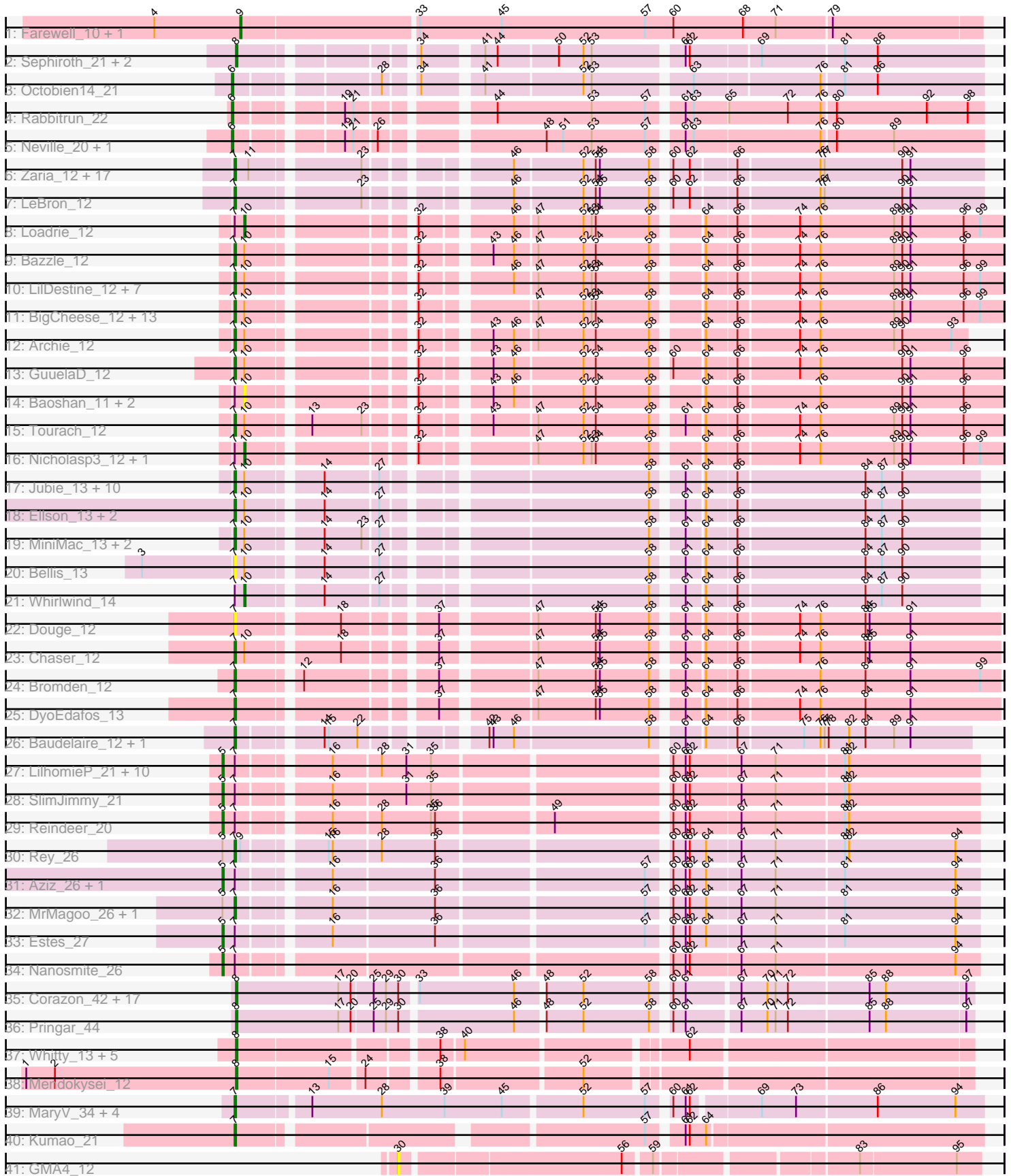


Pham 171273



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 171273 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171273 has 138 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Farewell_10, Sparky_10
- Track 2 : Sephiroth_21, Syleon_21, Kudrefre_20
- Track 3 : Octobien14_21
- Track 4 : Rabbitrun_22
- Track 5 : Neville_20, Trax_20
- Track 6 : Zaria_12, Wyatt2_12, Silverleaf_12, Appletree2_12, AvadaKedavra_12, DirkDirk_12, Rose5_12, Acquire49_12, Tyson_12, JoeDirt_12, UPIE_12, Halena_12, CicholasNage_12, Enceladus_12, MAckerman_12, OhShagHennessy_12, Wamburgxpress_12, Calm_12
- Track 7 : LeBron_12
- Track 8 : Loadrie_12
- Track 9 : Bazzle_12
- Track 10 : LilDestine_12, Wigglewiggles_12, Lewan_12, Hafay_12, Kahlid_12, Vetric_12, Finemlucis_12, Wilder_12
- Track 11 : BigCheese_12, MkaliMitinis3_12, Faith1_12, Miley16_12, DrSeegs_12, Zakai_12, Gabriela_12, Itos_12, Winky_12, Breezons_12, BobsGarage_12, Gardann_12, Rumpelstiltskin_12, Netyap_12
- Track 12 : Archie_12
- Track 13 : GuuelaD_12
- Track 14 : Baoshan_11, Claus_12, ZhongYanYuan_11
- Track 15 : Tourach_12
- Track 16 : Nicholasp3_12, Crossroads_12
- Track 17 : Jubie_13, Kingsolomon_13, Snenia_13, Finnry_13, Moostard_13, MsGreen_13, Jobypre_13, Nicholas_13, Clautastrophe_13, Samty_13, Lumos_13
- Track 18 : Ellson_13, Krypton555_13, DuncansLeg_13
- Track 19 : MiniMac_13, Lolly9_13, MiniLon_13
- Track 20 : Bellis_13
- Track 21 : Whirlwind_14
- Track 22 : Douge_12
- Track 23 : Chaser_12
- Track 24 : Bromden_12
- Track 25 : DyoEdafos_13
- Track 26 : Baudelaire_12, Aegeus_12
- Track 27 : LilhomieP_21, Auspice_22, TyDawg_22, IPhane7_22, Glaske16_23, Skinny_23, Bongo_22, PegLeg_22, Bricole_22, Dulcita_23, Diminimus_23
- Track 28 : SlimJimmy_21
- Track 29 : Reindeer_20

- Track 30 : Rey_26
- Track 31 : Aziz_26, GenevaB15_26
- Track 32 : MrMagoo_26, GardenSalsa_26
- Track 33 : Estes_27
- Track 34 : Nanosmite_26
- Track 35 : Corazon_42, Blackbeetle_44, Clarkson_45, VasuNzinga_44, FeliMaine_44, JoieB_45, Poise_44, Beelzebub_48, Marvin_42, Lilbit_45, Huphlepuuff_46, MosMoris_42, Caprice_41, Gattaca_43, Raela_44, Tesla_43, RedRaider77_44, LittleLaf_44
- Track 36 : Pringar_44
- Track 37 : Whitty_13, RonRayGun_13, Bernal13_13, ZenTime222_13, Nairb_13, Ibrahim_13
- Track 38 : Mendokysei_12
- Track 39 : MaryV_34, Cosmo_34, Wildcat_34, Azrael100_33, EniyanLRS_31
- Track 40 : Kumao_21
- Track 41 : GMA4_12

