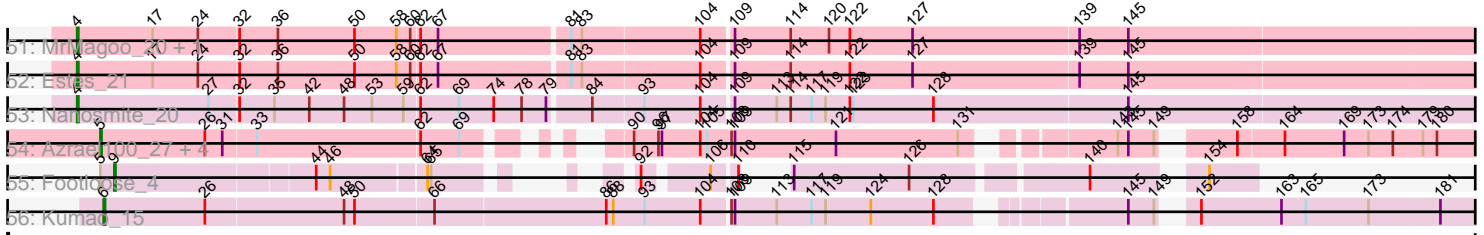


Pham 224332



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 224332 Report

This analysis was run 03/28/25 on database version 593.

Pham number 224332 has 166 members, 39 are drafts.

Phages represented in each track:

- Track 1 : MaGuCo_4
- Track 2 : Liebe_4, Maureen_4
- Track 3 : Tweety19_5
- Track 4 : Snek_5
- Track 5 : JasmineDragon_4, ShakeltOph_4, MiniMommy_4
- Track 6 : Emotion_4
- Track 7 : VroomVroom_4
- Track 8 : LadyAstra_4
- Track 9 : Gumpizza_4, Beaupre_4
- Track 10 : Giorgio_4
- Track 11 : SpecialK_4, Moss_4, Halsey_4, Ashes_4, RockScotty_4
- Track 12 : Sabourin_4, Sooty_4, Cappuccino_4, Gambol_4, Donkey_4, Kalimba_4
- Track 13 : Mysterium_4
- Track 14 : Stuu_4
- Track 15 : Sephiroth_15, Kudrefre_14, Syleon_15
- Track 16 : Octobien14_15
- Track 17 : Neville_14
- Track 18 : Rabbitrun_16
- Track 19 : Trax_14
- Track 20 : Honk_4
- Track 21 : Cen1621_4
- Track 22 : Zeta1847_4
- Track 23 : Floof_4
- Track 24 : SuMoo_4
- Track 25 : Tyson_6, Wyatt2_6, Zaria_6, CicholasNage_6, LeBron_6, AvadaKedavra_6, JoeDirt_6, UPIE_6, Wamburggrxpress_6, Appletree2_6, Rose5_6, Calm_6, MAckerman_6, DirkDirk_6, Poochiewood_6, Silverleaf_6, Enceladus_6, Halena_6, Acquire49_6, OhShagHennessy_6
- Track 26 : Nicholasp3_6, Underpass_6, Vetrix_6, BobsGarage_6, Netyap_6, Miley16_6, Gabriela_6, LilDestine_6, Faith1_6, Winky_6, Gardann_6, Itos_6, BigCheese_6, Kahlid_6, Finemlucis_6, Zakai_6, Lewan_6, DrSeegs_6, Wilder_6, Breezona_6, SoJulia_6, MkaliMitinis3_6, Crossroads_6, Rumpelstiltskin_6
- Track 27 : Soap141_6, Sarshaun_6, Loadrie_6, Hafay_6, Wigglewiggle_6
- Track 28 : Tourach_6
- Track 29 : DanBing_5
- Track 30 : Bazzle_6, Archie_6, Rossetti_6
- Track 31 : GuuelaD_6

- Track 32 : ZhongYanYuan_5, Claus_6, Baoshan_5
- Track 33 : DHan_6
- Track 34 : Krypton555_7
- Track 35 : Bellis_7, Kingsolomon_7, Lumos_7, Nicholas_7, Moostard_7, Red305_7, TriFive_7, Snenia_7, MsGreen_7, Finnry_7, Jubie_7, Samty_7, Clautastrophe_7, Jobypre_7
- Track 36 : MiniLon_7, Lolly9_7, MiniMac_7
- Track 37 : BourbonZero_6, Ellson_7, DuncansLeg_7, KirDoubleO7_5, LiyuLake_7
- Track 38 : Whirlwind_8
- Track 39 : Douzhi_6, PYPDinur_6, Chaser_6, Sheng711_6
- Track 40 : BrainDrainer_7
- Track 41 : Bromden_6
- Track 42 : Kropertea_6
- Track 43 : Douge_6, Quby_6, FarmResident_6
- Track 44 : DyoEdafos_7
- Track 45 : Baudelaire_6, Aegeus_6
- Track 46 : RoseMarie_16
- Track 47 : FreakyGoo_16, Glaske16_17, Auspice_16, Bricole_16, Dulcita_17, IPhane7_16, KleverKiS_16, Diminimus_17, Izel_15, Skinny_17, LilhomieP_15, PegLeg_16, TyDawg_16, Bongo_16, SlimJimmy_15
- Track 48 : Reindeer_14
- Track 49 : Rey_20
- Track 50 : GenevaB15_20, Aziz_20
- Track 51 : MrMagoo_20, GardenSalsa_20
- Track 52 : Estes_21
- Track 53 : Nanosmite_20
- Track 54 : Azrael100_27, MaryV_28, EniyanLRS_25, Cosmo_28, Wildcat_28
- Track 55 : Footloose_4
- Track 56 : Kumao_15

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

The start number called the most often in the published annotations is 3, it was called in 70 of the 127 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_6, Aegeus_6, Appletree2_6, Archie_6, AvadaKedavra_6, Baoshan_5, Baudelaire_6, Bazzle_6, Bellis_7, BigCheese_6, BobsGarage_6, BourbonZero_6, BrainDrainer_7, Breezona_6, Bromden_6, Calm_6, Chaser_6, CicholasNage_6, Claus_6, Clautastrophe_7, Crossroads_6, DHan_6, DanBing_5, DirkDirk_6, Douge_6, Douzhi_6, DrSeegs_6, DuncansLeg_7, DyoEdafos_7, Ellson_7, Enceladus_6, Faith1_6, FarmResident_6, Finemlucis_6, Finnry_7, Gabriela_6, Gardann_6, GuuelaD_6, Hafay_6, Halena_6, Itos_6, Jobypre_7, JoeDirt_6, Jubie_7, Kahlid_6, Kingsolomon_7, KirDoubleO7_5, Kropertea_6, Krypton555_7, LeBron_6, Lewan_6, LilDestine_6, LiyuLake_7, Loadrie_6, Lolly9_7, Lumos_7, MAckerman_6, Miley16_6, MiniLon_7, MiniMac_7, MkaliMitinis3_6, Moostard_7, MsGreen_7, Netyap_6, Nicholas_7, Nicholasp3_6, OhShagHennessy_6, PYPDinur_6, Poochiewood_6, Quby_6, Red305_7, Rose5_6, Rossetti_6, Rumpelstiltskin_6, Samty_7, Sarshaun_6, Sheng711_6, Silverleaf_6, Snenia_7, SoJulia_6, Soap141_6, Tourach_6, TriFive_7, Tyson_6, UPIE_6, Underpass_6, Vetrix_6,

Wamburgexpress_6, Whirlwind_8, Wigglewiggle_6, Wilder_6, Winky_6, Wyatt2_6, Zakai_6, Zaria_6, ZhongYanYuan_5,

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

-

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

- Ashes_4, Auspice_16, Aziz_20, Azrael100_27, Beaupre_4, Bongo_16, Bricole_16, Cappuccino_4, Cen1621_4, Cosmo_28, Diminimus_17, Donkey_4, Dulcita_17, Emotion_4, EniyanLRS_25, Estes_21, Floof_4, Footloose_4, FreakyGoo_16, Gambol_4, GardenSalsa_20, GenevaB15_20, Giorgio_4, Glaske16_17, Gumpizza_4, Halsey_4, Honk_4, IPhane7_16, Izel_15, JasmineDragon_4, Kalimba_4, KleverKiS_16, Kudrefre_14, Kumao_15, LadyAstra_4, Liebe_4, LilhomieP_15, MaGuCo_4, MaryV_28, Maureen_4, MiniMommy_4, Moss_4, MrMagoo_20, Mysterium_4, Nanosmite_20, Neville_14, Octobien14_15, PegLeg_16, Rabbitrun_16, Reindeer_14, Rey_20, RockScotty_4, RoseMarie_16, Sabourin_4, Sephiroth_15, ShakeltOph_4, Skinny_17, SlimJimmy_15, Snek_5, Sooty_4, SpecialK_4, Stuu_4, SuMoo_4, Syleon_15, Trax_14, Tweety19_5, TyDawg_16, VroomVroom_4, Wildcat_28, Zeta1847_4,

