wojtek_30
- Track 75 : Pywacket_30
- Track 76 : Enzomatic_26, Polo2Bam_26, SeaLumen_25
- Track 77 : Grimmer_25
- Track 78 : Mutaforma13_24
- Track 79 : Ardmore_24
- Track 80 : VanLee_26
- Track 81 : Colossa_26

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

The start number called the most often in the published annotations is 53, it was called in 73 of the 151 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alephilan_28, Alyssamiracle_31, Anamika_28, Apeppi_28, Astralis_28, Avian_28, Beaver_31, Berries_28, Bianmat_28, BillyBobJr_32, BirksAndSocks_31, BirthdayBoy_32, Boneham_31, Butterball_31, Charianelly_28, Charminar_28, CinnamonToast_32, Damp_28, DaviePasture_31, Diabla_30, DoobyDoo_30, Erutan_31, FelixAlejandro_32, Fulcrum_32, GOATification_32, GalacticEye_28, Genamy16_31, Gibbin_32, Guillaume_28, Hail2Pitt_28, Harambe_28, Hello_28, Jalebi_30, Jamemuya19_28, Jams_28, Jellybones_31, John316_31, Jormungandr_28, Kaseim_28, Lahirium_28, Lambo_31, LavAbarElk_29, Lidong_28, Lila22_30, LuckyLeo_30, Luker_29, Mima20_29, Minos_29, MoiGyank_33, MrWormie_28, Msay19_32, Neoovie_28, Newt_29, Nimi13_28, NorManre_32, NovaSharks_30, OtterstedtS21_31, ParvusTarda_31, Patos_32, Philon9_31, Poland_32, Pywacket_30, Ranch_31, RazorC_29, Riduram_28, Rukungu_31, Rumi_30, Sadboi_31, Sampudon_31, Shelley_28, Sticker17_28, Stormer_29, Teal_28, Vitaenoi_31, Woes_28, Wojtek_30, Yikes_32, Zany_30,

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

- GretellYn_31, Rota_30, Tillicus_30,

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

- AikoCarson_27, Airmid_5, AksarBAT_37, Amok_27, AnarQue_39, AndPeggy_27, Anon_8, Apiary_24, Ardmore_24, Artorias_26, Avazak_26, Banquo_3, Battleship_9, Benedict_5, BillDoor_30, Blackpen_39, Braxoaddie_24, Bugg_27, CaiB_39, CanesSauce_28, Captrips_26, CaramelLatte_28, Chadwick_5, ChickyNugget_27, ChocoMunchkin_28, CloverMinnie_39, CoffeeBean_24, Coldpizza_40, Colossa_26, Conspiracy_5, Dancer_26, DatBoi_42, DekHockey33_8, Dextert_38, ElTiger69_5, Elle_8, Emalyn_27, Enzomatic_26, Evaa_37, FelixTres_40, Football_27, ForGetIt_5, FortCran_26, GTE2_24, Greely_137, Grimmer_25, Jabiru_5, Jeanie_17, JulesRay_26, KatherineG_8, Kudrefre_32, Lev2_5, MakoManhole_39, Maselop_24, McGonagall_17, MinecraftSteve_9, MossRose_39, Mutaforma13_24, Myrna_134, NHagos_37, NadineRae_45, NoPickles_26, Octobien14_34, Oofda_8, Perkunas_28, Petite_27, PetterN_5, Phabba_139, PickleBack_5, Polo2Bam_26, Polyuyuki_24, Ravana_8, Rosalind_8, Scorpia_5, SeaLumen_25, Sephiroth_33, ShayRa_9, Soups_8, SpeedDemon_430, SteamedHams_30, SweetCrkHerbs_28, Switzerland_8, Syleon_33, Tairn4Wing_28, Talon44_27, TinaLin_3, Trufflozitus_26, VanLee_26, Waits_8, Warrior24_8, Yarn_27, Zolita_4,

Summary by start number:

Start 12:

- Found in 5 of 173 (2.9%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Ardmore_24 (F1),

Start 13:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NadineRae_45 (CR4),

Start 15:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Coldpizza_40 (DR),

Start 16:

- Found in 8 of 173 (4.6%) of genes in pham
- Manual Annotations of this start: 8 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Colossa_26 (KA), DatBoi_42 (DL), Kudrefre_32 (DU1), Octobien14_34 (DU1), Sephiroth_33 (DU1), SpeedDemon_430 (DL), Syleon_33 (DU1), VanLee_26 (KA),

Start 17:

- Found in 5 of 173 (2.9%) of genes in pham
- Manual Annotations of this start: 5 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Apiary_24 (CR6), Braxoaddie_24 (CR6), CoffeeBean_24 (CR6), Maselop_24 (CR6), Polyuyuki_24 (CR6),

Start 18:

- Found in 6 of 173 (3.5%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Enzomatic_26 (F1), Grimmer_25 (F1), Mutaforma13_24 (F1), Polo2Bam_26 (F1), SeaLumen_25 (F1),

Start 20:

- Found in 2 of 173 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Banquo_3 (CU1), TinaLin_3 (CU1),

Start 22:

- Found in 7 of 173 (4.0%) of genes in pham
- Manual Annotations of this start: 6 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AnarQue_39 (DR), Blackpen_39 (DR), CaiB_39 (DR), CloverMinnie_39 (DR), FelixTres_40 (DR), MakoManhole_39 (DR), MossRose_39 (DR),

Start 23:

- Found in 3 of 173 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 100.0% of time when present

- Phage (with cluster) where this start called: AksarBAT_37 (DR), Dexdert_38 (DE3), NHagos_37 (DR),

Start 24:

- Found in 12 of 173 (6.9%) of genes in pham
- Manual Annotations of this start: 12 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Airmid_5 (A5), Benedict_5 (A5), Chadwick_5 (A5), Conspiracy_5 (A5), ElTiger69_5 (A5), ForGetIt_5 (A5), Jabiru_5 (A5), Lev2_5 (A5), Petito_27 (DJ), PetterN_5 (A5), PickleBack_5 (A5), Scorpia_5 (A5),

Start 25:

- Found in 41 of 173 (23.7%) of genes in pham
- Manual Annotations of this start: 32 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AikoCarson_27 (CT), Amok_27 (CT), AndPeggy_27 (CT), Anon_8 (A15), Artorias_26 (DJ), Avazak_26 (DJ), Battleship_9 (A15), BillDoor_30 (CT), Bugg_27 (DJ), CanesSauce_28 (CT), Captrips_26 (DJ), CaramelLatte_28 (CT), ChickyNuggy_27 (DJ), ChocoMunchkin_28 (CT), Dancer_26 (DJ), DekHockey33_8 (A15), Elle_8 (A15), Emalyn_27 (CT), Evaa_37 (DR), Football_27 (DJ), FortCran_26 (DJ), GTE2_24 (CT), JulesRay_26 (DJ), KatherineG_8 (A15), MinecraftSteve_9 (A15), NoPickles_26 (DJ), Oofda_8 (A15), Perkunas_28 (DJ), Ravana_8 (A15), Rosalind_8 (A15), ShayRa_9 (A15), Soups_8 (A15), SteamedHams_30 (CT), SweetCrkHerbs_28 (DJ), Switzerland_8 (A15), Tairn4Wing_28 (DJ), Talon44_27 (DJ), Trufflozitus_26 (DJ), Waits_8 (A15), Warrior24_8 (A15), Yarn_27 (CT),

Start 26:

- Found in 3 of 173 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Jeanie_17 (CW1), McGonagall_17 (CW1),

Start 31:

- Found in 1 of 173 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 151
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zolita_4 (A5),

Start 44:

- Found in 12 of 173 (6.9%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Greely_137 (C2), Myrna_134 (C2), Phabba_139 (C2),

Start 53:

- Found in 81 of 173 (46.8%) of genes in pham
- Manual Annotations of this start: 73 of 151
- Called 96.3% of time when present

- Phage (with cluster) where this start called: Alephlan_28 (DV), Alyssamiracle_31 (DV), Anamika_28 (CS3), Apeppi_28 (DV), Astralis_28 (DV), Avian_28 (DV), Beaver_31 (CS2), Berries_28 (CS3), Bianmat_28 (CS3), BillyBobJr_32 (CS2), BirksAndSocks_31 (CS2), BirthdayBoy_32 (DV), Boneham_31 (CS2), Butterball_31 (CS2), Charianelly_28 (CS3), Charminar_28 (DV), CinnamonToast_32 (CS2), Damp_28 (CS3), DaviePasture_31 (DV), Diabla_30 (CS2), DoobyDoo_30 (DV), Erutan_31 (DV), FelixAlejandro_32 (CS2), Fulcrum_32 (DV), GOATification_32 (DV), GalacticEye_28 (CS3), Genamy16_31 (DV), Gibbin_32 (DV), Guillaume_28 (CS3), Hail2Pitt_28 (CS3), Harambe_28 (CS3), Hello_28 (CS3), Jalebi_30 (DV), Jamemuya19_28 (DV), Jams_28 (CS3), Jellybones_31 (CS2), John316_31 (CS2), Jormungandr_28 (CS3), Kaseim_28 (CS3), Lahirium_28 (CS3), Lambo_31 (DV), LavAbarElk_29 (DV), Lidong_28 (CS3), Lila22_30 (DV), LuckyLeo_30 (DV), Luker_29 (CS3), Mima20_29 (DV), Minos_29 (CS3), MoiGyank_33 (DV), MrWormie_28 (CS3), Msay19_32 (CS2), Neoovie_28 (CS3), Newt_29 (CS3), Nimi13_28 (CS3), NorManre_32 (DV), NovaSharks_30 (DV), OtterstedtS21_31 (DV), ParvusTarda_31 (DV), Patos_32 (DV), Philon9_31 (CS4), Poland_32 (CS2), Pywacket_30 (DV), Ranch_31 (DV), RazorC_29 (DV), Riduram_28 (DV), Rukungu_31 (DV), Rumi_30 (DV), Sadboi_31 (DV), Sampudon_31 (DV), Shelley_28 (CS3), Sticker17_28 (CS3), Stormer_29 (DV), Teal_28 (CS3), Vitaenoi_31 (CS4), Woes_28 (CS3), Wojtek_30 (DV), Yikes_32 (DV), Zany_30 (DV),

Start 64:

- Found in 15 of 173 (8.7%) of genes in pham
- Manual Annotations of this start: 2 of 151
- Called 13.3% of time when present
- Phage (with cluster) where this start called: GretelLyn_31 (DV), Tillicus_30 (DV),

Start 65:

- Found in 29 of 173 (16.8%) of genes in pham
- No Manual Annotations of this start.
- Called 3.4% of time when present
- Phage (with cluster) where this start called: Rota_30 (DV),

Summary by clusters:

There are 19 clusters represented in this pham: A15, F1, KA, DJ, CR6, CU1, CW1, DE3, DL, CR4, A5, DU1, DV, CS4, CS2, DR, C2, CS3, CT,

Info for manual annotations of cluster A15:

- Start number 25 was manually annotated 14 times for cluster A15.

Info for manual annotations of cluster A5:

- Start number 24 was manually annotated 11 times for cluster A5.
- Start number 31 was manually annotated 1 time for cluster A5.

Info for manual annotations of cluster C2:

- Start number 44 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster CR4:

- Start number 13 was manually annotated 1 time for cluster CR4.

Info for manual annotations of cluster CR6:

- Start number 17 was manually annotated 5 times for cluster CR6.

Info for manual annotations of cluster CS2:

- Start number 53 was manually annotated 10 times for cluster CS2.

Info for manual annotations of cluster CS3:

- Start number 53 was manually annotated 25 times for cluster CS3.

Info for manual annotations of cluster CS4:

- Start number 53 was manually annotated 2 times for cluster CS4.

Info for manual annotations of cluster CT:

- Start number 25 was manually annotated 7 times for cluster CT.

Info for manual annotations of cluster CU1:

- Start number 20 was manually annotated 2 times for cluster CU1.

Info for manual annotations of cluster CW1:

- Start number 26 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster DE3:

- Start number 23 was manually annotated 1 time for cluster DE3.

Info for manual annotations of cluster DJ:

- Start number 24 was manually annotated 1 time for cluster DJ.
- Start number 25 was manually annotated 10 times for cluster DJ.

Info for manual annotations of cluster DL:

- Start number 16 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster DR:

- Start number 15 was manually annotated 1 time for cluster DR.
- Start number 22 was manually annotated 6 times for cluster DR.
- Start number 23 was manually annotated 1 time for cluster DR.
- Start number 25 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster DU1:

- Start number 16 was manually annotated 4 times for cluster DU1.

Info for manual annotations of cluster DV:

- Start number 53 was manually annotated 36 times for cluster DV.
- Start number 64 was manually annotated 2 times for cluster DV.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster KA:

- Start number 16 was manually annotated 2 times for cluster KA.

Gene Information:

Gene: AikoCarson_27 Start: 22132, Stop: 22770, Start Num: 25

Candidate Starts for AikoCarson_27:

(Start: 25 @22132 has 32 MA's), (27, 22141), (39, 22183), (48, 22201), (58, 22237), (61, 22249), (68, 22291), (69, 22297), (86, 22408), (110, 22513), (136, 22627),

Gene: Airmid_5 Start: 3407, Stop: 4048, Start Num: 24

Candidate Starts for Airmid_5:

(Start: 24 @3407 has 12 MA's), (34, 3443), (40, 3464), (50, 3491), (73, 3623), (93, 3704), (97, 3719), (152, 4025),

Gene: AksarBAT_37 Start: 32541, Stop: 33188, Start Num: 23

Candidate Starts for AksarBAT_37:

(Start: 23 @32541 has 2 MA's), (39, 32598), (50, 32628), (51, 32631), (57, 32649), (70, 32715), (96, 32853), (97, 32856), (131, 33033), (154, 33171),

Gene: Alephilan_28 Start: 27950, Stop: 28543, Start Num: 53

Candidate Starts for Alephilan_28:

(Start: 53 @27950 has 73 MA's), (70, 28037), (78, 28112), (79, 28115), (81, 28127), (92, 28163), (124, 28313), (135, 28385), (142, 28436), (150, 28490),

Gene: Alyssamiracle_31 Start: 26760, Stop: 27347, Start Num: 53

Candidate Starts for Alyssamiracle_31:

(Start: 53 @26760 has 73 MA's), (81, 26937), (92, 26973), (142, 27240),

Gene: Amok_27 Start: 22092, Stop: 22730, Start Num: 25

Candidate Starts for Amok_27:

(Start: 25 @22092 has 32 MA's), (32, 22116), (39, 22143), (48, 22161), (58, 22197), (61, 22209), (68, 22251), (69, 22257), (86, 22368), (110, 22473), (136, 22587),

Gene: Anamika_28 Start: 37634, Stop: 38209, Start Num: 53

Candidate Starts for Anamika_28:

(Start: 53 @37634 has 73 MA's), (63, 37685), (65, 37691), (67, 37709), (83, 37817), (116, 37955), (124, 37997), (138, 38072),

Gene: AnarQue_39 Start: 33943, Stop: 34590, Start Num: 22

Candidate Starts for AnarQue_39:

(Start: 22 @33943 has 6 MA's), (39, 34000), (50, 34030), (51, 34033), (57, 34051), (72, 34123), (86, 34225), (96, 34255), (97, 34258), (123, 34375), (131, 34435), (154, 34573),

