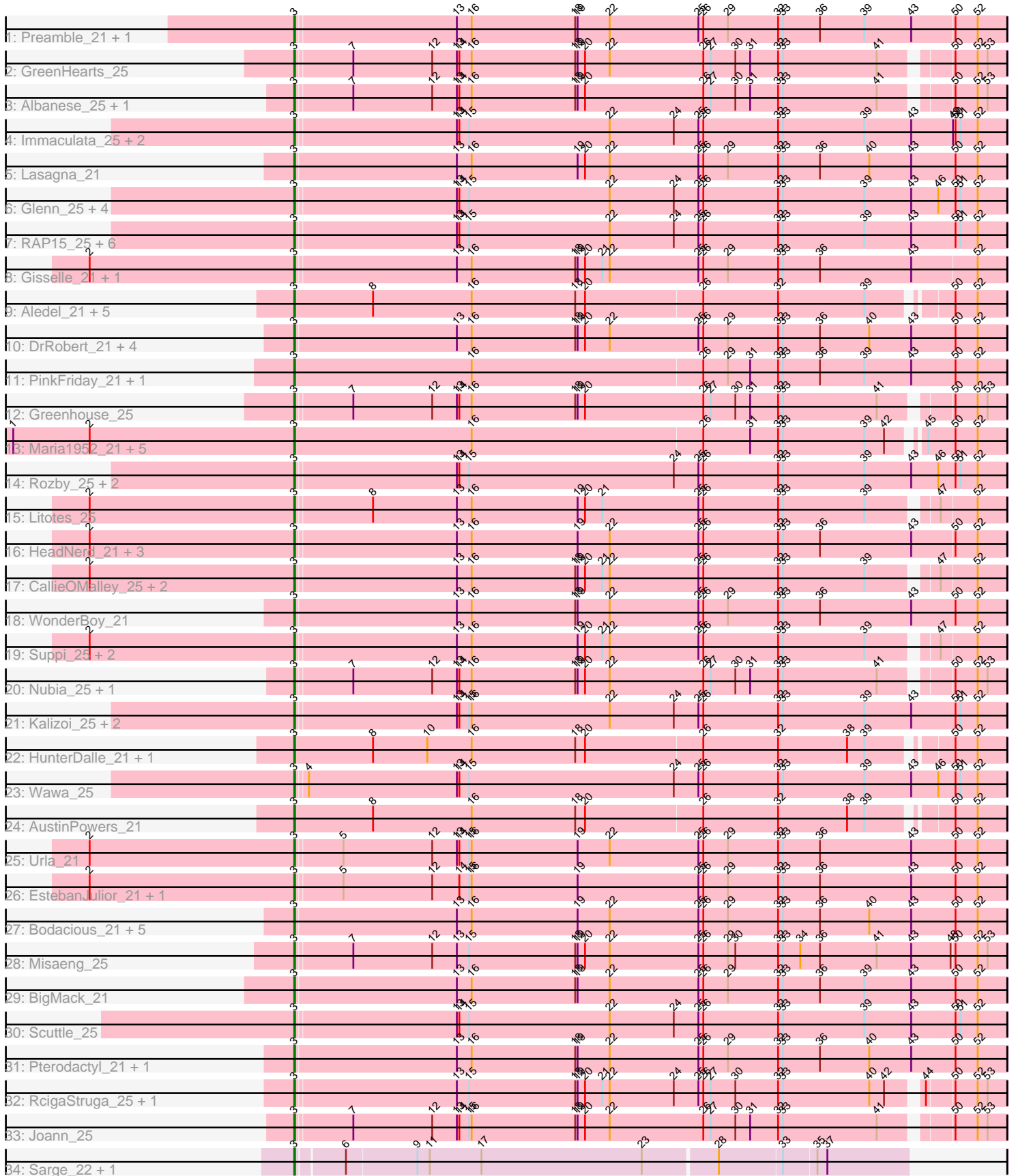


Pham 168151



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 168151 Report

This analysis was run 07/09/24 on database version 566.

Pham number 168151 has 86 members, 2 are drafts.