Summary by start number:

Start 3:

- Found in 96 of 166 (57.8%) of genes in pham
- Manual Annotations of this start: 70 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_6 (L1), Aegeus_6 (L5), Appletree2_6 (L1), Archie_6 (L2), AvadaKedavra_6 (L1), Baoshan_5 (L2), Baudelaire_6 (L5), Bazzle_6 (L2), Bellis_7 (L3), BigCheese_6 (L2), BobsGarage_6 (L2), BourbonZero_6 (L3), BrainDrainer_7 (L4), Breezona_6 (L2), Bromden_6 (L4), Calm_6 (L1), Chaser_6 (L4), CicholasNage_6 (L1), Claus_6 (L2), Clautastrophe_7 (L3), Crossroads_6 (L2), DHan_6 (L2), DanBing_5 (L2), DirkDirk_6 (L1), Douge_6 (L4), Douzhi_6 (L4), DrSeegs_6 (L2), DuncansLeg_7 (L3), DyoEdafos_7 (L4), Ellson_7 (L3), Enceladus_6 (L1), Faith1_6 (L2), FarmResident_6 (L4), Finemlucis_6 (L2), Finnry_7 (L3), Gabriela_6 (L2), Gardann_6 (L2), GuuelaD_6 (L2), Hafay_6 (L2), Halena_6 (L1), Itos_6 (L2), Jobypre_7 (L3), JoeDirt_6 (L1), Jubie_7 (L3), Kahlid_6 (L2), Kingsolomon_7 (L3), KirDoubleO7_5 (L3), Kropertea_6 (L4), Krypton555_7 (L3), LeBron_6 (L1), Lewan_6 (L2), LilDestine_6 (L2), LiyuLake_7 (L3), Loadrie_6 (L2), Lolly9_7 (L3), Lumos_7 (L3), MAckerman_6 (L1), Miley16_6 (L2), MiniLon_7 (L3), MiniMac_7 (L3), MkaliMitinis3_6 (L2), Moostard_7 (L3), MsGreen_7 (L3), Netyap_6 (L2), Nicholas_7 (L3), Nicholasp3_6 (L2), OhShagHennessy_6 (L1), PYPDinur_6 (L4), Poochiewood_6 (L1), Quby_6 (L4), Red305_7 (L3), Rose5_6 (L1), Rossetti_6 (L2), Rumpelstiltskin_6 (L2), Samty_7 (L3), Sarshaun_6 (L2), Sheng711_6 (L4), Silverleaf_6 (L1), Snenia_7 (L3), SoJulia_6 (L2), Soap141_6 (L2), Tourach_6 (L2), TriFive_7 (L3), Tyson_6 (L1), UPIE_6 (L1), Underpass_6 (L2), Vetrix_6 (L2), Wamburgexpress_6 (L1), Whirlwind_8 (L3), Wigglewiggle_6 (L2), Wilder_6 (L2), Winky_6 (L2), Wyatt2_6 (L1), Zakai_6 (L2), Zaria_6 (L1), ZhongYanYuan_5 (L2),

Start 4:

- Found in 24 of 166 (14.5%) of genes in pham
- Manual Annotations of this start: 20 of 127
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Auspice_16 (M1), Aziz_20 (M2), Bongo_16 (M1), Bricole_16 (M1), Diminimus_17 (M1), Dulcita_17 (M1), Estes_21 (M2), FreakyGoo_16 (M1), GardenSalsa_20 (M2), GenevaB15_20 (M2), Glaske16_17 (M1), IPhane7_16 (M1), Izel_15 (M1), KleverKiS_16 (M1), LilhomieP_15 (M1), MrMagoo_20 (M2), Nanosmite_20 (M3), PegLeg_16 (M1), Reindeer_14 (M1), Rey_20 (M2), RoseMarie_16 (M), Skinny_17 (M1), SlimJimmy_15 (M1), TyDawg_16 (M1),

Start 5:

- Found in 6 of 166 (3.6%) of genes in pham
- Manual Annotations of this start: 5 of 127
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Azrael100_27 (V), Cosmo_28 (V), EniyanLRS_25 (V), MaryV_28 (V), Wildcat_28 (V),

Start 6:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumao_15 (singleton),

Start 7:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Honk_4 (EH),

Start 8:

- Found in 40 of 166 (24.1%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Floop_4 (EH),

Start 9:

- Found in 18 of 166 (10.8%) of genes in pham
- Manual Annotations of this start: 12 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ashes_4 (AZ5), Beaupre_4 (AZ5), Cappuccino_4 (AZ5), Donkey_4 (AZ5), Footloose_4 (singleton), Gambol_4 (AZ5), Giorgio_4 (AZ5), Gumpizza_4 (AZ5), Halsey_4 (AZ5), Kalimba_4 (AZ5), Moss_4 (AZ5), Mysterium_4 (AZ5), RockScotty_4 (AZ5), Sabourin_4 (AZ5), Sooty_4 (AZ5), SpecialK_4 (AZ5), Stuu_4 (AZ5), SuMoo_4 (EH),

Start 10:

- Found in 3 of 166 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 127
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Cen1621_4 (EH), Zeta1847_4 (EH),

Start 11:

- Found in 30 of 166 (18.1%) of genes in pham
- Manual Annotations of this start: 6 of 127
- Called 20.0% of time when present

- Phage (with cluster) where this start called: Liebe_4 (AZ2), MaGuCo_4 (AZ2), Maureen_4 (AZ2), Neville_14 (DU2), Rabbitrun_16 (DU2), Trax_14 (DU2),

Start 12:

- Found in 8 of 166 (4.8%) of genes in pham
- Manual Annotations of this start: 5 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emotion_4 (AZ4), JasmineDragon_4 (AZ4), LadyAstra_4 (AZ4), MiniMommy_4 (AZ4), ShakeltOph_4 (AZ4), Snek_5 (AZ3), Tweety19_5 (AZ3), VroomVroom_4 (AZ4),

Start 14:

- Found in 1 of 166 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Octobien14_15 (DU1),

Start 16:

- Found in 3 of 166 (1.8%) of genes in pham
- Manual Annotations of this start: 3 of 127
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kudrefre_14 (DU1), Sephiroth_15 (DU1), Syleon_15 (DU1),

Summary by clusters:

There are 18 clusters represented in this pham: M1, EH, L1, DU2, M2, M, singleton, L4, L5, L2, L3, M3, V, DU1, AZ2, AZ3, AZ4, AZ5,

Info for manual annotations of cluster AZ2:

- Start number 11 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ3:

- Start number 12 was manually annotated 2 times for cluster AZ3.

Info for manual annotations of cluster AZ4:

- Start number 12 was manually annotated 3 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 9 was manually annotated 10 times for cluster AZ5.

Info for manual annotations of cluster DU1:

- Start number 14 was manually annotated 1 time for cluster DU1.
- Start number 16 was manually annotated 3 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 11 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster EH:

- Start number 7 was manually annotated 1 time for cluster EH.
- Start number 8 was manually annotated 1 time for cluster EH.
- Start number 9 was manually annotated 1 time for cluster EH.
- Start number 10 was manually annotated 2 times for cluster EH.

Info for manual annotations of cluster L1:

- Start number 3 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 3 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 3 was manually annotated 17 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 3 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 3 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:

- Start number 4 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 4 was manually annotated 6 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 4 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster V:

- Start number 5 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Acquire49_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Acquire49_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: Aegeus_6 Start: 3860, Stop: 4954, Start Num: 3

Candidate Starts for Aegeus_6:

(Start: 3 @3860 has 70 MA's), (13, 3914), (19, 3941), (28, 3983), (29, 3986), (31, 3992), (48, 4094), (51, 4109), (56, 4130), (60, 4151), (70, 4193), (72, 4199), (89, 4274), (90, 4277), (98, 4307), (99, 4313), (102, 4325), (124, 4475), (126, 4508), (127, 4511), (129, 4535), (133, 4568), (137, 4598), (139, 4631), (148, 4694), (164, 4781),

Gene: Appletree2_6 Start: 4294, Stop: 5349, Start Num: 3

Candidate Starts for Appletree2_6:

(Start: 3 @4294 has 70 MA's), (31, 4432), (32, 4444), (51, 4549), (54, 4561), (63, 4600), (64, 4603), (72, 4639), (88, 4705), (91, 4720), (98, 4735), (107, 4777), (127, 4879), (140, 5014), (143, 5038), (166, 5179), (169, 5206), (170, 5215),

Gene: Archie_6 Start: 4276, Stop: 5343, Start Num: 3

Candidate Starts for Archie_6:

(Start: 3 @4276 has 70 MA's), (Start: 8 @4333 has 1 MA's), (31, 4429), (51, 4546), (54, 4558), (65, 4603), (72, 4636), (88, 4702), (98, 4732), (107, 4774), (109, 4783), (127, 4876), (128, 4894), (140, 5011), (143, 5035), (145, 5044), (166, 5176), (169, 5203),