Gene: AndPeggy_27 Start: 22538, Stop: 23176, Start Num: 25

Candidate Starts for AndPeggy_27:

(Start: 25 @22538 has 32 MA's), (27, 22547), (39, 22589), (48, 22607), (58, 22643), (69, 22703), (110, 22919), (136, 23033),

Gene: Anon_8 Start: 4936, Stop: 5598, Start Num: 25

Candidate Starts for Anon_8:

(Start: 25 @4936 has 32 MA's), (45, 4987), (60, 5041), (98, 5242), (109, 5317),

Gene: Apeppi_28 Start: 28090, Stop: 28686, Start Num: 53

Candidate Starts for Apeppi_28:

(Start: 53 @28090 has 73 MA's), (Start: 64 @28144 has 2 MA's), (67, 28165), (70, 28177), (81, 28267), (83, 28273), (114, 28411), (127, 28489), (140, 28567), (147, 28612),

Gene: Apiary_24 Start: 12634, Stop: 13311, Start Num: 17

Candidate Starts for Apiary_24:

(Start: 17 @12634 has 5 MA's), (35, 12712), (46, 12745), (52, 12769), (56, 12778), (66, 12829), (68, 12838), (94, 12964), (119, 13072), (153, 13288),

Gene: Ardmore_24 Start: 24249, Stop: 25115, Start Num: 12

Candidate Starts for Ardmore_24:

(12, 24249), (Start: 18 @24309 has 2 MA's), (27, 24357), (36, 24390), (47, 24423), (112, 24753), (115, 24759), (146, 24963), (157, 25110),

Gene: Artorias_26 Start: 18647, Stop: 19297, Start Num: 25

Candidate Starts for Artorias_26:

(Start: 25 @18647 has 32 MA's), (35, 18683), (76, 18869), (107, 19031), (111, 19040), (114, 19049), (134, 19148), (139, 19178),

Gene: Astralis_28 Start: 26350, Stop: 26937, Start Num: 53

Candidate Starts for Astralis_28:

(Start: 53 @26350 has 73 MA's), (81, 26527), (92, 26563), (142, 26830),

Gene: Avazak_26 Start: 18654, Stop: 19304, Start Num: 25

Candidate Starts for Avazak_26:

(Start: 25 @18654 has 32 MA's), (35, 18690), (76, 18876), (107, 19038), (111, 19047), (114, 19056), (134, 19155), (139, 19185),

Gene: Avian_28 Start: 26742, Stop: 27329, Start Num: 53

Candidate Starts for Avian_28:

(Start: 53 @26742 has 73 MA's), (81, 26919), (92, 26955), (142, 27222),

Gene: Banquo_3 Start: 665, Stop: 1360, Start Num: 20

Candidate Starts for Banquo_3:

(6, 434), (9, 509), (10, 515), (11, 590), (Start: 20 @665 has 2 MA's), (21, 677), (29, 704), (43, 755), (59, 812), (66, 857), (68, 866), (90, 986), (94, 998), (98, 1010), (132, 1193),

Gene: Battleship_9 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for Battleship_9:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Beaver_31 Start: 37090, Stop: 37692, Start Num: 53

Candidate Starts for Beaver_31:

(Start: 53 @37090 has 73 MA's), (67, 37165), (102, 37348), (121, 37429), (122, 37447),

Gene: Benedict_5 Start: 3409, Stop: 4050, Start Num: 24

Candidate Starts for Benedict_5:

(Start: 24 @3409 has 12 MA's), (34, 3445), (40, 3466), (50, 3493), (73, 3625), (93, 3706), (97, 3721), (152, 4027),

Gene: Berries_28 Start: 37592, Stop: 38179, Start Num: 53

Candidate Starts for Berries_28:

(Start: 53 @37592 has 73 MA's), (81, 37769), (142, 38072), (144, 38081),

Gene: Bianmat_28 Start: 37632, Stop: 38219, Start Num: 53

Candidate Starts for Bianmat_28:

(Start: 53 @37632 has 73 MA's), (81, 37809), (142, 38112), (144, 38121),

Gene: BillDoor_30 Start: 22485, Stop: 23123, Start Num: 25

Candidate Starts for BillDoor_30:

(Start: 25 @22485 has 32 MA's), (27, 22494), (39, 22536), (48, 22554), (58, 22590), (69, 22650), (110, 22866), (136, 22980),

Gene: BillyBobJr_32 Start: 37117, Stop: 37719, Start Num: 53

Candidate Starts for BillyBobJr_32:

(Start: 53 @37117 has 73 MA's), (67, 37192), (102, 37375), (121, 37456), (122, 37474),

Gene: BirksAndSocks_31 Start: 37064, Stop: 37666, Start Num: 53

Candidate Starts for BirksAndSocks_31:

(Start: 53 @37064 has 73 MA's), (67, 37139), (102, 37322), (121, 37403), (122, 37421),

Gene: BirthdayBoy_32 Start: 28776, Stop: 29369, Start Num: 53

Candidate Starts for BirthdayBoy_32:

(Start: 53 @28776 has 73 MA's), (78, 28938), (81, 28953), (92, 28989), (142, 29262),

Gene: Blackpen_39 Start: 33361, Stop: 34008, Start Num: 22

Candidate Starts for Blackpen_39:

(Start: 22 @33361 has 6 MA's), (39, 33418), (50, 33448), (51, 33451), (57, 33469), (86, 33643), (96, 33673), (97, 33676), (100, 33688), (131, 33853), (154, 33991),

Gene: Boneham_31 Start: 37063, Stop: 37665, Start Num: 53

Candidate Starts for Boneham_31:

(Start: 53 @37063 has 73 MA's), (67, 37138), (102, 37321), (121, 37402), (122, 37420),

Gene: Braxoaddie_24 Start: 12622, Stop: 13299, Start Num: 17

Candidate Starts for Braxoaddie_24:

(Start: 17 @12622 has 5 MA's), (35, 12700), (46, 12733), (52, 12757), (56, 12766), (66, 12817), (68, 12826), (94, 12952), (119, 13060), (153, 13276),

Gene: Bugg_27 Start: 18682, Stop: 19329, Start Num: 25

Candidate Starts for Bugg_27:

(Start: 25 @18682 has 32 MA's), (Start: 44 @18745 has 2 MA's), (74, 18895), (104, 19033), (126, 19141), (138, 19207),

Gene: Butterball_31 Start: 37063, Stop: 37665, Start Num: 53

Candidate Starts for Butterball_31:

(Start: 53 @37063 has 73 MA's), (67, 37138), (102, 37321), (121, 37402), (122, 37420),

Gene: CaiB_39 Start: 33929, Stop: 34576, Start Num: 22

Candidate Starts for CaiB_39:

(Start: 22 @33929 has 6 MA's), (39, 33986), (50, 34016), (51, 34019), (57, 34037), (72, 34109), (86, 34211), (96, 34241), (97, 34244), (131, 34421), (154, 34559),

Gene: CanesSauce_28 Start: 22691, Stop: 23383, Start Num: 25

Candidate Starts for CanesSauce_28:

(Start: 25 @22691 has 32 MA's), (41, 22748), (45, 22757), (51, 22778), (66, 22853), (128, 23195),

Gene: Captrips_26 Start: 18675, Stop: 19322, Start Num: 25

Candidate Starts for Captrips_26:

(Start: 25 @18675 has 32 MA's), (Start: 44 @18738 has 2 MA's), (74, 18888), (104, 19026), (126, 19134), (138, 19200),

Gene: CaramelLatte_28 Start: 22691, Stop: 23383, Start Num: 25

Candidate Starts for CaramelLatte_28:

(Start: 25 @22691 has 32 MA's), (41, 22748), (45, 22757), (51, 22778), (66, 22853), (128, 23195),

Gene: Chadwick_5 Start: 3406, Stop: 4047, Start Num: 24

Candidate Starts for Chadwick_5:

(Start: 24 @3406 has 12 MA's), (34, 3442), (40, 3463), (50, 3490), (73, 3622), (93, 3703), (97, 3718), (152, 4024),

Gene: Charianelly_28 Start: 37342, Stop: 37929, Start Num: 53

Candidate Starts for Charianelly_28:

(Start: 53 @37342 has 73 MA's), (81, 37519), (142, 37822), (144, 37831),

Gene: Charminar_28 Start: 26353, Stop: 26940, Start Num: 53

Candidate Starts for Charminar_28:

(Start: 53 @26353 has 73 MA's), (81, 26530), (92, 26566), (142, 26833),

Gene: ChickyNuggy_27 Start: 18387, Stop: 19034, Start Num: 25

Candidate Starts for ChickyNuggy_27:

(Start: 25 @18387 has 32 MA's), (Start: 44 @18450 has 2 MA's), (74, 18600), (104, 18738), (126, 18846), (138, 18912),

Gene: ChocoMunchkin_28 Start: 22691, Stop: 23383, Start Num: 25

Candidate Starts for ChocoMunchkin_28:

(Start: 25 @22691 has 32 MA's), (41, 22748), (45, 22757), (51, 22778), (66, 22853), (128, 23195),

Gene: CinnamonToast_32 Start: 37117, Stop: 37719, Start Num: 53

Candidate Starts for CinnamonToast_32:

(Start: 53 @37117 has 73 MA's), (67, 37192), (102, 37375), (121, 37456), (122, 37474),

Gene: CloverMinnie_39 Start: 33869, Stop: 34516, Start Num: 22

Candidate Starts for CloverMinnie_39:

(Start: 22 @33869 has 6 MA's), (39, 33926), (50, 33956), (51, 33959), (57, 33977), (86, 34151), (96, 34181), (97, 34184), (100, 34196), (131, 34361), (154, 34499),

Gene: CoffeeBean_24 Start: 12577, Stop: 13254, Start Num: 17

Candidate Starts for CoffeeBean_24:

(Start: 17 @12577 has 5 MA's), (35, 12655), (46, 12688), (52, 12712), (56, 12721), (66, 12772), (68, 12781), (94, 12907), (119, 13015), (153, 13231),

Gene: Coldpizza_40 Start: 36634, Stop: 37356, Start Num: 15

Candidate Starts for Coldpizza_40:

(Start: 15 @36634 has 1 MA's), (38, 36724), (49, 36754), (63, 36814), (95, 36985), (106, 37063), (131, 37189), (151, 37309),

Gene: Colossa_26 Start: 22783, Stop: 23496, Start Num: 16

Candidate Starts for Colossa_26:

(3, 22381), (Start: 16 @22783 has 8 MA's), (33, 22849), (83, 23092), (106, 23209), (156, 23491),

Gene: Conspiracy_5 Start: 3447, Stop: 4088, Start Num: 24

Candidate Starts for Conspiracy_5:

(Start: 24 @3447 has 12 MA's), (58, 3555), (68, 3615), (73, 3663), (75, 3669), (82, 3708), (95, 3753), (97, 3759),

Gene: Damp_28 Start: 36506, Stop: 37093, Start Num: 53

Candidate Starts for Damp_28:

(Start: 53 @36506 has 73 MA's), (81, 36683), (92, 36719), (142, 36986), (144, 36995),

Gene: Dancer_26 Start: 18375, Stop: 19022, Start Num: 25

Candidate Starts for Dancer_26:

(Start: 25 @18375 has 32 MA's), (Start: 44 @18438 has 2 MA's), (74, 18588), (104, 18726), (126, 18834), (138, 18900),

Gene: DatBoi_42 Start: 38878, Stop: 39585, Start Num: 16

Candidate Starts for DatBoi_42:

(5, 38647), (7, 38716), (Start: 16 @38878 has 8 MA's), (19, 38893), (21, 38908), (117, 39325), (131, 39418), (151, 39538),

Gene: DaviePasture_31 Start: 28575, Stop: 29168, Start Num: 53

Candidate Starts for DaviePasture_31:

(Start: 53 @28575 has 73 MA's), (78, 28737), (81, 28752), (92, 28788), (142, 29061), (144, 29070), (147, 29094),

Gene: DekHockey33_8 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for DekHockey33_8:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Dexdert_38 Start: 33419, Stop: 34066, Start Num: 23

Candidate Starts for Dexdert_38:

(Start: 23 @33419 has 2 MA's), (39, 33476), (50, 33506), (51, 33509), (70, 33593), (84, 33692), (97, 33734), (118, 33830), (131, 33911), (154, 34049),

Gene: Diabla_30 Start: 36917, Stop: 37516, Start Num: 53

Candidate Starts for Diabla_30:

(Start: 53 @36917 has 73 MA's), (65, 36974), (67, 36992), (68, 36995), (79, 37082), (85, 37112), (87, 37118), (142, 37409),

Gene: DoobyDoo_30 Start: 27725, Stop: 28318, Start Num: 53

Candidate Starts for DoobyDoo_30:

(Start: 53 @27725 has 73 MA's), (Start: 64 @27779 has 2 MA's), (68, 27803), (74, 27860), (78, 27887), (81, 27902), (92, 27938), (142, 28211), (147, 28244),

Gene: ElTiger69_5 Start: 3407, Stop: 4048, Start Num: 24

Candidate Starts for ElTiger69_5:

(Start: 24 @3407 has 12 MA's), (34, 3443), (40, 3464), (50, 3491), (73, 3623), (93, 3704), (97, 3719), (152, 4025),

Gene: Elle_8 Start: 4308, Stop: 4970, Start Num: 25

Candidate Starts for Elle_8:

(Start: 25 @4308 has 32 MA's), (45, 4359), (50, 4377), (60, 4413), (98, 4614),

Gene: Emalyn_27 Start: 22133, Stop: 22771, Start Num: 25

Candidate Starts for Emalyn_27:

(Start: 25 @22133 has 32 MA's), (27, 22142), (39, 22184), (48, 22202), (58, 22238), (61, 22250), (68, 22292), (69, 22298), (86, 22409), (110, 22514), (136, 22628),

Gene: Enzomatic_26 Start: 24314, Stop: 25024, Start Num: 18

Candidate Starts for Enzomatic_26:

(12, 24254), (Start: 18 @24314 has 2 MA's), (27, 24362), (36, 24395), (47, 24428), (89, 24656),

Gene: Erutan_31 Start: 28223, Stop: 28828, Start Num: 53

Candidate Starts for Erutan_31:

(Start: 53 @28223 has 73 MA's), (63, 28274), (67, 28298), (83, 28406), (151, 28778),

Gene: Evaa_37 Start: 33037, Stop: 33708, Start Num: 25

Candidate Starts for Evaa_37:

(1, 32194), (2, 32491), (14, 32962), (Start: 25 @33037 has 32 MA's), (66, 33199), (70, 33217), (92, 33334), (94, 33343), (96, 33349), (130, 33529), (153, 33688),

Gene: FelixAlejandro_32 Start: 37261, Stop: 37863, Start Num: 53

Candidate Starts for FelixAlejandro_32:

(Start: 53 @37261 has 73 MA's), (67, 37336), (102, 37519), (121, 37600), (122, 37618),

Gene: FelixTres_40 Start: 33932, Stop: 34579, Start Num: 22

Candidate Starts for FelixTres_40:

(Start: 22 @33932 has 6 MA's), (39, 33989), (50, 34019), (51, 34022), (57, 34040), (72, 34112), (86, 34214), (96, 34244), (97, 34247), (123, 34364), (131, 34424), (154, 34562),