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

The start number called the most often in the published annotations is 7, it was called in 72 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_12, Aegeus_12, Appletree2_12, Archie_12, AvadaKedavra_12, Azrael100_33, Baudelaire_12, Bazzle_12, Bellis_13, BigCheese_12, BobsGarage_12, Breezona_12, Bromden_12, Calm_12, Chaser_12, CicholasNage_12, Clautastrophe_13, Cosmo_34, DirkDirk_12, Douge_12, DrSeegs_12, DuncansLeg_13, DyoEdafos_13, Ellson_13, Enceladus_12, EniyanLRS_31, Faith1_12, Finemlucis_12, Finnry_13, Gabriela_12, Gardann_12, GardenSalsa_26, GuuelaD_12, Hafay_12, Halena_12, Itos_12, Jobypre_13, JoeDirt_12, Jubie_13, Kahlid_12, Kingsolomon_13, Krypton555_13, Kumao_21, LeBron_12, Lewan_12, LilDestine_12, Lolly9_13, Lumos_13, MAckerman_12, MaryV_34, Miley16_12, MiniLon_13, MiniMac_13, MkaliMitinis3_12, Moostard_13, MrMagoo_26, MsGreen_13, Netyap_12, Nicholas_13, OhShagHennessy_12, Rey_26, Rose5_12, Rumpelstiltskin_12, Samty_13, Silverleaf_12, Snenia_13, Tourach_12, Tyson_12, UPIE_12, Vetrrix_12, Wamburggrxpress_12, Wigglewiggle_12, Wildcat_34, Wilder_12, Winky_12, Wyatt2_12, Zakai_12, Zaria_12,

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

- Auspice_22, Aziz_26, Baoshan_11, Bongo_22, Bricole_22, Claus_12, Crossroads_12, Diminimus_23, Dulcita_23, Estes_27, GenevaB15_26, Glaske16_23, IPHane7_22, LilhomieP_21, Loadrie_12, Nanosmite_26, Nicholasp3_12, PegLeg_22, Reindeer_20, Skinny_23, SlimJimmy_21, TyDawg_22, Whirlwind_14, ZhongYanYuan_11,

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

- Beelzebub_48, Bernal13_13, Blackbeetle_44, Caprice_41, Clarkson_45, Corazon_42, Farewell_10, FeliMaine_44, GMA4_12, Gattaca_43, Huphlepuuff_46, Ibrahim_13, JoieB_45, Kudrefre_20, Lilbit_45, LittleLaf_44, Marvin_42, Mendokysei_12, MosMoris_42, Nairb_13, Neville_20, Octobien14_21, Poise_44,

Pringar_44, Rabbitrun_22, Raela_44, RedRaider77_44, RonRayGun_13, Sephiroth_21, Sparky_10, Syleon_21, Tesla_43, Trax_20, VasuNzinga_44, Whitty_13, ZenTime222_13,

Summary by start number:

Start 5:

- Found in 20 of 138 (14.5%) of genes in pham
- Manual Annotations of this start: 17 of 125
- Called 85.0% of time when present
- Phage (with cluster) where this start called: Auspice_22 (M1), Aziz_26 (M2), Bongo_22 (M1), Bricole_22 (M1), Diminimus_23 (M1), Dulcita_23 (M1), Estes_27 (M2), GenevaB15_26 (M2), Glaske16_23 (M1), IPhane7_22 (M1), LilhomieP_21 (M1), Nanosmite_26 (M3), PegLeg_22 (M1), Reindeer_20 (M1), Skinny_23 (M1), SlimJimmy_21 (M1), TyDawg_22 (M1),

Start 6:

- Found in 4 of 138 (2.9%) of genes in pham
- Manual Annotations of this start: 4 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Neville_20 (DU2), Octobien14_21 (DU1), Rabbitrun_22 (DU2), Trax_20 (DU2),

Start 7:

- Found in 102 of 138 (73.9%) of genes in pham
- Manual Annotations of this start: 72 of 125
- Called 76.5% of time when present
- Phage (with cluster) where this start called: Acquire49_12 (L1), Aegeus_12 (L5), Appletree2_12 (L1), Archie_12 (L2), AvadaKedavra_12 (L1), Azrael100_33 (V), Baudelaire_12 (L5), Bazzle_12 (L2), Bellis_13 (L3), BigCheese_12 (L2), BobsGarage_12 (L2), Breezona_12 (L2), Bromden_12 (L4), Calm_12 (L1), Chaser_12 (L4), CicholasNage_12 (L1), Clautastrophe_13 (L3), Cosmo_34 (V), DirkDirk_12 (L1), Douge_12 (L4), DrSeegs_12 (L2), DuncansLeg_13 (L3), DyoEdafos_13 (L4), Ellson_13 (L3), Enceladus_12 (L1), EniyanLRS_31 (V), Faith1_12 (L2), Finemlucis_12 (L2), Finnry_13 (L3), Gabriela_12 (L2), Gardann_12 (L2), GardenSalsa_26 (M2), GuuelaD_12 (L2), Hafay_12 (L2), Halena_12 (L1), Itos_12 (L2), Jobypre_13 (L3), JoeDirt_12 (L1), Jubie_13 (L3), Kahlid_12 (L2), Kingsolomon_13 (L3), Krypton555_13 (L3), Kumao_21 (singleton), LeBron_12 (L1), Lewan_12 (L2), LilDestine_12 (L2), Lolly9_13 (L3), Lumos_13 (L3), MAckerman_12 (L1), MaryV_34 (V), Miley16_12 (L2), MiniLon_13 (L3), MiniMac_13 (L3), MkaliMinitis3_12 (L2), Moostard_13 (L3), MrMagoo_26 (M2), MsGreen_13 (L3), Netyap_12 (L2), Nicholas_13 (L3), OhShagHennessy_12 (L1), Rey_26 (M2), Rose5_12 (L1), Rumpelstiltskin_12 (L2), Samty_13 (L3), Silverleaf_12 (L1), Snenia_13 (L3), Tourach_12 (L2), Tyson_12 (L1), UPIE_12 (L1), Vetrrix_12 (L2), Wamburgrxpress_12 (L1), Wigglewiggle_12 (L2), Wildcat_34 (V), Wilder_12 (L2), Winky_12 (L2), Wyatt2_12 (L1), Zakai_12 (L2), Zaria_12 (L1),

Start 8:

- Found in 29 of 138 (21.0%) of genes in pham
- Manual Annotations of this start: 26 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beelzebub_48 (S), Bernal13_13 (T), Blackbeetle_44 (S), Caprice_41 (S), Clarkson_45 (S), Corazon_42 (S), FeliMaine_44

(S), Gattaca_43 (S), Huphlepuuff_46 (S), Ibrahim_13 (T), JoieB_45 (S), Kudrefre_20 (DU1), Lilbit_45 (S), LittleLaf_44 (S), Marvin_42 (S), Mendokysei_12 (T), MosMoris_42 (S), Nairb_13 (T), Poise_44 (S), Pringar_44 (S), Raela_44 (S), RedRaider77_44 (S), RonRayGun_13 (T), Sephiroth_21 (DU1), Syleon_21 (DU1), Tesla_43 (S), VasuNzinga_44 (S), Whitty_13 (T), ZenTime222_13 (T),

Start 9:

- Found in 3 of 138 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 125
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Farewell_10 (AF), Sparky_10 (AF),

Start 10:

- Found in 52 of 138 (37.7%) of genes in pham
- Manual Annotations of this start: 4 of 125
- Called 13.5% of time when present
- Phage (with cluster) where this start called: Baoshan_11 (L2), Claus_12 (L2), Crossroads_12 (L2), Loadrie_12 (L2), Nicholasp3_12 (L2), Whirlwind_14 (L3), ZhongYanYuan_11 (L2),

Start 30:

- Found in 20 of 138 (14.5%) of genes in pham
- No Manual Annotations of this start.
- Called 5.0% of time when present
- Phage (with cluster) where this start called: GMA4_12 (singleton),

Summary by clusters:

There are 15 clusters represented in this pham: V, AF, M1, L1, singleton, L4, S, L5, L2, L3, M3, M2, DU1, DU2, T,

Info for manual annotations of cluster AF:

- Start number 9 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster DU1:

- Start number 6 was manually annotated 1 time for cluster DU1.
- Start number 8 was manually annotated 3 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 6 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster L1:

- Start number 7 was manually annotated 18 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 7 was manually annotated 25 times for cluster L2.
- Start number 10 was manually annotated 3 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 7 was manually annotated 15 times for cluster L3.
- Start number 10 was manually annotated 1 time for cluster L3.