Gene: Ashes_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Ashes_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: Auspice_16 Start: 7882, Stop: 9042, Start Num: 4

Candidate Starts for Auspice_16:

(Start: 4 @7882 has 20 MA's), (26, 7990), (37, 8056), (42, 8077), (53, 8131), (62, 8170), (67, 8185), (73, 8227), (77, 8248), (80, 8284), (81, 8293), (101, 8383), (103, 8392), (104, 8395), (109, 8419), (114, 8467), (123, 8521), (124, 8536), (128, 8590), (138, 8692), (145, 8755),

Gene: AvadaKedavra_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for AvadaKedavra_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: Aziz_20 Start: 8460, Stop: 9641, Start Num: 4

Candidate Starts for Aziz_20:

(Start: 4 @8460 has 20 MA's), (17, 8523), (24, 8562), (32, 8595), (36, 8628), (50, 8694), (58, 8730), (60, 8742), (62, 8748), (67, 8763), (81, 8871), (94, 8934), (104, 8979), (109, 9009), (114, 9057), (120, 9090), (122, 9108), (127, 9162), (139, 9303), (140, 9312), (145, 9345),

Gene: Azrael100_27 Start: 11178, Stop: 12212, Start Num: 5

Candidate Starts for Azrael100_27:

(Start: 5 @11178 has 5 MA's), (26, 11268), (31, 11283), (33, 11310), (62, 11448), (69, 11481), (90, 11559), (96, 11580), (97, 11583), (104, 11616), (105, 11622), (108, 11640), (109, 11643), (121, 11730), (131, 11835), (143, 11934), (145, 11943), (149, 11964), (158, 12009), (164, 12045), (169, 12096), (173, 12117), (174, 12138), (179, 12162), (180, 12174),

Gene: Baoshan_5 Start: 4143, Stop: 5198, Start Num: 3

Candidate Starts for Baoshan_5:

(Start: 3 @4143 has 70 MA's), (Start: 8 @4191 has 1 MA's), (28, 4278), (51, 4404), (54, 4416), (65, 4461), (72, 4494), (88, 4560), (98, 4590), (107, 4632), (109, 4641), (127, 4734), (128, 4752), (140, 4869), (143, 4893), (145, 4902), (159, 4980), (166, 5031), (169, 5058), (170, 5067),

Gene: Baudelaire_6 Start: 3860, Stop: 4954, Start Num: 3

Candidate Starts for Baudelaire_6:

(Start: 3 @3860 has 70 MA's), (13, 3914), (19, 3941), (28, 3983), (29, 3986), (31, 3992), (48, 4094), (51, 4109), (56, 4130), (60, 4151), (70, 4193), (72, 4199), (89, 4274), (90, 4277), (98, 4307), (99, 4313), (102, 4325), (124, 4475), (126, 4508), (127, 4511), (129, 4535), (133, 4568), (137, 4598), (139, 4631), (148, 4694), (164, 4781),

Gene: Bazzle_6 Start: 4252, Stop: 5319, Start Num: 3

Candidate Starts for Bazzle_6:

(Start: 3 @4252 has 70 MA's), (Start: 8 @4309 has 1 MA's), (31, 4405), (51, 4522), (54, 4534), (65, 4579), (72, 4612), (88, 4678), (98, 4708), (107, 4750), (109, 4759), (127, 4852), (128, 4870), (140, 4987), (143, 5011), (145, 5020), (166, 5152), (169, 5179),

Gene: Beaupre_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Beaupre_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (55, 4110), (92, 4230), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: Bellis_7 Start: 4412, Stop: 5482, Start Num: 3

Candidate Starts for Bellis_7:

(Start: 3 @4412 has 70 MA's), (Start: 11 @4460 has 6 MA's), (13, 4469), (19, 4496), (31, 4547), (44, 4625), (51, 4664), (54, 4676), (72, 4754), (76, 4778), (88, 4820), (98, 4850), (127, 5018), (128, 5036), (140, 5153), (143, 5177), (159, 5264), (169, 5345),

Gene: BigCheese_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for BigCheese_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: BobsGarage_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for BobsGarage_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Bongo_16 Start: 7882, Stop: 9042, Start Num: 4

Candidate Starts for Bongo_16:

(Start: 4 @7882 has 20 MA's), (26, 7990), (37, 8056), (42, 8077), (53, 8131), (62, 8170), (67, 8185), (73, 8227), (77, 8248), (80, 8284), (81, 8293), (101, 8383), (103, 8392), (104, 8395), (109, 8419), (114, 8467), (123, 8521), (124, 8536), (128, 8590), (138, 8692), (145, 8755),

Gene: BourbonZero_6 Start: 4417, Stop: 5487, Start Num: 3

Candidate Starts for BourbonZero_6:

(Start: 3 @4417 has 70 MA's), (Start: 11 @4465 has 6 MA's), (13, 4474), (19, 4501), (31, 4552), (44, 4630), (51, 4669), (54, 4681), (72, 4759), (76, 4783), (88, 4825), (98, 4855), (128, 5041), (140, 5158), (143, 5182), (169, 5350),

Gene: BrainDrainer_7 Start: 4133, Stop: 5182, Start Num: 3

Candidate Starts for BrainDrainer_7:

(Start: 3 @4133 has 70 MA's), (30, 4268), (31, 4271), (51, 4388), (54, 4400), (72, 4478), (82, 4526), (88, 4544), (98, 4574), (107, 4616), (109, 4625), (118, 4649), (127, 4718), (128, 4736), (140, 4853), (143, 4877), (145, 4886), (166, 5015), (169, 5042), (177, 5102), (178, 5105),

Gene: Breezona_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Breezona_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Bricole_16 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for Bricole_16:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: Bromden_6 Start: 4032, Stop: 5087, Start Num: 3

Candidate Starts for Bromden_6:

(1, 4026), (Start: 3 @4032 has 70 MA's), (26, 4161), (51, 4293), (54, 4305), (72, 4383), (82, 4431), (88, 4449), (98, 4479), (107, 4521), (127, 4623), (128, 4641), (140, 4758), (143, 4782), (145, 4791), (166, 4920), (169, 4947), (177, 5007),

Gene: Calm_6 Start: 4321, Stop: 5376, Start Num: 3

Candidate Starts for Calm_6:

(Start: 3 @4321 has 70 MA's), (31, 4459), (32, 4471), (51, 4576), (54, 4588), (63, 4627), (64, 4630), (72, 4666), (88, 4732), (91, 4747), (98, 4762), (107, 4804), (127, 4906), (140, 5041), (143, 5065), (166, 5206), (169, 5233), (170, 5242),

Gene: Cappuccino_4 Start: 3875, Stop: 4669, Start Num: 9

Candidate Starts for Cappuccino_4:

(Start: 9 @3875 has 12 MA's), (19, 3917), (32, 3983), (35, 4013), (38, 4025), (99, 4244), (104, 4265), (116, 4307), (126, 4394), (128, 4415), (130, 4433), (156, 4607),

Gene: Cen1621_4 Start: 3740, Stop: 4483, Start Num: 10

Candidate Starts for Cen1621_4:

(Start: 10 @3740 has 2 MA's), (19, 3779), (43, 3908), (55, 3968), (64, 3998), (104, 4136), (109, 4160), (124, 4229), (126, 4262), (135, 4337), (136, 4346),

Gene: Chaser_6 Start: 4033, Stop: 5088, Start Num: 3

Candidate Starts for Chaser_6:

(1, 4027), (Start: 3 @4033 has 70 MA's), (26, 4162), (31, 4177), (51, 4294), (54, 4306), (72, 4384), (82, 4432), (88, 4450), (98, 4480), (107, 4522), (118, 4555), (127, 4624), (128, 4642), (140, 4759), (143, 4783), (145, 4792), (166, 4921), (169, 4948), (177, 5008), (178, 5011),

Gene: CicholasNage_6 Start: 4321, Stop: 5376, Start Num: 3

Candidate Starts for CicholasNage_6:

(Start: 3 @4321 has 70 MA's), (31, 4459), (32, 4471), (51, 4576), (54, 4588), (63, 4627), (64, 4630), (72, 4666), (88, 4732), (91, 4747), (98, 4762), (107, 4804), (127, 4906), (140, 5041), (143, 5065), (166, 5206), (169, 5233), (170, 5242),

Gene: Claus_6 Start: 4323, Stop: 5378, Start Num: 3

Candidate Starts for Claus_6:

(Start: 3 @4323 has 70 MA's), (Start: 8 @4371 has 1 MA's), (28, 4458), (51, 4584), (54, 4596), (65, 4641), (72, 4674), (88, 4740), (98, 4770), (107, 4812), (109, 4821), (127, 4914), (128, 4932), (140, 5049), (143, 5073), (145, 5082), (159, 5160), (166, 5211), (169, 5238), (170, 5247),

Gene: Clautastrophe_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Clautastrophe_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: Cosmo_28 Start: 11185, Stop: 12219, Start Num: 5