Gene: Football_27 Start: 18387, Stop: 19034, Start Num: 25

Candidate Starts for Football_27:

(Start: 25 @18387 has 32 MA's), (Start: 44 @18450 has 2 MA's), (74, 18600), (104, 18738), (126, 18846), (138, 18912),

Gene: ForGetIt_5 Start: 3473, Stop: 4114, Start Num: 24

Candidate Starts for ForGetIt_5:

(Start: 24 @3473 has 12 MA's), (58, 3581), (68, 3641), (73, 3689), (75, 3695), (82, 3734), (95, 3779), (97, 3785),

Gene: FortCran_26 Start: 18647, Stop: 19297, Start Num: 25

Candidate Starts for FortCran_26:

(Start: 25 @18647 has 32 MA's), (35, 18683), (76, 18869), (107, 19031), (111, 19040), (114, 19049), (134, 19148), (139, 19178),

Gene: Fulcrum_32 Start: 28753, Stop: 29346, Start Num: 53

Candidate Starts for Fulcrum_32:

(Start: 53 @28753 has 73 MA's), (78, 28915), (81, 28930), (92, 28966), (142, 29239),

Gene: GOATification_32 Start: 28753, Stop: 29346, Start Num: 53

Candidate Starts for GOATification_32:

(Start: 53 @28753 has 73 MA's), (78, 28915), (81, 28930), (92, 28966), (142, 29239),

Gene: GTE2_24 Start: 22211, Stop: 22849, Start Num: 25

Candidate Starts for GTE2_24:

(Start: 25 @22211 has 32 MA's), (39, 22262), (48, 22280), (58, 22316), (68, 22370), (69, 22376), (86, 22487), (110, 22592), (136, 22706),

Gene: GalacticEye_28 Start: 37316, Stop: 37891, Start Num: 53

Candidate Starts for GalacticEye_28:

(Start: 53 @37316 has 73 MA's), (63, 37367), (65, 37373), (67, 37391), (83, 37499), (116, 37637), (124, 37679), (138, 37754),

Gene: Genamy16_31 Start: 26760, Stop: 27347, Start Num: 53

Candidate Starts for Genamy16_31:

(Start: 53 @26760 has 73 MA's), (81, 26937), (92, 26973), (142, 27240),

Gene: Gibbin_32 Start: 28852, Stop: 29445, Start Num: 53

Candidate Starts for Gibbin_32:

(Start: 53 @28852 has 73 MA's), (Start: 64 @28906 has 2 MA's), (65, 28909), (78, 29014), (79, 29017), (81, 29029), (92, 29065), (142, 29338), (147, 29371),

Gene: Greely_137 Start: 80266, Stop: 80874, Start Num: 44

Candidate Starts for Greely_137:

(Start: 44 @80266 has 2 MA's), (69, 80377), (70, 80380), (84, 80479), (99, 80527), (113, 80608), (132, 80707), (155, 80857),

Gene: Gretellyn_31 Start: 29165, Stop: 29704, Start Num: 64

Candidate Starts for Gretellyn_31:

(Start: 53 @29111 has 73 MA's), (Start: 64 @29165 has 2 MA's), (68, 29189), (74, 29246), (78, 29273), (81, 29288), (92, 29324), (147, 29630),

Gene: Grimmer_25 Start: 24869, Stop: 25660, Start Num: 18

Candidate Starts for Grimmer_25:

(Start: 18 @24869 has 2 MA's), (27, 24917), (36, 24950), (47, 24983), (89, 25211), (115, 25337), (141, 25502),

Gene: Guillaume_28 Start: 37366, Stop: 37941, Start Num: 53

Candidate Starts for Guillaume_28:

(Start: 53 @37366 has 73 MA's), (63, 37417), (65, 37423), (67, 37441), (83, 37549), (116, 37687), (124, 37729), (138, 37804),

Gene: Hail2Pitt_28 Start: 37843, Stop: 38418, Start Num: 53

Candidate Starts for Hail2Pitt_28:

(Start: 53 @37843 has 73 MA's), (63, 37894), (65, 37900), (67, 37918), (83, 38026), (116, 38164), (124, 38206), (138, 38281),

Gene: Harambe_28 Start: 37633, Stop: 38208, Start Num: 53

Candidate Starts for Harambe_28:

(Start: 53 @37633 has 73 MA's), (63, 37684), (65, 37690), (67, 37708), (83, 37816), (116, 37954), (124, 37996), (138, 38071),

Gene: Hello_28 Start: 37595, Stop: 38170, Start Num: 53

Candidate Starts for Hello_28:

(Start: 53 @37595 has 73 MA's), (63, 37646), (65, 37652), (67, 37670), (83, 37778), (116, 37916), (124, 37958), (138, 38033),

Gene: Jabiru_5 Start: 3407, Stop: 4048, Start Num: 24

Candidate Starts for Jabiru_5:

(Start: 24 @3407 has 12 MA's), (34, 3443), (40, 3464), (50, 3491), (73, 3623), (93, 3704), (97, 3719), (152, 4025),

Gene: Jalebi_30 Start: 29287, Stop: 29880, Start Num: 53

Candidate Starts for Jalebi_30:

(Start: 53 @29287 has 73 MA's), (67, 29362), (78, 29449), (83, 29470), (92, 29500), (142, 29773), (144, 29782), (147, 29806),

Gene: Jamemuya19_28 Start: 26350, Stop: 26937, Start Num: 53

Candidate Starts for Jamemuya19_28:

(Start: 53 @26350 has 73 MA's), (81, 26527), (92, 26563), (142, 26830),

Gene: Jams_28 Start: 36792, Stop: 37379, Start Num: 53

Candidate Starts for Jams_28:

(Start: 53 @36792 has 73 MA's), (81, 36969), (142, 37272), (144, 37281),

Gene: Jeanie_17 Start: 12036, Stop: 12680, Start Num: 26

Candidate Starts for Jeanie_17:

(Start: 26 @12036 has 2 MA's), (71, 12207), (115, 12432), (128, 12507), (129, 12513), (132, 12525), (137, 12546), (148, 12612),

Gene: Jellybones_31 Start: 37122, Stop: 37724, Start Num: 53

Candidate Starts for Jellybones_31:

(Start: 53 @37122 has 73 MA's), (67, 37197), (102, 37380), (121, 37461), (122, 37479),

Gene: John316_31 Start: 37075, Stop: 37677, Start Num: 53

Candidate Starts for John316_31:

(Start: 53 @37075 has 73 MA's), (67, 37150), (102, 37333), (121, 37414), (122, 37432),

Gene: Jormungandr_28 Start: 37348, Stop: 37923, Start Num: 53

Candidate Starts for Jormungandr_28:

(Start: 53 @37348 has 73 MA's), (63, 37399), (65, 37405), (67, 37423), (83, 37531), (116, 37669), (124, 37711), (138, 37786),

Gene: JulesRay_26 Start: 18669, Stop: 19316, Start Num: 25

Candidate Starts for JulesRay_26:

(Start: 25 @18669 has 32 MA's), (Start: 44 @18732 has 2 MA's), (74, 18882), (104, 19020), (126, 19128), (138, 19194),

Gene: Kaseim_28 Start: 36777, Stop: 37364, Start Num: 53

Candidate Starts for Kaseim_28:

(Start: 53 @36777 has 73 MA's), (81, 36954), (142, 37257), (144, 37266),

Gene: KatherineG_8 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for KatherineG_8:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Kudfre_32 Start: 27445, Stop: 28155, Start Num: 16

Candidate Starts for Kudfre_32:

(Start: 16 @27445 has 8 MA's), (69, 27649), (71, 27655), (80, 27730), (94, 27778), (95, 27781), (96, 27784), (106, 27859), (133, 27988), (148, 28087), (152, 28129),