Info for manual annotations of cluster L4:

- Start number 7 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 7 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster M1:

- Start number 5 was manually annotated 13 times for cluster M1.

Info for manual annotations of cluster M2:

- Start number 5 was manually annotated 3 times for cluster M2.
- Start number 7 was manually annotated 3 times for cluster M2.

Info for manual annotations of cluster M3:

- Start number 5 was manually annotated 1 time for cluster M3.

Info for manual annotations of cluster S:

- Start number 8 was manually annotated 16 times for cluster S.

Info for manual annotations of cluster T:

- Start number 8 was manually annotated 7 times for cluster T.

Info for manual annotations of cluster V:

- Start number 7 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Acquire49_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for Acquire49_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Aegeus_12 Start: 8098, Stop: 8574, Start Num: 7

Candidate Starts for Aegeus_12:

(Start: 7 @8098 has 72 MA's), (14, 8149), (15, 8152), (22, 8173), (42, 8242), (43, 8245), (46, 8260), (58, 8356), (61, 8374), (64, 8386), (66, 8407), (75, 8452), (76, 8464), (77, 8467), (78, 8470), (82, 8485), (84, 8497), (89, 8518), (91, 8530),

Gene: Appletree2_12 Start: 8447, Stop: 8935, Start Num: 7

Candidate Starts for Appletree2_12:

(Start: 7 @8447 has 72 MA's), (11, 8456), (23, 8528), (46, 8612), (52, 8660), (54, 8669), (55, 8672), (58, 8708), (60, 8717), (62, 8729), (66, 8759), (76, 8816), (77, 8819), (90, 8876), (91, 8882),

Gene: Archie_12 Start: 8444, Stop: 8920, Start Num: 7

Candidate Starts for Archie_12:

(Start: 7 @8444 has 72 MA's), (Start: 10 @8450 has 4 MA's), (32, 8552), (43, 8594), (46, 8609), (47, 8624), (52, 8657), (54, 8666), (58, 8705), (64, 8735), (66, 8756), (74, 8798), (76, 8813), (89, 8867), (90, 8873), (93, 8909),

Gene: Auspice_22 Start: 12285, Stop: 12797, Start Num: 5

Candidate Starts for Auspice_22:

(Start: 5 @12285 has 17 MA's), (Start: 7 @12294 has 72 MA's), (16, 12351), (28, 12384), (31, 12402), (35, 12420), (60, 12579), (61, 12588), (62, 12591), (67, 12627), (71, 12651), (81, 12699), (82, 12702),

Gene: AvadaKedavra_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for AvadaKedavra_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Aziz_26 Start: 12859, Stop: 13371, Start Num: 5

Candidate Starts for Aziz_26:

(Start: 5 @12859 has 17 MA's), (Start: 7 @12868 has 72 MA's), (16, 12925), (36, 12997), (57, 13141), (60, 13153), (61, 13162), (62, 13165), (64, 13177), (67, 13201), (71, 13225), (81, 13273), (94, 13354),

Gene: Azrael100_33 Start: 15365, Stop: 15877, Start Num: 7

Candidate Starts for Azrael100_33:

(Start: 7 @15365 has 72 MA's), (13, 15413), (28, 15464), (39, 15509), (45, 15551), (52, 15605), (57, 15650), (60, 15662), (61, 15671), (62, 15674), (69, 15719), (73, 15743), (86, 15800), (94, 15857),

Gene: Baoshan_11 Start: 8305, Stop: 8802, Start Num: 10

Candidate Starts for Baoshan_11:

(Start: 7 @8299 has 72 MA's), (Start: 10 @8305 has 4 MA's), (32, 8407), (43, 8449), (46, 8464), (52, 8512), (54, 8521), (58, 8560), (64, 8590), (66, 8611), (76, 8668), (90, 8728), (91, 8734), (96, 8773),

Gene: Baudelaire_12 Start: 8098, Stop: 8574, Start Num: 7

Candidate Starts for Baudelaire_12:

(Start: 7 @8098 has 72 MA's), (14, 8149), (15, 8152), (22, 8173), (42, 8242), (43, 8245), (46, 8260), (58, 8356), (61, 8374), (64, 8386), (66, 8407), (75, 8452), (76, 8464), (77, 8467), (78, 8470), (82, 8485), (84, 8497), (89, 8518), (91, 8530),

Gene: Bazzle_12 Start: 8420, Stop: 8923, Start Num: 7

Candidate Starts for Bazzle_12:

(Start: 7 @8420 has 72 MA's), (Start: 10 @8426 has 4 MA's), (32, 8528), (43, 8570), (46, 8585), (47, 8600), (52, 8633), (54, 8642), (58, 8681), (64, 8711), (66, 8732), (74, 8774), (76, 8789), (89, 8843), (90, 8849), (91, 8855), (96, 8894),

Gene: Beelzebub_48 Start: 18820, Stop: 19326, Start Num: 8

Candidate Starts for Beelzebub_48:

(Start: 8 @18820 has 26 MA's), (17, 18895), (20, 18904), (25, 18919), (29, 18928), (30, 18937), (33, 18946), (46, 19015), (48, 19033), (52, 19060), (58, 19108), (60, 19117), (61, 19126), (67, 19162), (70, 19180), (71, 19186), (72, 19195), (85, 19252), (88, 19264), (97, 19321),

Gene: Bellis_13 Start: 8603, Stop: 9088, Start Num: 7

Candidate Starts for Bellis_13:

(3, 8537), (Start: 7 @8603 has 72 MA's), (Start: 10 @8609 has 4 MA's), (14, 8657), (27, 8693), (58, 8864), (61, 8882), (64, 8894), (66, 8915), (84, 9005), (87, 9017), (90, 9032),

Gene: Bernal13_13 Start: 9373, Stop: 9864, Start Num: 8

Candidate Starts for Bernal13_13:

(Start: 8 @9373 has 26 MA's), (38, 9505), (40, 9520), (62, 9667),

Gene: BigCheese_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for BigCheese_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Blackbeetle_44 Start: 17839, Stop: 18345, Start Num: 8

Candidate Starts for Blackbeetle_44:

(Start: 8 @17839 has 26 MA's), (17, 17914), (20, 17923), (25, 17938), (29, 17947), (30, 17956), (33, 17965), (46, 18034), (48, 18052), (52, 18079), (58, 18127), (60, 18136), (61, 18145), (67, 18181), (70, 18199), (71, 18205), (72, 18214), (85, 18271), (88, 18283), (97, 18340),

Gene: BobsGarage_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for BobsGarage_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Bongo_22 Start: 12285, Stop: 12797, Start Num: 5

Candidate Starts for Bongo_22:

(Start: 5 @12285 has 17 MA's), (Start: 7 @12294 has 72 MA's), (16, 12351), (28, 12384), (31, 12402), (35, 12420), (60, 12579), (61, 12588), (62, 12591), (67, 12627), (71, 12651), (81, 12699), (82, 12702),

Gene: Breezona_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Breezona_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Bricole_22 Start: 12284, Stop: 12796, Start Num: 5

Candidate Starts for Bricole_22:

(Start: 5 @12284 has 17 MA's), (Start: 7 @12293 has 72 MA's), (16, 12350), (28, 12383), (31, 12401), (35, 12419), (60, 12578), (61, 12587), (62, 12590), (67, 12626), (71, 12650), (81, 12698), (82, 12701),