Candidate Starts for Cosmo_28:

(Start: 5 @11185 has 5 MA's), (26, 11275), (31, 11290), (33, 11317), (62, 11455), (69, 11488), (90, 11566), (96, 11587), (97, 11590), (104, 11623), (105, 11629), (108, 11647), (109, 11650), (121, 11737), (131, 11842), (143, 11941), (145, 11950), (149, 11971), (158, 12016), (164, 12052), (169, 12103), (173, 12124), (174, 12145), (179, 12169), (180, 12181),

Gene: Crossroads_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Crossroads_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: DHan_6 Start: 4259, Stop: 5314, Start Num: 3

Candidate Starts for DHan_6:

(Start: 3 @4259 has 70 MA's), (Start: 8 @4307 has 1 MA's), (51, 4520), (54, 4532), (72, 4610), (88, 4676), (98, 4706), (107, 4748), (109, 4757), (127, 4850), (140, 4985), (143, 5009), (145, 5018), (159, 5096), (166, 5147), (169, 5174), (170, 5183),

Gene: DanBing_5 Start: 4143, Stop: 5198, Start Num: 3

Candidate Starts for DanBing_5:

(Start: 3 @4143 has 70 MA's), (Start: 8 @4191 has 1 MA's), (51, 4404), (54, 4416), (65, 4461), (72, 4494), (88, 4560), (98, 4590), (107, 4632), (109, 4641), (127, 4734), (128, 4752), (140, 4869), (143, 4893), (145, 4902), (159, 4980), (166, 5031), (169, 5058), (170, 5067),

Gene: Diminimus_17 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for Diminimus_17:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: DirkDirk_6 Start: 4322, Stop: 5377, Start Num: 3

Candidate Starts for DirkDirk_6:

(Start: 3 @4322 has 70 MA's), (31, 4460), (32, 4472), (51, 4577), (54, 4589), (63, 4628), (64, 4631), (72, 4667), (88, 4733), (91, 4748), (98, 4763), (107, 4805), (127, 4907), (140, 5042), (143, 5066), (166, 5207), (169, 5234), (170, 5243),

Gene: Donkey_4 Start: 3875, Stop: 4669, Start Num: 9

Candidate Starts for Donkey_4:

(Start: 9 @3875 has 12 MA's), (19, 3917), (32, 3983), (35, 4013), (38, 4025), (99, 4244), (104, 4265), (116, 4307), (126, 4394), (128, 4415), (130, 4433), (156, 4607),

Gene: Douge_6 Start: 3988, Stop: 5043, Start Num: 3

Candidate Starts for Douge_6:

(1, 3982), (Start: 3 @3988 has 70 MA's), (30, 4129), (31, 4132), (51, 4249), (54, 4261), (72, 4339), (82, 4387), (88, 4405), (98, 4435), (107, 4477), (109, 4486), (118, 4510), (127, 4579), (128, 4597), (140, 4714), (143, 4738), (145, 4747), (166, 4876), (169, 4903), (177, 4963), (178, 4966),

Gene: Douzhi_6 Start: 3988, Stop: 5043, Start Num: 3

Candidate Starts for Douzhi_6:

(1, 3982), (Start: 3 @3988 has 70 MA's), (26, 4117), (31, 4132), (51, 4249), (54, 4261), (72, 4339), (82, 4387), (88, 4405), (98, 4435), (107, 4477), (118, 4510), (127, 4579), (128, 4597), (140, 4714), (143, 4738), (145, 4747), (166, 4876), (169, 4903), (177, 4963), (178, 4966),

Gene: DrSeegs_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for DrSeegs_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Dulcita_17 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for Dulcita_17:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: DuncansLeg_7 Start: 4419, Stop: 5489, Start Num: 3

Candidate Starts for DuncansLeg_7:

(Start: 3 @4419 has 70 MA's), (Start: 11 @4467 has 6 MA's), (13, 4476), (19, 4503), (31, 4554), (44, 4632), (51, 4671), (54, 4683), (72, 4761), (76, 4785), (88, 4827), (98, 4857), (128, 5043), (140, 5160), (143, 5184), (169, 5352),

Gene: DyoEdafos_7 Start: 4176, Stop: 5231, Start Num: 3

Candidate Starts for DyoEdafos_7:

(1, 4170), (Start: 3 @4176 has 70 MA's), (26, 4305), (51, 4437), (54, 4449), (72, 4527), (82, 4575), (88, 4593), (98, 4623), (107, 4665), (118, 4698), (127, 4767), (128, 4785), (140, 4902), (143, 4926), (166, 5064), (169, 5091), (177, 5151),

Gene: Ellson_7 Start: 4428, Stop: 5498, Start Num: 3

Candidate Starts for Ellson_7:

(Start: 3 @4428 has 70 MA's), (Start: 11 @4476 has 6 MA's), (13, 4485), (19, 4512), (31, 4563), (44, 4641), (51, 4680), (54, 4692), (72, 4770), (76, 4794), (88, 4836), (98, 4866), (128, 5052), (140, 5169), (143, 5193), (169, 5361),

Gene: Emotion_4 Start: 3677, Stop: 4474, Start Num: 12

Candidate Starts for Emotion_4:

(Start: 12 @3677 has 5 MA's), (31, 3761), (52, 3884), (57, 3908), (66, 3935), (117, 4103), (126, 4187), (130, 4226), (140, 4319),

Gene: Enceladus_6 Start: 4322, Stop: 5377, Start Num: 3

Candidate Starts for Enceladus_6:

(Start: 3 @4322 has 70 MA's), (31, 4460), (32, 4472), (51, 4577), (54, 4589), (63, 4628), (64, 4631), (72, 4667), (88, 4733), (91, 4748), (98, 4763), (107, 4805), (127, 4907), (140, 5042), (143, 5066), (166, 5207), (169, 5234), (170, 5243),

Gene: EniyanLRS_25 Start: 10876, Stop: 11910, Start Num: 5

Candidate Starts for EniyanLRS_25:

(Start: 5 @10876 has 5 MA's), (26, 10966), (31, 10981), (33, 11008), (62, 11146), (69, 11179), (90, 11257), (96, 11278), (97, 11281), (104, 11314), (105, 11320), (108, 11338), (109, 11341), (121, 11428), (131, 11533), (143, 11632), (145, 11641), (149, 11662), (158, 11707), (164, 11743), (169, 11794), (173, 11815), (174, 11836), (179, 11860), (180, 11872),

Gene: Estes_21 Start: 8605, Stop: 9780, Start Num: 4

Candidate Starts for Estes_21:

(Start: 4 @8605 has 20 MA's), (17, 8668), (24, 8707), (32, 8740), (36, 8773), (50, 8839), (58, 8875), (60, 8887), (62, 8893), (67, 8908), (81, 9016), (83, 9025), (104, 9124), (109, 9148), (114, 9196), (122, 9247), (127, 9301), (139, 9442), (145, 9484),

Gene: Faith1_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Faith1_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143,

5061), (145, 5070), (166, 5202), (169, 5229),

Gene: FarmResident_6 Start: 4027, Stop: 5082, Start Num: 3

Candidate Starts for FarmResident_6:

(1, 4021), (Start: 3 @4027 has 70 MA's), (30, 4168), (31, 4171), (51, 4288), (54, 4300), (72, 4378), (82, 4426), (88, 4444), (98, 4474), (107, 4516), (109, 4525), (118, 4549), (127, 4618), (128, 4636), (140, 4753), (143, 4777), (145, 4786), (166, 4915), (169, 4942), (177, 5002), (178, 5005),

Gene: Finemlucis_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Finemlucis_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Finnry_7 Start: 4413, Stop: 5483, Start Num: 3

Candidate Starts for Finnry_7:

(Start: 3 @4413 has 70 MA's), (Start: 11 @4461 has 6 MA's), (13, 4470), (19, 4497), (31, 4548), (44, 4626), (51, 4665), (54, 4677), (72, 4755), (76, 4779), (88, 4821), (98, 4851), (127, 5019), (128, 5037), (140, 5154), (143, 5178), (159, 5265), (169, 5346),

Gene: Floof_4 Start: 4029, Stop: 4892, Start Num: 8

Candidate Starts for Floof_4:

(Start: 8 @4029 has 1 MA's), (15, 4059), (40, 4191), (104, 4434), (126, 4563), (146, 4731), (161, 4815),

Gene: Footloose_4 Start: 3515, Stop: 4273, Start Num: 9

Candidate Starts for Footloose_4:

(Start: 5 @3503 has 5 MA's), (Start: 9 @3515 has 12 MA's), (44, 3680), (46, 3692), (64, 3767), (65, 3770), (92, 3851), (106, 3899), (110, 3917), (115, 3920), (126, 4019), (140, 4154), (154, 4232),

Gene: FreakyGoo_16 Start: 7882, Stop: 9042, Start Num: 4

Candidate Starts for FreakyGoo_16:

(Start: 4 @7882 has 20 MA's), (26, 7990), (37, 8056), (42, 8077), (53, 8131), (62, 8170), (67, 8185), (73, 8227), (77, 8248), (80, 8284), (81, 8293), (101, 8383), (103, 8392), (104, 8395), (109, 8419), (114, 8467), (123, 8521), (124, 8536), (128, 8590), (138, 8692), (145, 8755),

Gene: Gabriela_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Gabriela_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Gambol_4 Start: 3875, Stop: 4669, Start Num: 9

Candidate Starts for Gambol_4:

(Start: 9 @3875 has 12 MA's), (19, 3917), (32, 3983), (35, 4013), (38, 4025), (99, 4244), (104, 4265), (116, 4307), (126, 4394), (128, 4415), (130, 4433), (156, 4607),

Gene: Gardann_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Gardann_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: GardenSalsa_20 Start: 8439, Stop: 9614, Start Num: 4

Candidate Starts for GardenSalsa_20:

(Start: 4 @8439 has 20 MA's), (17, 8502), (24, 8541), (32, 8574), (36, 8607), (50, 8673), (58, 8709), (60, 8721), (62, 8727), (67, 8742), (81, 8850), (83, 8859), (104, 8958), (109, 8982), (114, 9030), (120, 9063), (122, 9081), (127, 9135), (139, 9276), (145, 9318),

Gene: GenevaB15_20 Start: 8460, Stop: 9641, Start Num: 4

Candidate Starts for GenevaB15_20:

(Start: 4 @8460 has 20 MA's), (17, 8523), (24, 8562), (32, 8595), (36, 8628), (50, 8694), (58, 8730), (60, 8742), (62, 8748), (67, 8763), (81, 8871), (94, 8934), (104, 8979), (109, 9009), (114, 9057), (120, 9090), (122, 9108), (127, 9162), (139, 9303), (140, 9312), (145, 9345),

Gene: Giorgio_4 Start: 3880, Stop: 4674, Start Num: 9

Candidate Starts for Giorgio_4:

(Start: 9 @3880 has 12 MA's), (19, 3922), (32, 3988), (35, 4018), (38, 4030), (92, 4231), (99, 4249), (104, 4270), (116, 4312), (124, 4366), (126, 4399), (128, 4420), (156, 4612),

Gene: Glaske16_17 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for Glaske16_17:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: Gumpizza_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Gumpizza_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (55, 4110), (92, 4230), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: GuuelaD_6 Start: 4356, Stop: 5411, Start Num: 3

Candidate Starts for GuuelaD_6:

(Start: 3 @4356 has 70 MA's), (Start: 8 @4404 has 1 MA's), (28, 4491), (51, 4617), (54, 4629), (72, 4707), (88, 4773), (98, 4803), (107, 4845), (109, 4854), (127, 4947), (128, 4965), (140, 5082), (143, 5106), (145, 5115), (155, 5166), (160, 5196), (162, 5211), (169, 5271),

Gene: Hafay_6 Start: 4350, Stop: 5402, Start Num: 3

Candidate Starts for Hafay_6:

(Start: 3 @4350 has 70 MA's), (Start: 8 @4392 has 1 MA's), (51, 4605), (54, 4617), (65, 4662), (72, 4695), (88, 4761), (98, 4791), (107, 4833), (109, 4842), (127, 4935), (128, 4953), (140, 5070), (143, 5094), (145, 5103), (166, 5235), (169, 5262),

Gene: Halena_6 Start: 4321, Stop: 5376, Start Num: 3

Candidate Starts for Halena_6:

(Start: 3 @4321 has 70 MA's), (31, 4459), (32, 4471), (51, 4576), (54, 4588), (63, 4627), (64, 4630), (72, 4666), (88, 4732), (91, 4747), (98, 4762), (107, 4804), (127, 4906), (140, 5041), (143, 5065), (166, 5206), (169, 5233), (170, 5242),

Gene: Halsey_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Halsey_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: Honk_4 Start: 3779, Stop: 4525, Start Num: 7

Candidate Starts for Honk_4:

(Start: 7 @3779 has 1 MA's), (Start: 10 @3788 has 2 MA's), (15, 3812), (19, 3827), (21, 3839), (22, 3842), (43, 3953), (55, 4013), (71, 4076), (99, 4160), (104, 4181), (124, 4274), (126, 4307), (130, 4346), (146, 4469), (147, 4478),

Gene: IPhone7_16 Start: 7882, Stop: 9042, Start Num: 4

Candidate Starts for IPhone7_16:

(Start: 4 @7882 has 20 MA's), (26, 7990), (37, 8056), (42, 8077), (53, 8131), (62, 8170), (67, 8185), (73, 8227), (77, 8248), (80, 8284), (81, 8293), (101, 8383), (103, 8392), (104, 8395), (109, 8419), (114, 8467), (123, 8521), (124, 8536), (128, 8590), (138, 8692), (145, 8755),

Gene: Itos_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Itos_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Izel_15 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for Izel_15:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: JasmineDragon_4 Start: 3667, Stop: 4464, Start Num: 12

Candidate Starts for JasmineDragon_4:

(Start: 12 @3667 has 5 MA's), (45, 3841), (52, 3874), (99, 4027), (117, 4093), (126, 4177), (140, 4309),

Gene: Jobypre_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Jobypre_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: JoeDirt_6 Start: 4321, Stop: 5376, Start Num: 3

Candidate Starts for JoeDirt_6:

(Start: 3 @4321 has 70 MA's), (31, 4459), (32, 4471), (51, 4576), (54, 4588), (63, 4627), (64, 4630), (72, 4666), (88, 4732), (91, 4747), (98, 4762), (107, 4804), (127, 4906), (140, 5041), (143, 5065), (166, 5206), (169, 5233), (170, 5242),

Gene: Jubie_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Jubie_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: Kahlid_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Kahlid_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Kalimba_4 Start: 3875, Stop: 4669, Start Num: 9

Candidate Starts for Kalimba_4:

(Start: 9 @3875 has 12 MA's), (19, 3917), (32, 3983), (35, 4013), (38, 4025), (99, 4244), (104, 4265), (116, 4307), (126, 4394), (128, 4415), (130, 4433), (156, 4607),

Gene: Kingsolomon_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Kingsolomon_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: KirDoubleO7_5 Start: 4428, Stop: 5498, Start Num: 3

Candidate Starts for KirDoubleO7_5:

(Start: 3 @4428 has 70 MA's), (Start: 11 @4476 has 6 MA's), (13, 4485), (19, 4512), (31, 4563), (44, 4641), (51, 4680), (54, 4692), (72, 4770), (76, 4794), (88, 4836), (98, 4866), (128, 5052), (140, 5169), (143, 5193), (169, 5361),

Gene: KleverKiS_16 Start: 7878, Stop: 9038, Start Num: 4

Candidate Starts for KleverKiS_16:

(Start: 4 @7878 has 20 MA's), (26, 7986), (37, 8052), (42, 8073), (53, 8127), (62, 8166), (67, 8181), (73, 8223), (77, 8244), (80, 8280), (81, 8289), (101, 8379), (103, 8388), (104, 8391), (109, 8415), (114, 8463), (123, 8517), (124, 8532), (128, 8586), (138, 8688), (145, 8751),

Gene: Kropertea_6 Start: 3983, Stop: 5038, Start Num: 3

Candidate Starts for Kropertea_6:

(1, 3977), (Start: 3 @3983 has 70 MA's), (26, 4112), (51, 4244), (54, 4256), (72, 4334), (82, 4382), (88, 4400), (98, 4430), (107, 4472), (118, 4505), (127, 4574), (128, 4592), (140, 4709), (143, 4733), (145, 4742), (166, 4871), (169, 4898), (177, 4958),

Gene: Krypton555_7 Start: 4408, Stop: 5478, Start Num: 3

Candidate Starts for Krypton555_7:

(Start: 3 @4408 has 70 MA's), (Start: 11 @4456 has 6 MA's), (13, 4465), (19, 4492), (31, 4543), (37, 4594), (44, 4621), (51, 4660), (54, 4672), (72, 4750), (76, 4774), (88, 4816), (98, 4846), (128, 5032), (140, 5149), (143, 5173), (169, 5341),

Gene: Kudrefre_14 Start: 7918, Stop: 8928, Start Num: 16

Candidate Starts for Kudrefre_14:

(Start: 16 @7918 has 3 MA's), (20, 7936), (22, 7945), (24, 7960), (34, 8017), (49, 8089), (61, 8143), (96, 8293), (104, 8329), (109, 8353), (114, 8401), (122, 8452), (123, 8455), (126, 8503), (132, 8566), (134, 8584), (143, 8668), (149, 8698), (155, 8728), (164, 8776), (168, 8824), (171, 8839), (172, 8845),

Gene: Kumao_15 Start: 7305, Stop: 8408, Start Num: 6

Candidate Starts for Kumao_15:

(Start: 6 @7305 has 1 MA's), (26, 7392), (48, 7509), (50, 7518), (66, 7584), (86, 7728), (88, 7734), (93, 7761), (104, 7809), (108, 7830), (109, 7833), (113, 7869), (117, 7899), (119, 7911), (124, 7950), (128, 8004), (145, 8133), (149, 8154), (152, 8169), (163, 8238), (165, 8259), (173, 8313), (181, 8373),

Gene: LadyAstra_4 Start: 3658, Stop: 4455, Start Num: 12

Candidate Starts for LadyAstra_4:

(Start: 12 @3658 has 5 MA's), (41, 3814), (45, 3832), (52, 3865), (99, 4018), (117, 4084), (118, 4090), (126, 4168), (140, 4300),

Gene: LeBron_6 Start: 4321, Stop: 5376, Start Num: 3

Candidate Starts for LeBron_6:

(Start: 3 @4321 has 70 MA's), (31, 4459), (32, 4471), (51, 4576), (54, 4588), (63, 4627), (64, 4630), (72, 4666), (88, 4732), (91, 4747), (98, 4762), (107, 4804), (127, 4906), (140, 5041), (143, 5065), (166, 5206), (169, 5233), (170, 5242),

Gene: Lewan_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Lewan_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Liebe_4 Start: 3813, Stop: 4607, Start Num: 11

Candidate Starts for Liebe_4:

(Start: 11 @3813 has 6 MA's), (31, 3897), (52, 4020), (53, 4026), (88, 4143), (92, 4155), (99, 4173), (109, 4218), (117, 4239), (126, 4323), (136, 4407),

Gene: LilDestine_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for LilDestine_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: LilhomieP_15 Start: 7882, Stop: 9042, Start Num: 4

Candidate Starts for LilhomieP_15:

(Start: 4 @7882 has 20 MA's), (26, 7990), (37, 8056), (42, 8077), (53, 8131), (62, 8170), (67, 8185), (73, 8227), (77, 8248), (80, 8284), (81, 8293), (101, 8383), (103, 8392), (104, 8395), (109, 8419), (114, 8467), (123, 8521), (124, 8536), (128, 8590), (138, 8692), (145, 8755),

Gene: LiyuLake_7 Start: 4419, Stop: 5489, Start Num: 3

Candidate Starts for LiyuLake_7:

(Start: 3 @4419 has 70 MA's), (Start: 11 @4467 has 6 MA's), (13, 4476), (19, 4503), (31, 4554), (44, 4632), (51, 4671), (54, 4683), (72, 4761), (76, 4785), (88, 4827), (98, 4857), (128, 5043), (140, 5160), (143, 5184), (169, 5352),

Gene: Loadrie_6 Start: 4350, Stop: 5402, Start Num: 3

Candidate Starts for Loadrie_6:

(Start: 3 @4350 has 70 MA's), (Start: 8 @4392 has 1 MA's), (51, 4605), (54, 4617), (65, 4662), (72, 4695), (88, 4761), (98, 4791), (107, 4833), (109, 4842), (127, 4935), (128, 4953), (140, 5070), (143, 5094), (145, 5103), (166, 5235), (169, 5262),

Gene: Lolly9_7 Start: 4422, Stop: 5492, Start Num: 3

Candidate Starts for Lolly9_7:

(Start: 3 @4422 has 70 MA's), (Start: 11 @4470 has 6 MA's), (13, 4479), (19, 4506), (31, 4557), (44, 4635), (51, 4674), (54, 4686), (72, 4764), (76, 4788), (88, 4830), (98, 4860), (128, 5046), (140, 5163), (143, 5187), (159, 5274), (169, 5355),

Gene: Lumos_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Lumos_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: MAckerman_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for MAckerman_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: MaGuCo_4 Start: 3672, Stop: 4466, Start Num: 11

Candidate Starts for MaGuCo_4:

(Start: 11 @3672 has 6 MA's), (31, 3756), (52, 3879), (88, 4002), (92, 4014), (99, 4032), (109, 4077), (117, 4098), (126, 4182), (127, 4185), (136, 4266), (141, 4323),

Gene: MaryV_28 Start: 11148, Stop: 12182, Start Num: 5

Candidate Starts for MaryV_28:

(Start: 5 @11148 has 5 MA's), (26, 11238), (31, 11253), (33, 11280), (62, 11418), (69, 11451), (90, 11529), (96, 11550), (97, 11553), (104, 11586), (105, 11592), (108, 11610), (109, 11613), (121, 11700), (131, 11805), (143, 11904), (145, 11913), (149, 11934), (158, 11979), (164, 12015), (169, 12066), (173, 12087), (174, 12108), (179, 12132), (180, 12144),

Gene: Maureen_4 Start: 3813, Stop: 4607, Start Num: 11

Candidate Starts for Maureen_4:

(Start: 11 @3813 has 6 MA's), (31, 3897), (52, 4020), (53, 4026), (88, 4143), (92, 4155), (99, 4173), (109, 4218), (117, 4239), (126, 4323), (136, 4407),

Gene: Miley16_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Miley16_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: MiniLon_7 Start: 4422, Stop: 5492, Start Num: 3

Candidate Starts for MiniLon_7:

(Start: 3 @4422 has 70 MA's), (Start: 11 @4470 has 6 MA's), (13, 4479), (19, 4506), (31, 4557), (44, 4635), (51, 4674), (54, 4686), (72, 4764), (76, 4788), (88, 4830), (98, 4860), (128, 5046), (140, 5163), (143, 5187), (159, 5274), (169, 5355),

Gene: MiniMac_7 Start: 4422, Stop: 5492, Start Num: 3

Candidate Starts for MiniMac_7:

(Start: 3 @4422 has 70 MA's), (Start: 11 @4470 has 6 MA's), (13, 4479), (19, 4506), (31, 4557), (44, 4635), (51, 4674), (54, 4686), (72, 4764), (76, 4788), (88, 4830), (98, 4860), (128, 5046), (140, 5163), (143, 5187), (159, 5274), (169, 5355),

Gene: MiniMommy_4 Start: 3667, Stop: 4464, Start Num: 12

Candidate Starts for MiniMommy_4:

(Start: 12 @3667 has 5 MA's), (45, 3841), (52, 3874), (99, 4027), (117, 4093), (126, 4177), (140, 4309),

Gene: MkaliMitinis3_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for MkaliMitinis3_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Moostard_7 Start: 4412, Stop: 5482, Start Num: 3

Candidate Starts for Moostard_7:

(Start: 3 @4412 has 70 MA's), (Start: 11 @4460 has 6 MA's), (13, 4469), (19, 4496), (31, 4547), (44, 4625), (51, 4664), (54, 4676), (72, 4754), (76, 4778), (88, 4820), (98, 4850), (127, 5018), (128, 5036),

(140, 5153), (143, 5177), (159, 5264), (169, 5345),

Gene: Moss_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Moss_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: MrMagoo_20 Start: 8439, Stop: 9614, Start Num: 4

Candidate Starts for MrMagoo_20:

(Start: 4 @8439 has 20 MA's), (17, 8502), (24, 8541), (32, 8574), (36, 8607), (50, 8673), (58, 8709), (60, 8721), (62, 8727), (67, 8742), (81, 8850), (83, 8859), (104, 8958), (109, 8982), (114, 9030), (120, 9063), (122, 9081), (127, 9135), (139, 9276), (145, 9318),

Gene: MsGreen_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for MsGreen_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: Mysterium_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Mysterium_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (55, 4110), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: Nanosmite_20 Start: 8660, Stop: 9835, Start Num: 4

Candidate Starts for Nanosmite_20:

(Start: 4 @8660 has 20 MA's), (27, 8771), (32, 8795), (35, 8825), (42, 8855), (48, 8885), (53, 8909), (59, 8936), (62, 8948), (69, 8981), (74, 9011), (78, 9035), (79, 9056), (84, 9089), (93, 9131), (104, 9179), (109, 9203), (113, 9239), (114, 9251), (117, 9269), (119, 9281), (122, 9302), (123, 9305), (128, 9374), (145, 9539),

Gene: Netyap_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Netyap_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Neville_14 Start: 7752, Stop: 8771, Start Num: 11

Candidate Starts for Neville_14:

(2, 7683), (Start: 11 @7752 has 6 MA's), (25, 7821), (34, 7875), (45, 7926), (67, 8019), (97, 8166), (101, 8187), (104, 8199), (109, 8223), (111, 8235), (114, 8271), (118, 8295), (126, 8373), (127, 8376), (138, 8481), (140, 8511), (142, 8532), (153, 8583), (155, 8595), (175, 8718),

Gene: Nicholas_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Nicholas_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: Nicholasp3_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Nicholasp3_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143,

5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Octobien14_15 Start: 8989, Stop: 9996, Start Num: 14

Candidate Starts for Octobien14_15:

(Start: 14 @8989 has 1 MA's), (22, 9022), (34, 9094), (39, 9115), (49, 9166), (67, 9238), (87, 9331), (104, 9406), (109, 9430), (114, 9478), (122, 9529), (127, 9583), (132, 9643), (144, 9748), (145, 9754), (149, 9772), (164, 9844), (167, 9874), (169, 9895), (171, 9907), (176, 9937),