Gene: Lahirium_28 Start: 37870, Stop: 38445, Start Num: 53

Candidate Starts for Lahirium_28:

(Start: 53 @37870 has 73 MA's), (63, 37921), (65, 37927), (67, 37945), (83, 38053), (116, 38191), (124, 38233), (138, 38308),

Gene: Lambo_31 Start: 28762, Stop: 29367, Start Num: 53

Candidate Starts for Lambo_31:

(Start: 53 @28762 has 73 MA's), (63, 28813), (65, 28819), (81, 28939), (114, 29080), (116, 29083), (124, 29125), (151, 29317),

Gene: LavAbarElk_29 Start: 27226, Stop: 27819, Start Num: 53

Candidate Starts for LavAbarElk_29:

(Start: 53 @27226 has 73 MA's), (Start: 64 @27280 has 2 MA's), (65, 27283), (78, 27388), (79, 27391), (81, 27403), (92, 27439), (142, 27712), (147, 27745),

Gene: Lev2_5 Start: 3446, Stop: 4087, Start Num: 24

Candidate Starts for Lev2_5:

(Start: 24 @3446 has 12 MA's), (58, 3554), (68, 3614), (73, 3662), (75, 3668), (82, 3707), (95, 3752), (97, 3758),

Gene: Lidong_28 Start: 37592, Stop: 38179, Start Num: 53

Candidate Starts for Lidong_28:

(Start: 53 @37592 has 73 MA's), (81, 37769), (142, 38072), (144, 38081),

Gene: Lila22_30 Start: 28717, Stop: 29322, Start Num: 53

Candidate Starts for Lila22_30:

(Start: 53 @28717 has 73 MA's), (63, 28768), (65, 28774), (67, 28792), (81, 28894), (111, 29026), (114, 29035), (116, 29038), (124, 29080), (151, 29272),

Gene: LuckyLeo_30 Start: 28090, Stop: 28686, Start Num: 53

Candidate Starts for LuckyLeo_30:

(Start: 53 @28090 has 73 MA's), (Start: 64 @28144 has 2 MA's), (67, 28165), (70, 28177), (81, 28267), (83, 28273), (114, 28411), (127, 28489), (140, 28567), (147, 28612),

Gene: Luker_29 Start: 37823, Stop: 38398, Start Num: 53

Candidate Starts for Luker_29:

(Start: 53 @37823 has 73 MA's), (63, 37874), (65, 37880), (67, 37898), (83, 38006), (116, 38144), (124, 38186), (138, 38261),

Gene: MakoManhole_39 Start: 33947, Stop: 34594, Start Num: 22

Candidate Starts for MakoManhole_39:

(Start: 22 @33947 has 6 MA's), (39, 34004), (50, 34034), (51, 34037), (57, 34055), (86, 34229), (96, 34259), (97, 34262), (100, 34274), (131, 34439), (154, 34577),

Gene: Maselop_24 Start: 12653, Stop: 13330, Start Num: 17

Candidate Starts for Maselop_24:

(Start: 17 @12653 has 5 MA's), (35, 12731), (46, 12764), (52, 12788), (56, 12797), (66, 12848), (68, 12857), (94, 12983), (119, 13091), (153, 13307),

Gene: McGonagall_17 Start: 12036, Stop: 12680, Start Num: 26

Candidate Starts for McGonagall_17:

(Start: 26 @12036 has 2 MA's), (71, 12207), (115, 12432), (128, 12507), (129, 12513), (132, 12525), (137, 12546), (148, 12612),

Gene: Mima20_29 Start: 28476, Stop: 29069, Start Num: 53

Candidate Starts for Mima20_29:

(Start: 53 @28476 has 73 MA's), (67, 28551), (78, 28638), (81, 28653), (92, 28689), (142, 28962), (147, 28995),

Gene: MinecraftSteve_9 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for MinecraftSteve_9:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Minos_29 Start: 37334, Stop: 37921, Start Num: 53

Candidate Starts for Minos_29:

(Start: 53 @37334 has 73 MA's), (81, 37511), (142, 37814), (144, 37823),

Gene: MoiGyank_33 Start: 29157, Stop: 29750, Start Num: 53

Candidate Starts for MoiGyank_33:

(Start: 53 @29157 has 73 MA's), (83, 29340), (142, 29643), (144, 29652),

Gene: MossRose_39 Start: 33926, Stop: 34573, Start Num: 22

Candidate Starts for MossRose_39:

(Start: 22 @33926 has 6 MA's), (39, 33983), (50, 34013), (51, 34016), (57, 34034), (86, 34208), (98, 34244), (119, 34340), (154, 34556),

Gene: MrWormie_28 Start: 36495, Stop: 37082, Start Num: 53

Candidate Starts for MrWormie_28:

(Start: 53 @36495 has 73 MA's), (81, 36672), (142, 36975), (144, 36984),

Gene: Msay19_32 Start: 37256, Stop: 37858, Start Num: 53

Candidate Starts for Msay19_32:

(Start: 53 @37256 has 73 MA's), (67, 37331), (83, 37439), (121, 37595), (122, 37613),

Gene: Mutaforma13_24 Start: 24312, Stop: 25115, Start Num: 18

Candidate Starts for Mutaforma13_24:

(12, 24252), (Start: 18 @24312 has 2 MA's), (27, 24360), (36, 24393), (47, 24426), (62, 24498), (67, 24525), (83, 24633), (84, 24639), (89, 24654), (108, 24753), (112, 24765), (125, 24828),

Gene: Myrna_134 Start: 80964, Stop: 81575, Start Num: 44

Candidate Starts for Myrna_134:

(4, 80451), (Start: 44 @80964 has 2 MA's), (70, 81078), (77, 81147), (113, 81306), (114, 81309), (132, 81408), (145, 81474), (149, 81516), (155, 81558),

Gene: NHagos_37 Start: 32544, Stop: 33191, Start Num: 23

Candidate Starts for NHagos_37:

(Start: 23 @32544 has 2 MA's), (39, 32601), (50, 32631), (51, 32634), (57, 32652), (70, 32718), (82, 32808), (97, 32859), (131, 33036), (154, 33174),

Gene: NadineRae_45 Start: 32686, Stop: 33396, Start Num: 13

Candidate Starts for NadineRae_45:

(Start: 13 @32686 has 1 MA's), (54, 32824), (93, 33025),

Gene: Neoevie_28 Start: 37610, Stop: 38185, Start Num: 53

Candidate Starts for Neoevie_28:

(Start: 53 @37610 has 73 MA's), (63, 37661), (65, 37667), (67, 37685), (83, 37793), (116, 37931), (124, 37973), (138, 38048),

Gene: Newt_29 Start: 37837, Stop: 38412, Start Num: 53

Candidate Starts for Newt_29:

(Start: 53 @37837 has 73 MA's), (63, 37888), (65, 37894), (67, 37912), (83, 38020), (116, 38158), (124, 38200), (138, 38275),

Gene: Nimi13_28 Start: 37355, Stop: 37930, Start Num: 53

Candidate Starts for Nimi13_28:

(Start: 53 @37355 has 73 MA's), (63, 37406), (65, 37412), (67, 37430), (83, 37538), (116, 37676), (124, 37718), (138, 37793),

Gene: NoPickles_26 Start: 18394, Stop: 19041, Start Num: 25

Candidate Starts for NoPickles_26:

(Start: 25 @18394 has 32 MA's), (Start: 44 @18457 has 2 MA's), (74, 18607), (104, 18745), (126, 18853), (138, 18919),

Gene: NorManre_32 Start: 28358, Stop: 28951, Start Num: 53

Candidate Starts for NorManre_32:

(Start: 53 @28358 has 73 MA's), (Start: 64 @28412 has 2 MA's), (65, 28415), (78, 28520), (79, 28523), (81, 28535), (92, 28571), (142, 28844), (147, 28877),

Gene: NovaSharks_30 Start: 26350, Stop: 26937, Start Num: 53

Candidate Starts for NovaSharks_30:

(Start: 53 @26350 has 73 MA's), (81, 26527), (92, 26563), (142, 26830),

Gene: Octobien14_34 Start: 28125, Stop: 28844, Start Num: 16

Candidate Starts for Octobien14_34:

(Start: 16 @28125 has 8 MA's), (30, 28179), (35, 28200), (63, 28305), (69, 28338), (71, 28344), (80, 28419), (106, 28548), (120, 28587), (133, 28677), (148, 28776), (152, 28818),

Gene: Oofda_8 Start: 4406, Stop: 5080, Start Num: 25

Candidate Starts for Oofda_8:

(Start: 25 @4406 has 32 MA's), (50, 4487), (60, 4523), (81, 4670), (96, 4718),

Gene: OtterstedtS21_31 Start: 28433, Stop: 29026, Start Num: 53

Candidate Starts for OtterstedtS21_31:

(Start: 53 @28433 has 73 MA's), (Start: 64 @28487 has 2 MA's), (68, 28511), (74, 28568), (78, 28595), (81, 28610), (92, 28646), (147, 28952),

Gene: ParvusTarda_31 Start: 27891, Stop: 28496, Start Num: 53

Candidate Starts for ParvusTarda_31:

(Start: 53 @27891 has 73 MA's), (63, 27942), (65, 27948), (67, 27966), (83, 28074), (102, 28149), (122, 28248), (151, 28446),

Gene: Patos_32 Start: 28358, Stop: 28951, Start Num: 53

Candidate Starts for Patos_32:

(Start: 53 @28358 has 73 MA's), (Start: 64 @28412 has 2 MA's), (65, 28415), (78, 28520), (79, 28523), (81, 28535), (92, 28571), (142, 28844), (147, 28877),

Gene: Perkunas_28 Start: 19169, Stop: 19819, Start Num: 25

Candidate Starts for Perkunas_28:

(Start: 25 @19169 has 32 MA's), (50, 19253), (109, 19556), (114, 19571), (149, 19766), (154, 19802),

Gene: Petite_27 Start: 18884, Stop: 19531, Start Num: 24

Candidate Starts for Petito_27:

(Start: 24 @18884 has 12 MA's), (28, 18896), (42, 18941), (58, 18989), (97, 19193), (132, 19376), (155, 19517),

Gene: PetterN_5 Start: 3407, Stop: 4048, Start Num: 24

Candidate Starts for PetterN_5:

(Start: 24 @3407 has 12 MA's), (34, 3443), (40, 3464), (50, 3491), (73, 3623), (93, 3704), (97, 3719), (152, 4025),

Gene: Phabba_139 Start: 79960, Stop: 80571, Start Num: 44

Candidate Starts for Phabba_139:

(4, 79447), (Start: 44 @79960 has 2 MA's), (70, 80074), (97, 80215), (99, 80221), (105, 80281), (113, 80302), (114, 80305), (155, 80554),

Gene: Philon9_31 Start: 39420, Stop: 39992, Start Num: 53

Candidate Starts for Philon9_31:

(Start: 53 @39420 has 73 MA's), (Start: 64 @39468 has 2 MA's), (65, 39471), (67, 39489), (68, 39492), (79, 39579), (102, 39663), (138, 39855), (143, 39888), (147, 39918),

Gene: PickleBack_5 Start: 3447, Stop: 4088, Start Num: 24

Candidate Starts for PickleBack_5:

(Start: 24 @3447 has 12 MA's), (58, 3555), (68, 3615), (73, 3663), (75, 3669), (82, 3708), (95, 3753), (97, 3759),

Gene: Poland_32 Start: 37235, Stop: 37837, Start Num: 53

Candidate Starts for Poland_32:

(Start: 53 @37235 has 73 MA's), (67, 37310), (83, 37418), (121, 37574), (122, 37592),

Gene: Polo2Bam_26 Start: 24314, Stop: 25024, Start Num: 18

Candidate Starts for Polo2Bam_26:

(12, 24254), (Start: 18 @24314 has 2 MA's), (27, 24362), (36, 24395), (47, 24428), (89, 24656),

Gene: Polyyuki_24 Start: 12645, Stop: 13322, Start Num: 17

Candidate Starts for Polyyuki_24:

(Start: 17 @12645 has 5 MA's), (35, 12723), (46, 12756), (52, 12780), (56, 12789), (66, 12840), (68, 12849), (94, 12975), (119, 13083), (153, 13299),

Gene: Pywacket_30 Start: 29248, Stop: 29841, Start Num: 53

Candidate Starts for Pywacket_30:

(Start: 53 @29248 has 73 MA's), (63, 29299), (65, 29305), (67, 29323), (83, 29431), (116, 29569), (124, 29611), (138, 29704),

Gene: Ranch_31 Start: 27251, Stop: 27850, Start Num: 53

Candidate Starts for Ranch_31:

(Start: 53 @27251 has 73 MA's), (67, 27326), (68, 27329), (73, 27383), (81, 27428), (83, 27434), (101, 27500), (103, 27512), (147, 27776),

Gene: Ravana_8 Start: 4403, Stop: 5077, Start Num: 25

Candidate Starts for Ravana_8:

(Start: 25 @4403 has 32 MA's), (50, 4484), (60, 4520), (81, 4667), (96, 4715),

Gene: RazorC_29 Start: 26742, Stop: 27329, Start Num: 53

Candidate Starts for RazorC_29:

(Start: 53 @26742 has 73 MA's), (81, 26919), (92, 26955), (142, 27222),

Gene: Riduram_28 Start: 26320, Stop: 26907, Start Num: 53

Candidate Starts for Riduram_28:

(Start: 53 @26320 has 73 MA's), (81, 26497), (92, 26533), (142, 26800),

Gene: Rosalind_8 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for Rosalind_8:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Rota_30 Start: 28685, Stop: 29233, Start Num: 65

Candidate Starts for Rota_30:

(Start: 53 @28628 has 73 MA's), (63, 28679), (65, 28685), (81, 28805), (102, 28886), (122, 28985), (151, 29183),

Gene: Rukungu_31 Start: 28953, Stop: 29546, Start Num: 53

Candidate Starts for Rukungu_31:

(Start: 53 @28953 has 73 MA's), (Start: 64 @29007 has 2 MA's), (65, 29010), (78, 29115), (79, 29118), (81, 29130), (92, 29166), (142, 29439),

Gene: Rumi_30 Start: 26353, Stop: 26940, Start Num: 53

Candidate Starts for Rumi_30:

(Start: 53 @26353 has 73 MA's), (81, 26530), (92, 26566), (142, 26833), (144, 26842),

Gene: Sadboi_31 Start: 29111, Stop: 29704, Start Num: 53

Candidate Starts for Sadboi_31:

(Start: 53 @29111 has 73 MA's), (Start: 64 @29165 has 2 MA's), (68, 29189), (74, 29246), (78, 29273), (81, 29288), (92, 29324), (147, 29630),

Gene: Sampudon_31 Start: 29287, Stop: 29880, Start Num: 53

Candidate Starts for Sampudon_31:

(Start: 53 @29287 has 73 MA's), (67, 29362), (78, 29449), (83, 29470), (92, 29500), (142, 29773), (144, 29782), (147, 29806),

Gene: Scorpia_5 Start: 3408, Stop: 4049, Start Num: 24

Candidate Starts for Scorpia_5:

(Start: 24 @3408 has 12 MA's), (34, 3444), (40, 3465), (50, 3492), (73, 3624), (93, 3705), (97, 3720), (152, 4026),