Gene: Bromden_12 Start: 8191, Stop: 8694, Start Num: 7

Candidate Starts for Bromden_12:

(Start: 7 @8191 has 72 MA's), (12, 8230), (37, 8314), (47, 8374), (54, 8416), (55, 8419), (58, 8455), (61, 8473), (64, 8485), (66, 8506), (76, 8563), (84, 8596), (91, 8629), (99, 8680),

Gene: Calm_12 Start: 8474, Stop: 8962, Start Num: 7

Candidate Starts for Calm_12:

(Start: 7 @8474 has 72 MA's), (11, 8483), (23, 8555), (46, 8639), (52, 8687), (54, 8696), (55, 8699), (58, 8735), (60, 8744), (62, 8756), (66, 8786), (76, 8843), (77, 8846), (90, 8903), (91, 8909),

Gene: Caprice_41 Start: 17909, Stop: 18415, Start Num: 8

Candidate Starts for Caprice_41:

(Start: 8 @17909 has 26 MA's), (17, 17984), (20, 17993), (25, 18008), (29, 18017), (30, 18026), (33, 18035), (46, 18104), (48, 18122), (52, 18149), (58, 18197), (60, 18206), (61, 18215), (67, 18251), (70, 18269), (71, 18275), (72, 18284), (85, 18341), (88, 18353), (97, 18410),

Gene: Chaser_12 Start: 8195, Stop: 8698, Start Num: 7

Candidate Starts for Chaser_12:

(Start: 7 @8195 has 72 MA's), (Start: 10 @8201 has 4 MA's), (18, 8261), (37, 8318), (47, 8378), (54, 8420), (55, 8423), (58, 8459), (61, 8477), (64, 8489), (66, 8510), (74, 8552), (76, 8567), (84, 8600), (85, 8603), (91, 8633),

Gene: CicholasNage_12 Start: 8474, Stop: 8962, Start Num: 7

Candidate Starts for CicholasNage_12:

(Start: 7 @8474 has 72 MA's), (11, 8483), (23, 8555), (46, 8639), (52, 8687), (54, 8696), (55, 8699), (58, 8735), (60, 8744), (62, 8756), (66, 8786), (76, 8843), (77, 8846), (90, 8903), (91, 8909),

Gene: Clarkson_45 Start: 18521, Stop: 19027, Start Num: 8

Candidate Starts for Clarkson_45:

(Start: 8 @18521 has 26 MA's), (17, 18596), (20, 18605), (25, 18620), (29, 18629), (30, 18638), (33, 18647), (46, 18716), (48, 18734), (52, 18761), (58, 18809), (60, 18818), (61, 18827), (67, 18863), (70, 18881), (71, 18887), (72, 18896), (85, 18953), (88, 18965), (97, 19022),

Gene: Claus_12 Start: 8485, Stop: 8982, Start Num: 10

Candidate Starts for Claus_12:

(Start: 7 @8479 has 72 MA's), (Start: 10 @8485 has 4 MA's), (32, 8587), (43, 8629), (46, 8644), (52, 8692), (54, 8701), (58, 8740), (64, 8770), (66, 8791), (76, 8848), (90, 8908), (91, 8914), (96, 8953),

Gene: Clautastrophe_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for Clautastrophe_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: Corazon_42 Start: 18474, Stop: 18980, Start Num: 8

Candidate Starts for Corazon_42:

(Start: 8 @18474 has 26 MA's), (17, 18549), (20, 18558), (25, 18573), (29, 18582), (30, 18591), (33, 18600), (46, 18669), (48, 18687), (52, 18714), (58, 18762), (60, 18771), (61, 18780), (67, 18816), (70, 18834), (71, 18840), (72, 18849), (85, 18906), (88, 18918), (97, 18975),

Gene: Cosmo_34 Start: 15372, Stop: 15884, Start Num: 7

Candidate Starts for Cosmo_34:

(Start: 7 @15372 has 72 MA's), (13, 15420), (28, 15471), (39, 15516), (45, 15558), (52, 15612), (57, 15657), (60, 15669), (61, 15678), (62, 15681), (69, 15726), (73, 15750), (86, 15807), (94, 15864),

Gene: Crossroads_12 Start: 8477, Stop: 8974, Start Num: 10

Candidate Starts for Crossroads_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Diminimus_23 Start: 12284, Stop: 12796, Start Num: 5

Candidate Starts for Diminimus_23:

(Start: 5 @12284 has 17 MA's), (Start: 7 @12293 has 72 MA's), (16, 12350), (28, 12383), (31, 12401), (35, 12419), (60, 12578), (61, 12587), (62, 12590), (67, 12626), (71, 12650), (81, 12698), (82, 12701),

Gene: DirkDirk_12 Start: 8475, Stop: 8963, Start Num: 7

Candidate Starts for DirkDirk_12:

(Start: 7 @8475 has 72 MA's), (11, 8484), (23, 8556), (46, 8640), (52, 8688), (54, 8697), (55, 8700), (58, 8736), (60, 8745), (62, 8757), (66, 8787), (76, 8844), (77, 8847), (90, 8904), (91, 8910),

Gene: Douge_12 Start: 8141, Stop: 8644, Start Num: 7

Candidate Starts for Douge_12:

(Start: 7 @8141 has 72 MA's), (18, 8207), (37, 8264), (47, 8324), (54, 8366), (55, 8369), (58, 8405), (61, 8423), (64, 8435), (66, 8456), (74, 8498), (76, 8513), (84, 8546), (85, 8549), (91, 8579),

Gene: DrSeegs_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for DrSeegs_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Dulcita_23 Start: 12284, Stop: 12796, Start Num: 5

Candidate Starts for Dulcita_23:

(Start: 5 @12284 has 17 MA's), (Start: 7 @12293 has 72 MA's), (16, 12350), (28, 12383), (31, 12401), (35, 12419), (60, 12578), (61, 12587), (62, 12590), (67, 12626), (71, 12650), (81, 12698), (82, 12701),

Gene: DuncansLeg_13 Start: 8612, Stop: 9097, Start Num: 7

Candidate Starts for DuncansLeg_13:

(Start: 7 @8612 has 72 MA's), (Start: 10 @8618 has 4 MA's), (14, 8666), (27, 8702), (58, 8873), (61, 8891), (64, 8903), (66, 8924), (84, 9014), (87, 9026), (90, 9041),

Gene: DyoEdafos_13 Start: 8351, Stop: 8854, Start Num: 7

Candidate Starts for DyoEdafos_13:

(Start: 7 @8351 has 72 MA's), (37, 8474), (47, 8534), (54, 8576), (55, 8579), (58, 8615), (61, 8633), (64, 8645), (66, 8666), (74, 8708), (76, 8723), (84, 8756), (91, 8789),

Gene: Ellson_13 Start: 8620, Stop: 9105, Start Num: 7

Candidate Starts for Ellson_13:

(Start: 7 @8620 has 72 MA's), (Start: 10 @8626 has 4 MA's), (14, 8674), (27, 8710), (58, 8881), (61, 8899), (64, 8911), (66, 8932), (84, 9022), (87, 9034), (90, 9049),

Gene: Enceladus_12 Start: 8475, Stop: 8963, Start Num: 7

Candidate Starts for Enceladus_12:

(Start: 7 @8475 has 72 MA's), (11, 8484), (23, 8556), (46, 8640), (52, 8688), (54, 8697), (55, 8700), (58, 8736), (60, 8745), (62, 8757), (66, 8787), (76, 8844), (77, 8847), (90, 8904), (91, 8910),

Gene: EniyanLRS_31 Start: 15066, Stop: 15578, Start Num: 7

Candidate Starts for EniyanLRS_31:

(Start: 7 @15066 has 72 MA's), (13, 15114), (28, 15165), (39, 15210), (45, 15252), (52, 15306), (57, 15351), (60, 15363), (61, 15372), (62, 15375), (69, 15420), (73, 15444), (86, 15501), (94, 15558),

Gene: Estes_27 Start: 12996, Stop: 13508, Start Num: 5

Candidate Starts for Estes_27:

(Start: 5 @12996 has 17 MA's), (Start: 7 @13005 has 72 MA's), (16, 13062), (36, 13134), (57, 13278), (60, 13290), (61, 13299), (62, 13302), (64, 13314), (67, 13338), (71, 13362), (81, 13410), (94, 13491),

Gene: Faith1_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Faith1_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Farewell_10 Start: 7492, Stop: 8022, Start Num: 9

Candidate Starts for Farewell_10:

(4, 7429), (Start: 9 @7492 has 2 MA's), (33, 7615), (45, 7675), (57, 7780), (60, 7801), (68, 7852), (71, 7876), (79, 7915),

Gene: FeliMaine_44 Start: 18522, Stop: 19028, Start Num: 8

Candidate Starts for FeliMaine_44:

(Start: 8 @18522 has 26 MA's), (17, 18597), (20, 18606), (25, 18621), (29, 18630), (30, 18639), (33, 18648), (46, 18717), (48, 18735), (52, 18762), (58, 18810), (60, 18819), (61, 18828), (67, 18864), (70, 18882), (71, 18888), (72, 18897), (85, 18954), (88, 18966), (97, 19023),

Gene: Finemlucis_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Finemlucis_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (46, 8636), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Finnry_13 Start: 8605, Stop: 9090, Start Num: 7

Candidate Starts for Finnry_13:

(Start: 7 @8605 has 72 MA's), (Start: 10 @8611 has 4 MA's), (14, 8659), (27, 8695), (58, 8866), (61, 8884), (64, 8896), (66, 8917), (84, 9007), (87, 9019), (90, 9034),

Gene: GMA4_12 Start: 8487, Stop: 8873, Start Num: 30

Candidate Starts for GMA4_12:

(30, 8487), (56, 8637), (59, 8655), (83, 8787), (95, 8856),

Gene: Gabriela_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Gabriela_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Gardann_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Gardann_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: GardenSalsa_26 Start: 12841, Stop: 13344, Start Num: 7

Candidate Starts for GardenSalsa_26:

(Start: 5 @12832 has 17 MA's), (Start: 7 @12841 has 72 MA's), (16, 12898), (36, 12970), (57, 13114), (60, 13126), (61, 13135), (62, 13138), (64, 13150), (67, 13174), (71, 13198), (81, 13246), (94, 13327),

Gene: Gattaca_43 Start: 17701, Stop: 18207, Start Num: 8

Candidate Starts for Gattaca_43:

(Start: 8 @17701 has 26 MA's), (17, 17776), (20, 17785), (25, 17800), (29, 17809), (30, 17818), (33, 17827), (46, 17896), (48, 17914), (52, 17941), (58, 17989), (60, 17998), (61, 18007), (67, 18043), (70, 18061), (71, 18067), (72, 18076), (85, 18133), (88, 18145), (97, 18202),

Gene: GenevaB15_26 Start: 12859, Stop: 13371, Start Num: 5

Candidate Starts for GenevaB15_26:

(Start: 5 @12859 has 17 MA's), (Start: 7 @12868 has 72 MA's), (16, 12925), (36, 12997), (57, 13141), (60, 13153), (61, 13162), (62, 13165), (64, 13177), (67, 13201), (71, 13225), (81, 13273), (94, 13354),

Gene: Glaske16_23 Start: 12284, Stop: 12796, Start Num: 5

Candidate Starts for Glaske16_23:

(Start: 5 @12284 has 17 MA's), (Start: 7 @12293 has 72 MA's), (16, 12350), (28, 12383), (31, 12401), (35, 12419), (60, 12578), (61, 12587), (62, 12590), (67, 12626), (71, 12650), (81, 12698), (82, 12701),

Gene: GuuelaD_12 Start: 8503, Stop: 9006, Start Num: 7

Candidate Starts for GuuelaD_12:

(Start: 7 @8503 has 72 MA's), (Start: 10 @8509 has 4 MA's), (32, 8611), (43, 8653), (46, 8668), (52, 8716), (54, 8725), (58, 8764), (60, 8773), (64, 8794), (66, 8815), (74, 8857), (76, 8872), (90, 8932), (91, 8938), (96, 8977),

Gene: Hafay_12 Start: 8504, Stop: 9007, Start Num: 7

Candidate Starts for Hafay_12:

(Start: 7 @8504 has 72 MA's), (Start: 10 @8510 has 4 MA's), (32, 8612), (46, 8669), (47, 8684), (52, 8717), (53, 8723), (54, 8726), (58, 8765), (64, 8795), (66, 8816), (74, 8858), (76, 8873), (89, 8927), (90, 8933), (91, 8939), (96, 8978), (99, 8990),

Gene: Halena_12 Start: 8474, Stop: 8962, Start Num: 7

Candidate Starts for Halena_12:

(Start: 7 @8474 has 72 MA's), (11, 8483), (23, 8555), (46, 8639), (52, 8687), (54, 8696), (55, 8699), (58, 8735), (60, 8744), (62, 8756), (66, 8786), (76, 8843), (77, 8846), (90, 8903), (91, 8909),

Gene: Huphleuff_46 Start: 18326, Stop: 18832, Start Num: 8

Candidate Starts for Huphleuff_46:

(Start: 8 @18326 has 26 MA's), (17, 18401), (20, 18410), (25, 18425), (29, 18434), (30, 18443), (33, 18452), (46, 18521), (48, 18539), (52, 18566), (58, 18614), (60, 18623), (61, 18632), (67, 18668), (70, 18686), (71, 18692), (72, 18701), (85, 18758), (88, 18770), (97, 18827),

Gene: IPhone7_22 Start: 12285, Stop: 12797, Start Num: 5

Candidate Starts for IPhone7_22:

(Start: 5 @12285 has 17 MA's), (Start: 7 @12294 has 72 MA's), (16, 12351), (28, 12384), (31, 12402), (35, 12420), (60, 12579), (61, 12588), (62, 12591), (67, 12627), (71, 12651), (81, 12699), (82, 12702),

Gene: Ibrahim_13 Start: 9373, Stop: 9864, Start Num: 8

Candidate Starts for Ibrahim_13:

(Start: 8 @9373 has 26 MA's), (38, 9505), (40, 9520), (62, 9667),

Gene: Itos_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Itos_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Jobypre_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for Jobypre_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: JoeDirt_12 Start: 8474, Stop: 8962, Start Num: 7

Candidate Starts for JoeDirt_12:

(Start: 7 @8474 has 72 MA's), (11, 8483), (23, 8555), (46, 8639), (52, 8687), (54, 8696), (55, 8699), (58, 8735), (60, 8744), (62, 8756), (66, 8786), (76, 8843), (77, 8846), (90, 8903), (91, 8909),

Gene: JoieB_45 Start: 18545, Stop: 19051, Start Num: 8

Candidate Starts for JoieB_45:

(Start: 8 @18545 has 26 MA's), (17, 18620), (20, 18629), (25, 18644), (29, 18653), (30, 18662), (33, 18671), (46, 18740), (48, 18758), (52, 18785), (58, 18833), (60, 18842), (61, 18851), (67, 18887), (70,

18905), (71, 18911), (72, 18920), (85, 18977), (88, 18989), (97, 19046),

Gene: Jubie_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for Jubie_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: Kahlid_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Kahlid_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (46, 8636), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Kingsolomon_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for Kingsolomon_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: Krypton555_13 Start: 8597, Stop: 9082, Start Num: 7