Gene: OhShagHennessy_6 Start: 4294, Stop: 5349, Start Num: 3

Candidate Starts for OhShagHennessy_6:

(Start: 3 @4294 has 70 MA's), (31, 4432), (32, 4444), (51, 4549), (54, 4561), (63, 4600), (64, 4603), (72, 4639), (88, 4705), (91, 4720), (98, 4735), (107, 4777), (127, 4879), (140, 5014), (143, 5038), (166, 5179), (169, 5206), (170, 5215),

Gene: PYPDinur_6 Start: 3988, Stop: 5043, Start Num: 3

Candidate Starts for PYPDinur_6:

(1, 3982), (Start: 3 @3988 has 70 MA's), (26, 4117), (31, 4132), (51, 4249), (54, 4261), (72, 4339), (82, 4387), (88, 4405), (98, 4435), (107, 4477), (118, 4510), (127, 4579), (128, 4597), (140, 4714), (143, 4738), (145, 4747), (166, 4876), (169, 4903), (177, 4963), (178, 4966),

Gene: PegLeg_16 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for PegLeg_16:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: Poochiewood_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Poochiewood_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: Quby_6 Start: 3988, Stop: 5043, Start Num: 3

Candidate Starts for Quby_6:

(1, 3982), (Start: 3 @3988 has 70 MA's), (30, 4129), (31, 4132), (51, 4249), (54, 4261), (72, 4339), (82, 4387), (88, 4405), (98, 4435), (107, 4477), (109, 4486), (118, 4510), (127, 4579), (128, 4597), (140, 4714), (143, 4738), (145, 4747), (166, 4876), (169, 4903), (177, 4963), (178, 4966),

Gene: Rabbitrun_16 Start: 8261, Stop: 9289, Start Num: 11

Candidate Starts for Rabbitrun_16:

(Start: 11 @8261 has 6 MA's), (26, 8333), (34, 8384), (49, 8456), (85, 8621), (97, 8672), (101, 8693), (104, 8705), (109, 8729), (111, 8741), (112, 8753), (114, 8777), (127, 8882), (128, 8900), (140, 9011), (142, 9032), (149, 9065), (153, 9083), (155, 9095), (157, 9107), (167, 9176), (175, 9236),

Gene: Red305_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Red305_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: Reindeer_14 Start: 7753, Stop: 8904, Start Num: 4

Candidate Starts for Reindeer_14:

(Start: 4 @7753 has 20 MA's), (37, 7927), (42, 7948), (50, 7987), (53, 8002), (62, 8041), (64, 8047), (67, 8056), (73, 8098), (77, 8119), (80, 8155), (95, 8215), (96, 8221), (104, 8257), (109, 8281), (114, 8329), (119, 8359), (120, 8362), (126, 8431), (128, 8452), (138, 8554), (140, 8584), (145, 8617),

Gene: Rey_20 Start: 8671, Stop: 9846, Start Num: 4

Candidate Starts for Rey_20:

(Start: 4 @8671 has 20 MA's), (17, 8734), (24, 8773), (36, 8839), (50, 8905), (60, 8953), (62, 8959), (67, 8974), (81, 9082), (83, 9091), (93, 9142), (97, 9157), (104, 9190), (109, 9214), (114, 9262), (120, 9295), (122, 9313), (139, 9508), (145, 9550),

Gene: RockScotty_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for RockScotty_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: Rose5_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Rose5_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: RoseMarie_16 Start: 8126, Stop: 9286, Start Num: 4

Candidate Starts for RoseMarie_16:

(Start: 4 @8126 has 20 MA's), (37, 8300), (42, 8321), (53, 8375), (62, 8414), (64, 8420), (67, 8429), (73, 8471), (77, 8492), (80, 8528), (81, 8537), (84, 8552), (95, 8597), (104, 8639), (109, 8663), (114, 8711), (119, 8741), (126, 8813), (128, 8834), (139, 8957), (145, 8999), (151, 9035),

Gene: Rossetti_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Rossetti_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (31, 4455), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Rumpelstiltskin_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Rumpelstiltskin_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Sabourin_4 Start: 3875, Stop: 4669, Start Num: 9

Candidate Starts for Sabourin_4:

(Start: 9 @3875 has 12 MA's), (19, 3917), (32, 3983), (35, 4013), (38, 4025), (99, 4244), (104, 4265), (116, 4307), (126, 4394), (128, 4415), (130, 4433), (156, 4607),

Gene: Samty_7 Start: 4412, Stop: 5482, Start Num: 3

Candidate Starts for Samty_7:

(Start: 3 @4412 has 70 MA's), (Start: 11 @4460 has 6 MA's), (13, 4469), (19, 4496), (31, 4547), (44, 4625), (51, 4664), (54, 4676), (72, 4754), (76, 4778), (88, 4820), (98, 4850), (127, 5018), (128, 5036), (140, 5153), (143, 5177), (159, 5264), (169, 5345),

Gene: Sarshaun_6 Start: 4350, Stop: 5402, Start Num: 3

Candidate Starts for Sarshaun_6:

(Start: 3 @4350 has 70 MA's), (Start: 8 @4392 has 1 MA's), (51, 4605), (54, 4617), (65, 4662), (72, 4695), (88, 4761), (98, 4791), (107, 4833), (109, 4842), (127, 4935), (128, 4953), (140, 5070), (143, 5094), (145, 5103), (166, 5235), (169, 5262),

Gene: Sephiroth_15 Start: 8089, Stop: 9099, Start Num: 16

Candidate Starts for Sephiroth_15:

(Start: 16 @8089 has 3 MA's), (20, 8107), (22, 8116), (24, 8131), (34, 8188), (49, 8260), (61, 8314), (96, 8464), (104, 8500), (109, 8524), (114, 8572), (122, 8623), (123, 8626), (126, 8674), (132, 8737), (134, 8755), (143, 8839), (149, 8869), (155, 8899), (164, 8947), (168, 8995), (171, 9010), (172, 9016),

Gene: ShakeltOph_4 Start: 3667, Stop: 4464, Start Num: 12

Candidate Starts for ShakeltOph_4:

(Start: 12 @3667 has 5 MA's), (45, 3841), (52, 3874), (99, 4027), (117, 4093), (126, 4177), (140, 4309),

Gene: Sheng711_6 Start: 3988, Stop: 5043, Start Num: 3

Candidate Starts for Sheng711_6:

(1, 3982), (Start: 3 @3988 has 70 MA's), (26, 4117), (31, 4132), (51, 4249), (54, 4261), (72, 4339), (82, 4387), (88, 4405), (98, 4435), (107, 4477), (118, 4510), (127, 4579), (128, 4597), (140, 4714), (143, 4738), (145, 4747), (166, 4876), (169, 4903), (177, 4963), (178, 4966),

Gene: Silverleaf_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Silverleaf_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: Skinny_17 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for Skinny_17:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: SlimJimmy_15 Start: 7881, Stop: 9041, Start Num: 4

Candidate Starts for SlimJimmy_15:

(Start: 4 @7881 has 20 MA's), (26, 7989), (37, 8055), (42, 8076), (53, 8130), (62, 8169), (67, 8184), (73, 8226), (77, 8247), (80, 8283), (81, 8292), (101, 8382), (103, 8391), (104, 8394), (109, 8418), (114, 8466), (123, 8520), (124, 8535), (128, 8589), (138, 8691), (145, 8754),

Gene: Snek_5 Start: 4503, Stop: 5270, Start Num: 12

Candidate Starts for Snek_5:

(Start: 12 @4503 has 5 MA's), (21, 4548), (23, 4554), (41, 4659), (52, 4710), (68, 4770), (75, 4803), (81, 4821), (92, 4845), (117, 4929), (122, 4962), (126, 5013), (127, 5016), (150, 5175),

Gene: Snenia_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for Snenia_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: SoJulia_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for SoJulia_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143,

5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Soap141_6 Start: 4350, Stop: 5402, Start Num: 3

Candidate Starts for Soap141_6:

(Start: 3 @4350 has 70 MA's), (Start: 8 @4392 has 1 MA's), (51, 4605), (54, 4617), (65, 4662), (72, 4695), (88, 4761), (98, 4791), (107, 4833), (109, 4842), (127, 4935), (128, 4953), (140, 5070), (143, 5094), (145, 5103), (166, 5235), (169, 5262),

Gene: Sooty_4 Start: 3875, Stop: 4669, Start Num: 9

Candidate Starts for Sooty_4:

(Start: 9 @3875 has 12 MA's), (19, 3917), (32, 3983), (35, 4013), (38, 4025), (99, 4244), (104, 4265), (116, 4307), (126, 4394), (128, 4415), (130, 4433), (156, 4607),

Gene: SpecialK_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for SpecialK_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (38, 4029), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: Stuu_4 Start: 3879, Stop: 4673, Start Num: 9