Gene: SeaLumen_25 Start: 24314, Stop: 25024, Start Num: 18

Candidate Starts for SeaLumen_25:

(12, 24254), (Start: 18 @24314 has 2 MA's), (27, 24362), (36, 24395), (47, 24428), (89, 24656),

Gene: Sephiroth_33 Start: 27616, Stop: 28326, Start Num: 16

Candidate Starts for Sephiroth_33:

(Start: 16 @27616 has 8 MA's), (69, 27820), (71, 27826), (80, 27901), (94, 27949), (95, 27952), (96, 27955), (106, 28030), (133, 28159), (148, 28258), (152, 28300),

Gene: ShayRa_9 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for ShayRa_9:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Shelley_28 Start: 36819, Stop: 37406, Start Num: 53

Candidate Starts for Shelley_28:

(Start: 53 @36819 has 73 MA's), (81, 36996), (142, 37299), (144, 37308),

Gene: Soups_8 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for Soups_8:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: SpeedDemon_430 Start: 40514, Stop: 41227, Start Num: 16

Candidate Starts for SpeedDemon_430:

(8, 40364), (Start: 16 @40514 has 8 MA's), (19, 40529), (21, 40544), (27, 40565), (55, 40652), (65, 40709), (88, 40844), (91, 40853), (98, 40874), (106, 40943), (132, 41057),

Gene: SteamedHams_30 Start: 22667, Stop: 23359, Start Num: 25

Candidate Starts for SteamedHams_30:

(Start: 25 @22667 has 32 MA's), (41, 22724), (45, 22733), (51, 22754), (66, 22829), (128, 23171),

Gene: Sticker17_28 Start: 37346, Stop: 37921, Start Num: 53

Candidate Starts for Sticker17_28:

(Start: 53 @37346 has 73 MA's), (63, 37397), (65, 37403), (67, 37421), (83, 37529), (116, 37667), (124, 37709), (138, 37784),

Gene: Stormer_29 Start: 26356, Stop: 26943, Start Num: 53

Candidate Starts for Stormer_29:

(Start: 53 @26356 has 73 MA's), (72, 26449), (81, 26533), (92, 26569), (142, 26836),

Gene: SweetCrkHerbs_28 Start: 18842, Stop: 19492, Start Num: 25

Candidate Starts for SweetCrkHerbs_28:

(Start: 25 @18842 has 32 MA's), (50, 18926), (109, 19229), (114, 19244), (149, 19439), (154, 19475),

Gene: Switzerland_8 Start: 4550, Stop: 5224, Start Num: 25

Candidate Starts for Switzerland_8:

(Start: 25 @4550 has 32 MA's), (50, 4631), (60, 4667), (81, 4814), (96, 4862),

Gene: Syleon_33 Start: 27538, Stop: 28248, Start Num: 16

Candidate Starts for Syleon_33:

(Start: 16 @27538 has 8 MA's), (69, 27742), (71, 27748), (80, 27823), (94, 27871), (95, 27874), (96, 27877), (106, 27952), (133, 28081), (148, 28180), (152, 28222),

Gene: Tairn4Wing_28 Start: 18667, Stop: 19314, Start Num: 25

Candidate Starts for Tairn4Wing_28:

(Start: 25 @18667 has 32 MA's), (Start: 44 @18730 has 2 MA's), (74, 18880), (104, 19018), (126, 19126), (138, 19192),

Gene: Talon44_27 Start: 18842, Stop: 19492, Start Num: 25

Candidate Starts for Talon44_27:

(Start: 25 @18842 has 32 MA's), (50, 18926), (109, 19229), (114, 19244), (149, 19439), (154, 19475),

Gene: Teal_28 Start: 37814, Stop: 38389, Start Num: 53

Candidate Starts for Teal_28:

(Start: 53 @37814 has 73 MA's), (63, 37865), (65, 37871), (67, 37889), (83, 37997), (116, 38135), (124, 38177), (138, 38252),

Gene: Tillicus_30 Start: 27738, Stop: 28280, Start Num: 64

Candidate Starts for Tillicus_30:

(Start: 53 @27684 has 73 MA's), (Start: 64 @27738 has 2 MA's), (67, 27759), (70, 27771), (81, 27861), (83, 27867), (114, 28005), (127, 28083), (147, 28206),

Gene: TinaLin_3 Start: 665, Stop: 1360, Start Num: 20

Candidate Starts for TinaLin_3:

(6, 434), (10, 515), (11, 590), (Start: 20 @665 has 2 MA's), (21, 677), (29, 704), (43, 755), (59, 812), (66, 857), (68, 866), (90, 986), (94, 998), (98, 1010), (132, 1193),

Gene: Trufflozitus_26 Start: 18668, Stop: 19315, Start Num: 25

Candidate Starts for Trufflozitus_26:

(Start: 25 @18668 has 32 MA's), (Start: 44 @18731 has 2 MA's), (74, 18881), (104, 19019), (126, 19127), (138, 19193), (152, 19289),

Gene: VanLee_26 Start: 22797, Stop: 23510, Start Num: 16

Candidate Starts for VanLee_26:

(Start: 16 @22797 has 8 MA's), (37, 22881), (106, 23223), (156, 23505),

Gene: Vitaenoi_31 Start: 39419, Stop: 39991, Start Num: 53

Candidate Starts for Vitaenoi_31:

(Start: 53 @39419 has 73 MA's), (Start: 64 @39467 has 2 MA's), (67, 39488), (68, 39491), (79, 39578), (102, 39662), (138, 39854), (143, 39887), (147, 39917),

Gene: Waits_8 Start: 4402, Stop: 5076, Start Num: 25

Candidate Starts for Waits_8:

(Start: 25 @4402 has 32 MA's), (50, 4483), (60, 4519), (81, 4666), (96, 4714),

Gene: Warrior24_8 Start: 4406, Stop: 5080, Start Num: 25

Candidate Starts for Warrior24_8:

(Start: 25 @4406 has 32 MA's), (50, 4487), (60, 4523), (81, 4670), (96, 4718),

Gene: Woes_28 Start: 37853, Stop: 38440, Start Num: 53

Candidate Starts for Woes_28:

(Start: 53 @37853 has 73 MA's), (81, 38030), (92, 38066), (142, 38333),

Gene: Wojtek_30 Start: 27970, Stop: 28575, Start Num: 53

Candidate Starts for Wojtek_30:

(Start: 53 @27970 has 73 MA's), (63, 28021), (65, 28027), (81, 28147), (114, 28288), (116, 28291), (124, 28333), (151, 28525),

Gene: Yarn_27 Start: 22532, Stop: 23170, Start Num: 25

Candidate Starts for Yarn_27:

(Start: 25 @22532 has 32 MA's), (27, 22541), (39, 22583), (48, 22601), (58, 22637), (69, 22697), (110, 22913), (136, 23027),

Gene: Yikes_32 Start: 29366, Stop: 29959, Start Num: 53

Candidate Starts for Yikes_32:

(Start: 53 @29366 has 73 MA's), (Start: 64 @29420 has 2 MA's), (65, 29423), (78, 29528), (79, 29531), (81, 29543), (92, 29579), (142, 29852), (147, 29885),

Gene: Zany_30 Start: 28893, Stop: 29486, Start Num: 53

Candidate Starts for Zany_30:

(Start: 53 @28893 has 73 MA's), (78, 29055), (81, 29070), (92, 29106), (142, 29379), (144, 29388),
(147, 29412),

Gene: Zolita_4 Start: 3697, Stop: 4401, Start Num: 31

Candidate Starts for Zolita_4:

(Start: 26 @3679 has 2 MA's), (Start: 31 @3697 has 1 MA's), (45, 3745), (51, 3766), (71, 3862),