Candidate Starts for Krypton555_13:

(Start: 7 @8597 has 72 MA's), (Start: 10 @8603 has 4 MA's), (14, 8651), (27, 8687), (58, 8858), (61, 8876), (64, 8888), (66, 8909), (84, 8999), (87, 9011), (90, 9026),

Gene: Kudfre_20 Start: 11817, Stop: 12305, Start Num: 8

Candidate Starts for Kudfre_20:

(Start: 8 @11817 has 26 MA's), (34, 11925), (41, 11961), (44, 11970), (50, 12012), (52, 12030), (53, 12036), (61, 12096), (62, 12099), (69, 12147), (81, 12204), (86, 12228),

Gene: Kumao_21 Start: 11563, Stop: 12060, Start Num: 7

Candidate Starts for Kumao_21:

(Start: 7 @11563 has 72 MA's), (57, 11830), (61, 11851), (62, 11854), (64, 11866),

Gene: LeBron_12 Start: 8474, Stop: 8962, Start Num: 7

Candidate Starts for LeBron_12:

(Start: 7 @8474 has 72 MA's), (23, 8555), (46, 8639), (52, 8687), (54, 8696), (55, 8699), (58, 8735), (60, 8744), (62, 8756), (66, 8786), (76, 8843), (77, 8846), (90, 8903), (91, 8909),

Gene: Lewan_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Lewan_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (46, 8636), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: LilDestine_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for LilDestine_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (46, 8636), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Lilbit_45 Start: 18522, Stop: 19028, Start Num: 8

Candidate Starts for Lilbit_45:

(Start: 8 @18522 has 26 MA's), (17, 18597), (20, 18606), (25, 18621), (29, 18630), (30, 18639), (33, 18648), (46, 18717), (48, 18735), (52, 18762), (58, 18810), (60, 18819), (61, 18828), (67, 18864), (70,

18882), (71, 18888), (72, 18897), (85, 18954), (88, 18966), (97, 19023),

Gene: LilhomieP_21 Start: 12285, Stop: 12797, Start Num: 5

Candidate Starts for LilhomieP_21:

(Start: 5 @12285 has 17 MA's), (Start: 7 @12294 has 72 MA's), (16, 12351), (28, 12384), (31, 12402), (35, 12420), (60, 12579), (61, 12588), (62, 12591), (67, 12627), (71, 12651), (81, 12699), (82, 12702),

Gene: LittleLaf_44 Start: 18251, Stop: 18757, Start Num: 8

Candidate Starts for LittleLaf_44:

(Start: 8 @18251 has 26 MA's), (17, 18326), (20, 18335), (25, 18350), (29, 18359), (30, 18368), (33, 18377), (46, 18446), (48, 18464), (52, 18491), (58, 18539), (60, 18548), (61, 18557), (67, 18593), (70, 18611), (71, 18617), (72, 18626), (85, 18683), (88, 18695), (97, 18752),

Gene: Loadrie_12 Start: 8510, Stop: 9007, Start Num: 10

Candidate Starts for Loadrie_12:

(Start: 7 @8504 has 72 MA's), (Start: 10 @8510 has 4 MA's), (32, 8612), (46, 8669), (47, 8684), (52, 8717), (53, 8723), (54, 8726), (58, 8765), (64, 8795), (66, 8816), (74, 8858), (76, 8873), (89, 8927), (90, 8933), (91, 8939), (96, 8978), (99, 8990),

Gene: Lolly9_13 Start: 8615, Stop: 9100, Start Num: 7

Candidate Starts for Lolly9_13:

(Start: 7 @8615 has 72 MA's), (Start: 10 @8621 has 4 MA's), (14, 8669), (23, 8696), (27, 8705), (58, 8876), (61, 8894), (64, 8906), (66, 8927), (84, 9017), (87, 9029), (90, 9044),

Gene: Lumos_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for Lumos_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: MAckerman_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for MAckerman_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Marvin_42 Start: 18521, Stop: 19027, Start Num: 8

Candidate Starts for Marvin_42:

(Start: 8 @18521 has 26 MA's), (17, 18596), (20, 18605), (25, 18620), (29, 18629), (30, 18638), (33, 18647), (46, 18716), (48, 18734), (52, 18761), (58, 18809), (60, 18818), (61, 18827), (67, 18863), (70, 18881), (71, 18887), (72, 18896), (85, 18953), (88, 18965), (97, 19022),

Gene: MaryV_34 Start: 15338, Stop: 15850, Start Num: 7

Candidate Starts for MaryV_34:

(Start: 7 @15338 has 72 MA's), (13, 15386), (28, 15437), (39, 15482), (45, 15524), (52, 15578), (57, 15623), (60, 15635), (61, 15644), (62, 15647), (69, 15692), (73, 15716), (86, 15773), (94, 15830),

Gene: Mendokysei_12 Start: 9351, Stop: 9842, Start Num: 8

Candidate Starts for Mendokysei_12:

(1, 9198), (2, 9219), (Start: 8 @9351 has 26 MA's), (15, 9417), (24, 9438), (38, 9483), (52, 9579),

Gene: Miley16_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Miley16_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900),

(91, 8906), (96, 8945), (99, 8957),

Gene: MiniLon_13 Start: 8615, Stop: 9100, Start Num: 7

Candidate Starts for MiniLon_13:

(Start: 7 @8615 has 72 MA's), (Start: 10 @8621 has 4 MA's), (14, 8669), (23, 8696), (27, 8705), (58, 8876), (61, 8894), (64, 8906), (66, 8927), (84, 9017), (87, 9029), (90, 9044),

Gene: MiniMac_13 Start: 8616, Stop: 9101, Start Num: 7

Candidate Starts for MiniMac_13:

(Start: 7 @8616 has 72 MA's), (Start: 10 @8622 has 4 MA's), (14, 8670), (23, 8697), (27, 8706), (58, 8877), (61, 8895), (64, 8907), (66, 8928), (84, 9018), (87, 9030), (90, 9045),

Gene: MkaliMitinis3_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for MkaliMitinis3_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Moostard_13 Start: 8604, Stop: 9089, Start Num: 7

Candidate Starts for Moostard_13:

(Start: 7 @8604 has 72 MA's), (Start: 10 @8610 has 4 MA's), (14, 8658), (27, 8694), (58, 8865), (61, 8883), (64, 8895), (66, 8916), (84, 9006), (87, 9018), (90, 9033),

Gene: MosMoris_42 Start: 17701, Stop: 18207, Start Num: 8

Candidate Starts for MosMoris_42:

(Start: 8 @17701 has 26 MA's), (17, 17776), (20, 17785), (25, 17800), (29, 17809), (30, 17818), (33, 17827), (46, 17896), (48, 17914), (52, 17941), (58, 17989), (60, 17998), (61, 18007), (67, 18043), (70, 18061), (71, 18067), (72, 18076), (85, 18133), (88, 18145), (97, 18202),

Gene: MrMagoo_26 Start: 12841, Stop: 13344, Start Num: 7

Candidate Starts for MrMagoo_26:

(Start: 5 @12832 has 17 MA's), (Start: 7 @12841 has 72 MA's), (16, 12898), (36, 12970), (57, 13114), (60, 13126), (61, 13135), (62, 13138), (64, 13150), (67, 13174), (71, 13198), (81, 13246), (94, 13327),

Gene: MsGreen_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for MsGreen_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: Nairb_13 Start: 9373, Stop: 9864, Start Num: 8

Candidate Starts for Nairb_13:

(Start: 8 @9373 has 26 MA's), (38, 9505), (40, 9520), (62, 9667),

Gene: Nanosmite_26 Start: 13051, Stop: 13563, Start Num: 5

Candidate Starts for Nanosmite_26:

(Start: 5 @13051 has 17 MA's), (Start: 7 @13060 has 72 MA's), (60, 13345), (61, 13354), (62, 13357), (67, 13393), (71, 13417), (94, 13546),

Gene: Netyap_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Netyap_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Neville_20 Start: 11648, Stop: 12142, Start Num: 6

Candidate Starts for Neville_20:

(Start: 6 @11648 has 4 MA's), (19, 11714), (21, 11720), (26, 11735), (48, 11837), (51, 11849), (53, 11870), (57, 11909), (61, 11930), (63, 11936), (76, 12026), (80, 12035), (89, 12077),

Gene: Nicholas_13 Start: 8608, Stop: 9093, Start Num: 7

Candidate Starts for Nicholas_13:

(Start: 7 @8608 has 72 MA's), (Start: 10 @8614 has 4 MA's), (14, 8662), (27, 8698), (58, 8869), (61, 8887), (64, 8899), (66, 8920), (84, 9010), (87, 9022), (90, 9037),

Gene: Nicholasp3_12 Start: 8477, Stop: 8974, Start Num: 10

Candidate Starts for Nicholasp3_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Octobien14_21 Start: 12862, Stop: 13350, Start Num: 6

Candidate Starts for Octobien14_21:

(Start: 6 @12862 has 4 MA's), (28, 12952), (34, 12970), (41, 13006), (52, 13075), (53, 13081), (63, 13147), (76, 13234), (81, 13249), (86, 13273),

Gene: OhShagHennessy_12 Start: 8447, Stop: 8935, Start Num: 7

Candidate Starts for OhShagHennessy_12:

(Start: 7 @8447 has 72 MA's), (11, 8456), (23, 8528), (46, 8612), (52, 8660), (54, 8669), (55, 8672), (58, 8708), (60, 8717), (62, 8729), (66, 8759), (76, 8816), (77, 8819), (90, 8876), (91, 8882),

Gene: PegLeg_22 Start: 12284, Stop: 12796, Start Num: 5

Candidate Starts for PegLeg_22:

(Start: 5 @12284 has 17 MA's), (Start: 7 @12293 has 72 MA's), (16, 12350), (28, 12383), (31, 12401), (35, 12419), (60, 12578), (61, 12587), (62, 12590), (67, 12626), (71, 12650), (81, 12698), (82, 12701),

Gene: Poise_44 Start: 17839, Stop: 18345, Start Num: 8

Candidate Starts for Poise_44:

(Start: 8 @17839 has 26 MA's), (17, 17914), (20, 17923), (25, 17938), (29, 17947), (30, 17956), (33, 17965), (46, 18034), (48, 18052), (52, 18079), (58, 18127), (60, 18136), (61, 18145), (67, 18181), (70, 18199), (71, 18205), (72, 18214), (85, 18271), (88, 18283), (97, 18340),

Gene: Pringar_44 Start: 18151, Stop: 18657, Start Num: 8

Candidate Starts for Pringar_44:

(Start: 8 @18151 has 26 MA's), (17, 18226), (20, 18235), (25, 18250), (29, 18259), (30, 18268), (46, 18346), (48, 18364), (52, 18391), (58, 18439), (60, 18448), (61, 18457), (67, 18493), (70, 18511), (71, 18517), (72, 18526), (85, 18583), (88, 18595), (97, 18652),

Gene: Rabbitrun_22 Start: 12210, Stop: 12704, Start Num: 6

Candidate Starts for Rabbitrun_22:

(Start: 6 @12210 has 4 MA's), (19, 12276), (21, 12282), (44, 12363), (53, 12432), (57, 12471), (61, 12492), (63, 12498), (65, 12522), (72, 12564), (76, 12588), (80, 12597), (92, 12663), (98, 12693),

Gene: Raela_44 Start: 18394, Stop: 18900, Start Num: 8

Candidate Starts for Raela_44:

(Start: 8 @18394 has 26 MA's), (17, 18469), (20, 18478), (25, 18493), (29, 18502), (30, 18511), (33, 18520), (46, 18589), (48, 18607), (52, 18634), (58, 18682), (60, 18691), (61, 18700), (67, 18736), (70,

18754), (71, 18760), (72, 18769), (85, 18826), (88, 18838), (97, 18895),

Gene: RedRaider77_44 Start: 18295, Stop: 18801, Start Num: 8

Candidate Starts for RedRaider77_44:

(Start: 8 @18295 has 26 MA's), (17, 18370), (20, 18379), (25, 18394), (29, 18403), (30, 18412), (33, 18421), (46, 18490), (48, 18508), (52, 18535), (58, 18583), (60, 18592), (61, 18601), (67, 18637), (70, 18655), (71, 18661), (72, 18670), (85, 18727), (88, 18739), (97, 18796),

Gene: Reindeer_20 Start: 12137, Stop: 12649, Start Num: 5

Candidate Starts for Reindeer_20:

(Start: 5 @12137 has 17 MA's), (Start: 7 @12146 has 72 MA's), (16, 12203), (28, 12236), (35, 12272), (36, 12275), (49, 12353), (60, 12431), (61, 12440), (62, 12443), (67, 12479), (71, 12503), (81, 12551), (82, 12554),

Gene: Rey_26 Start: 13073, Stop: 13576, Start Num: 7

Candidate Starts for Rey_26:

(Start: 5 @13064 has 17 MA's), (Start: 7 @13073 has 72 MA's), (Start: 9 @13076 has 2 MA's), (15, 13127), (16, 13130), (28, 13163), (36, 13202), (60, 13358), (61, 13367), (62, 13370), (64, 13382), (67, 13406), (71, 13430), (81, 13478), (82, 13481), (94, 13559),

Gene: RonRayGun_13 Start: 9373, Stop: 9864, Start Num: 8

Candidate Starts for RonRayGun_13:

(Start: 8 @9373 has 26 MA's), (38, 9505), (40, 9520), (62, 9667),

Gene: Rose5_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for Rose5_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Rumpelstiltskin_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Rumpelstiltskin_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Samty_13 Start: 8604, Stop: 9089, Start Num: 7

Candidate Starts for Samty_13:

(Start: 7 @8604 has 72 MA's), (Start: 10 @8610 has 4 MA's), (14, 8658), (27, 8694), (58, 8865), (61, 8883), (64, 8895), (66, 8916), (84, 9006), (87, 9018), (90, 9033),

Gene: Sephiroth_21 Start: 11988, Stop: 12476, Start Num: 8

Candidate Starts for Sephiroth_21:

(Start: 8 @11988 has 26 MA's), (34, 12096), (41, 12132), (44, 12141), (50, 12183), (52, 12201), (53, 12207), (61, 12267), (62, 12270), (69, 12318), (81, 12375), (86, 12399),

Gene: Silverleaf_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for Silverleaf_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Skinny_23 Start: 12285, Stop: 12797, Start Num: 5

Candidate Starts for Skinny_23:

(Start: 5 @12285 has 17 MA's), (Start: 7 @12294 has 72 MA's), (16, 12351), (28, 12384), (31, 12402), (35, 12420), (60, 12579), (61, 12588), (62, 12591), (67, 12627), (71, 12651), (81, 12699), (82, 12702),

Gene: SlimJimmy_21 Start: 12284, Stop: 12796, Start Num: 5

Candidate Starts for SlimJimmy_21:

(Start: 5 @12284 has 17 MA's), (Start: 7 @12293 has 72 MA's), (16, 12350), (31, 12401), (35, 12419), (60, 12578), (61, 12587), (62, 12590), (67, 12626), (71, 12650), (81, 12698), (82, 12701),

Gene: Snenia_13 Start: 8609, Stop: 9094, Start Num: 7

Candidate Starts for Snenia_13:

(Start: 7 @8609 has 72 MA's), (Start: 10 @8615 has 4 MA's), (14, 8663), (27, 8699), (58, 8870), (61, 8888), (64, 8900), (66, 8921), (84, 9011), (87, 9023), (90, 9038),