Candidate Starts for Stuu_4:

(Start: 9 @3879 has 12 MA's), (19, 3921), (32, 3987), (35, 4017), (92, 4230), (99, 4248), (104, 4269), (116, 4311), (124, 4365), (126, 4398), (128, 4419), (156, 4611),

Gene: SuMoo_4 Start: 3785, Stop: 4639, Start Num: 9

Candidate Starts for SuMoo_4:

(Start: 9 @3785 has 12 MA's), (18, 3821), (104, 4187), (122, 4265), (125, 4295), (126, 4316), (136, 4400), (146, 4484), (161, 4568),

Gene: Syleon_15 Start: 8011, Stop: 9021, Start Num: 16

Candidate Starts for Syleon_15:

(Start: 16 @8011 has 3 MA's), (20, 8029), (22, 8038), (24, 8053), (34, 8110), (49, 8182), (61, 8236), (96, 8386), (104, 8422), (109, 8446), (114, 8494), (122, 8545), (123, 8548), (126, 8596), (132, 8659), (134, 8677), (143, 8761), (149, 8791), (155, 8821), (164, 8869), (168, 8917), (171, 8932), (172, 8938),

Gene: Tourach_6 Start: 4327, Stop: 5382, Start Num: 3

Candidate Starts for Tourach_6:

(Start: 3 @4327 has 70 MA's), (Start: 8 @4375 has 1 MA's), (28, 4462), (44, 4549), (51, 4588), (54, 4600), (72, 4678), (88, 4744), (98, 4774), (107, 4816), (109, 4825), (127, 4918), (140, 5053), (143, 5077), (155, 5137), (160, 5167), (162, 5182), (169, 5242),

Gene: Trax_14 Start: 7752, Stop: 8771, Start Num: 11

Candidate Starts for Trax_14:

(Start: 11 @7752 has 6 MA's), (25, 7821), (34, 7875), (45, 7926), (67, 8019), (97, 8166), (101, 8187), (104, 8199), (109, 8223), (111, 8235), (114, 8271), (118, 8295), (126, 8373), (127, 8376), (138, 8481), (140, 8511), (142, 8532), (153, 8583), (155, 8595), (175, 8718),

Gene: TriFive_7 Start: 4416, Stop: 5486, Start Num: 3

Candidate Starts for TriFive_7:

(Start: 3 @4416 has 70 MA's), (Start: 11 @4464 has 6 MA's), (13, 4473), (19, 4500), (31, 4551), (44, 4629), (51, 4668), (54, 4680), (72, 4758), (76, 4782), (88, 4824), (98, 4854), (127, 5022), (128, 5040), (140, 5157), (143, 5181), (159, 5268), (169, 5349),

Gene: Tweety19_5 Start: 4503, Stop: 5270, Start Num: 12

Candidate Starts for Tweety19_5:

(Start: 12 @4503 has 5 MA's), (21, 4548), (41, 4659), (47, 4689), (52, 4710), (68, 4770), (75, 4803), (81, 4821), (92, 4845), (100, 4869), (117, 4929), (122, 4962), (126, 5013), (127, 5016), (150, 5175),

Gene: TyDawg_16 Start: 7882, Stop: 9042, Start Num: 4

Candidate Starts for TyDawg_16:

(Start: 4 @7882 has 20 MA's), (26, 7990), (37, 8056), (42, 8077), (53, 8131), (62, 8170), (67, 8185), (73, 8227), (77, 8248), (80, 8284), (81, 8293), (101, 8383), (103, 8392), (104, 8395), (109, 8419), (114, 8467), (123, 8521), (124, 8536), (128, 8590), (138, 8692), (145, 8755),

Gene: Tyson_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Tyson_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: UPIE_6 Start: 4318, Stop: 5373, Start Num: 3

Candidate Starts for UPIE_6:

(Start: 3 @4318 has 70 MA's), (31, 4456), (32, 4468), (51, 4573), (54, 4585), (63, 4624), (64, 4627), (72, 4663), (88, 4729), (91, 4744), (98, 4759), (107, 4801), (127, 4903), (140, 5038), (143, 5062), (166, 5203), (169, 5230), (170, 5239),

Gene: Underpass_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Underpass_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Vetrix_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Vetrix_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: VroomVroom_4 Start: 3676, Stop: 4473, Start Num: 12

Candidate Starts for VroomVroom_4:

(Start: 12 @3676 has 5 MA's), (41, 3832), (45, 3850), (52, 3883), (99, 4036), (117, 4102), (126, 4186), (140, 4318),

Gene: Wamburgexpress_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Wamburgexpress_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: Whirlwind_8 Start: 4408, Stop: 5478, Start Num: 3

Candidate Starts for Whirlwind_8:

(Start: 3 @4408 has 70 MA's), (Start: 11 @4456 has 6 MA's), (13, 4465), (19, 4492), (31, 4543), (37, 4594), (44, 4621), (51, 4660), (54, 4672), (72, 4750), (76, 4774), (88, 4816), (98, 4846), (128, 5032), (140, 5149), (143, 5173), (166, 5314), (169, 5341),

Gene: Wigglewobble_6 Start: 4350, Stop: 5402, Start Num: 3

Candidate Starts for Wigglewobble_6:

(Start: 3 @4350 has 70 MA's), (Start: 8 @4392 has 1 MA's), (51, 4605), (54, 4617), (65, 4662), (72, 4695), (88, 4761), (98, 4791), (107, 4833), (109, 4842), (127, 4935), (128, 4953), (140, 5070), (143, 5094), (145, 5103), (166, 5235), (169, 5262),

Gene: Wildcat_28 Start: 11158, Stop: 12192, Start Num: 5

Candidate Starts for Wildcat_28:

(Start: 5 @11158 has 5 MA's), (26, 11248), (31, 11263), (33, 11290), (62, 11428), (69, 11461), (90, 11539), (96, 11560), (97, 11563), (104, 11596), (105, 11602), (108, 11620), (109, 11623), (121, 11710), (131, 11815), (143, 11914), (145, 11923), (149, 11944), (158, 11989), (164, 12025), (169, 12076), (173, 12097), (174, 12118), (179, 12142), (180, 12154),

Gene: Wilder_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Wilder_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Winky_6 Start: 4311, Stop: 5369, Start Num: 3

Candidate Starts for Winky_6:

(Start: 3 @4311 has 70 MA's), (Start: 8 @4359 has 1 MA's), (51, 4572), (54, 4584), (65, 4629), (72, 4662), (88, 4728), (98, 4758), (107, 4800), (109, 4809), (127, 4902), (128, 4920), (140, 5037), (143, 5061), (145, 5070), (166, 5202), (169, 5229),

Gene: Wyatt2_6 Start: 4320, Stop: 5375, Start Num: 3

Candidate Starts for Wyatt2_6:

(Start: 3 @4320 has 70 MA's), (31, 4458), (32, 4470), (51, 4575), (54, 4587), (63, 4626), (64, 4629), (72, 4665), (88, 4731), (91, 4746), (98, 4761), (107, 4803), (127, 4905), (140, 5040), (143, 5064), (166, 5205), (169, 5232), (170, 5241),

Gene: Zakai_6 Start: 4299, Stop: 5357, Start Num: 3

Candidate Starts for Zakai_6:

(Start: 3 @4299 has 70 MA's), (Start: 8 @4347 has 1 MA's), (51, 4560), (54, 4572), (65, 4617), (72, 4650), (88, 4716), (98, 4746), (107, 4788), (109, 4797), (127, 4890), (128, 4908), (140, 5025), (143, 5049), (145, 5058), (166, 5190), (169, 5217),

Gene: Zaria_6 Start: 4321, Stop: 5376, Start Num: 3

Candidate Starts for Zaria_6:

(Start: 3 @4321 has 70 MA's), (31, 4459), (32, 4471), (51, 4576), (54, 4588), (63, 4627), (64, 4630), (72, 4666), (88, 4732), (91, 4747), (98, 4762), (107, 4804), (127, 4906), (140, 5041), (143, 5065), (166, 5206), (169, 5233), (170, 5242),

Gene: Zeta1847_4 Start: 3665, Stop: 4408, Start Num: 10

Candidate Starts for Zeta1847_4:

(Start: 10 @3665 has 2 MA's), (19, 3704), (43, 3833), (53, 3884), (104, 4061), (109, 4085), (126, 4187), (130, 4226),

Gene: ZhongYanYuan_5 Start: 4143, Stop: 5198, Start Num: 3

Candidate Starts for ZhongYanYuan_5:

(Start: 3 @4143 has 70 MA's), (Start: 8 @4191 has 1 MA's), (28, 4278), (51, 4404), (54, 4416), (65, 4461), (72, 4494), (88, 4560), (98, 4590), (107, 4632), (109, 4641), (127, 4734), (128, 4752), (140, 4869), (143, 4893), (145, 4902), (159, 4980), (166, 5031), (169, 5058), (170, 5067),