Gene: Sparky_10 Start: 7493, Stop: 8023, Start Num: 9

Candidate Starts for Sparky_10:

(4, 7430), (Start: 9 @7493 has 2 MA's), (33, 7616), (45, 7676), (57, 7781), (60, 7802), (68, 7853), (71, 7877), (79, 7916),

Gene: Syleon_21 Start: 11910, Stop: 12395, Start Num: 8

Candidate Starts for Syleon_21:

(Start: 8 @11910 has 26 MA's), (34, 12018), (41, 12054), (44, 12063), (50, 12105), (52, 12123), (53, 12129), (61, 12189), (62, 12192), (69, 12240), (81, 12297), (86, 12321),

Gene: Tesla_43 Start: 18144, Stop: 18650, Start Num: 8

Candidate Starts for Tesla_43:

(Start: 8 @18144 has 26 MA's), (17, 18219), (20, 18228), (25, 18243), (29, 18252), (30, 18261), (33, 18270), (46, 18339), (48, 18357), (52, 18384), (58, 18432), (60, 18441), (61, 18450), (67, 18486), (70, 18504), (71, 18510), (72, 18519), (85, 18576), (88, 18588), (97, 18645),

Gene: Tourach_12 Start: 8484, Stop: 8987, Start Num: 7

Candidate Starts for Tourach_12:

(Start: 7 @8484 has 72 MA's), (Start: 10 @8490 has 4 MA's), (13, 8529), (23, 8565), (32, 8592), (43, 8634), (47, 8664), (52, 8697), (54, 8706), (58, 8745), (61, 8763), (64, 8775), (66, 8796), (74, 8838), (76, 8853), (89, 8907), (90, 8913), (91, 8919), (96, 8958),

Gene: Trax_20 Start: 11648, Stop: 12142, Start Num: 6

Candidate Starts for Trax_20:

(Start: 6 @11648 has 4 MA's), (19, 11714), (21, 11720), (26, 11735), (48, 11837), (51, 11849), (53, 11870), (57, 11909), (61, 11930), (63, 11936), (76, 12026), (80, 12035), (89, 12077),

Gene: TyDawg_22 Start: 12285, Stop: 12797, Start Num: 5

Candidate Starts for TyDawg_22:

(Start: 5 @12285 has 17 MA's), (Start: 7 @12294 has 72 MA's), (16, 12351), (28, 12384), (31, 12402), (35, 12420), (60, 12579), (61, 12588), (62, 12591), (67, 12627), (71, 12651), (81, 12699), (82, 12702),

Gene: Tyson_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for Tyson_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: UPIE_12 Start: 8471, Stop: 8959, Start Num: 7

Candidate Starts for UPIE_12:

(Start: 7 @8471 has 72 MA's), (11, 8480), (23, 8552), (46, 8636), (52, 8684), (54, 8693), (55, 8696), (58, 8732), (60, 8741), (62, 8753), (66, 8783), (76, 8840), (77, 8843), (90, 8900), (91, 8906),

Gene: VasuNzinga_44 Start: 17728, Stop: 18234, Start Num: 8

Candidate Starts for VasuNzinga_44:

(Start: 8 @17728 has 26 MA's), (17, 17803), (20, 17812), (25, 17827), (29, 17836), (30, 17845), (33, 17854), (46, 17923), (48, 17941), (52, 17968), (58, 18016), (60, 18025), (61, 18034), (67, 18070), (70, 18088), (71, 18094), (72, 18103), (85, 18160), (88, 18172), (97, 18229),

Gene: Vetrix_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Vetrix_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (46, 8636), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Wamburgexpress_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for Wamburgexpress_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Whirlwind_14 Start: 8608, Stop: 9087, Start Num: 10

Candidate Starts for Whirlwind_14:

(Start: 7 @8602 has 72 MA's), (Start: 10 @8608 has 4 MA's), (14, 8656), (27, 8692), (58, 8863), (61, 8881), (64, 8893), (66, 8914), (84, 9004), (87, 9016), (90, 9031),

Gene: Whitty_13 Start: 9373, Stop: 9864, Start Num: 8

Candidate Starts for Whitty_13:

(Start: 8 @9373 has 26 MA's), (38, 9505), (40, 9520), (62, 9667),

Gene: Wigglewobble_12 Start: 8504, Stop: 9007, Start Num: 7

Candidate Starts for Wigglewobble_12:

(Start: 7 @8504 has 72 MA's), (Start: 10 @8510 has 4 MA's), (32, 8612), (46, 8669), (47, 8684), (52, 8717), (53, 8723), (54, 8726), (58, 8765), (64, 8795), (66, 8816), (74, 8858), (76, 8873), (89, 8927), (90, 8933), (91, 8939), (96, 8978), (99, 8990),

Gene: Wildcat_34 Start: 15348, Stop: 15860, Start Num: 7

Candidate Starts for Wildcat_34:

(Start: 7 @15348 has 72 MA's), (13, 15396), (28, 15447), (39, 15492), (45, 15534), (52, 15588), (57, 15633), (60, 15645), (61, 15654), (62, 15657), (69, 15702), (73, 15726), (86, 15783), (94, 15840),

Gene: Wilder_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Wilder_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (46, 8636), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Winky_12 Start: 8471, Stop: 8974, Start Num: 7

Candidate Starts for Winky_12:

(Start: 7 @8471 has 72 MA's), (Start: 10 @8477 has 4 MA's), (32, 8579), (47, 8651), (52, 8684), (53, 8690), (54, 8693), (58, 8732), (64, 8762), (66, 8783), (74, 8825), (76, 8840), (89, 8894), (90, 8900), (91, 8906), (96, 8945), (99, 8957),

Gene: Wyatt2_12 Start: 8473, Stop: 8961, Start Num: 7

Candidate Starts for Wyatt2_12:

(Start: 7 @8473 has 72 MA's), (11, 8482), (23, 8554), (46, 8638), (52, 8686), (54, 8695), (55, 8698), (58, 8734), (60, 8743), (62, 8755), (66, 8785), (76, 8842), (77, 8845), (90, 8902), (91, 8908),

Gene: Zakai_12 Start: 8459, Stop: 8962, Start Num: 7

Candidate Starts for Zakai_12:

(Start: 7 @8459 has 72 MA's), (Start: 10 @8465 has 4 MA's), (32, 8567), (47, 8639), (52, 8672), (53, 8678), (54, 8681), (58, 8720), (64, 8750), (66, 8771), (74, 8813), (76, 8828), (89, 8882), (90, 8888), (91, 8894), (96, 8933), (99, 8945),

Gene: Zaria_12 Start: 8474, Stop: 8962, Start Num: 7

Candidate Starts for Zaria_12:

(Start: 7 @8474 has 72 MA's), (11, 8483), (23, 8555), (46, 8639), (52, 8687), (54, 8696), (55, 8699), (58, 8735), (60, 8744), (62, 8756), (66, 8786), (76, 8843), (77, 8846), (90, 8903), (91, 8909),

Gene: ZenTime222_13 Start: 9373, Stop: 9864, Start Num: 8

Candidate Starts for ZenTime222_13:

(Start: 8 @9373 has 26 MA's), (38, 9505), (40, 9520), (62, 9667),

Gene: ZhongYanYuan_11 Start: 8305, Stop: 8802, Start Num: 10

Candidate Starts for ZhongYanYuan_11:

(Start: 7 @8299 has 72 MA's), (Start: 10 @8305 has 4 MA's), (32, 8407), (43, 8449), (46, 8464), (52, 8512), (54, 8521), (58, 8560), (64, 8590), (66, 8611), (76, 8668), (90, 8728), (91, 8734), (96, 8773),