Phages represented in each track:

- Track 1 : Preamble_21, Kittykat_21
- Track 2 : GreenHearts_25
- Track 3 : Albanese_25, Lakshmi_25
- Track 4 : Immaculata_25, Cholula_25, Potatoes_25
- Track 5 : Lasagna_21
- Track 6 : Glenn_25, TattModd_25, Carpal_25, Fluke_25, Vallejo_25
- Track 7 : RAP15_25, Korra_26, MeganNoll_25, Savage2526_25, MrGloopy_25, Jumboset_25, BrotherBLo_25
- Track 8 : Gisselle_21, DreamTeam_21
- Track 9 : Aledel_21, Supakev_21, Riovina_21, Eunoia_21, OMalley_21, Chridison_21
- Track 10 : DrRobert_21, Lucy_21, Christian_21, PitaDog_21, OurGirlNessie_21
- Track 11 : PinkFriday_21, Pumancara_21
- Track 12 : Greenhouse_25
- Track 13 : Maria1952_21, Daiboju_21, Temper16_21, KingBob_21, Herb_21, Sergei_21
- Track 14 : Rozby_25, Riverdale_25, Beethoven_25
- Track 15 : Litotes_25
- Track 16 : HeadNerd_21, Moki_21, Bennie_21, Huckleberry_21
- Track 17 : CallieOMalley_25, PartyCup_25, Wayne_25
- Track 18 : WonderBoy_21
- Track 19 : Suppi_25, AppleCider_25, Canowicakte_25
- Track 20 : Nubia_25, Oxynfrius_25
- Track 21 : Kalizoi_25, Dino_25, Zorro_25
- Track 22 : HunterDalle_21, Vulture_21
- Track 23 : Wawa_25
- Track 24 : AustinPowers_21
- Track 25 : Urla_21
- Track 26 : EstebanJulior_21, MamaPearl_21
- Track 27 : Bodacious_21, Nancia_21, CristinaYang_21, LilStuart_21, Lennox_21, ChewChew_21
- Track 28 : Misaeng_25
- Track 29 : BigMack_21
- Track 30 : Scuttle_25
- Track 31 : Pterodactyl_21, Makoto_21
- Track 32 : RcigaStruga_25, Huntingdon_25
- Track 33 : Joann_25

- Track 34 : Sarge_22, BrayBeast_22

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 84 of the 84 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Albanese_25, Aledel_21, AppleCider_25, AustinPowers_21, Beethoven_25, Bennie_21, BigMack_21, Bodacious_21, BrayBeast_22, BrotherBLo_25, CallieOMalley_25, Canowicakte_25, Carpal_25, ChewChew_21, Cholula_25, Chridison_21, Christian_21, CristinaYang_21, Daiboju_21, Dino_25, DrRobert_21, DreamTeam_21, EstebanJulior_21, Eunoia_21, Fluke_25, Gisselle_21, Glenn_25, GreenHearts_25, Greenhouse_25, HeadNerd_21, Herb_21, Huckleberry_21, HunterDalle_21, Huntingdon_25, Immaculata_25, Joann_25, Jumboset_25, Kalizoi_25, KingBob_21, Kittykat_21, Korra_26, Lakshmi_25, Lasagna_21, Lennox_21, LilStuart_21, Litotes_25, Lucy_21, Makoto_21, MamaPearl_21, Maria1952_21, MeganNoll_25, Misaeng_25, Moki_21, MrGloopy_25, Nancia_21, Nubia_25, OMalley_21, OurGirlNessie_21, Oxynfrius_25, PartyCup_25, PinkFriday_21, PitaDog_21, Potatoes_25, Preamble_21, Pterodactyl_21, Pumancara_21, RAP15_25, RcigaStruga_25, Riovina_21, Riverdale_25, Rozby_25, Sarge_22, Savage2526_25, Scuttle_25, Sergei_21, Supakev_21, Suppi_25, TattModd_25, Temper16_21, Urla_21, Vallejo_25, Vulture_21, Wawa_25, Wayne_25, WonderBoy_21, Zorro_25,

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

-

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

-

Summary by start number:

Start 3:

- Found in 86 of 86 (100.0%) of genes in pham
- Manual Annotations of this start: 84 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Albanese_25 (AK), Aledel_21 (AK), AppleCider_25 (AK), AustinPowers_21 (AK), Beethoven_25 (AK), Bennie_21 (AK), BigMack_21 (AK), Bodacious_21 (AK), BrayBeast_22 (FB), BrotherBLo_25 (AK), CallieOMalley_25 (AK), Canowicakte_25 (AK), Carpal_25 (AK), ChewChew_21 (AK), Cholula_25 (AK), Chridison_21 (AK), Christian_21 (AK), CristinaYang_21 (AK), Daiboju_21 (AK), Dino_25 (AK), DrRobert_21 (AK), DreamTeam_21 (AK), EstebanJulior_21 (AK), Eunoia_21 (AK), Fluke_25 (AK), Gisselle_21 (AK), Glenn_25 (AK), GreenHearts_25 (AK), Greenhouse_25 (AK), HeadNerd_21 (AK), Herb_21 (AK), Huckleberry_21 (AK), HunterDalle_21 (AK), Huntingdon_25 (AK), Immaculata_25 (AK), Joann_25 (AK), Jumboset_25 (AK), Kalizoi_25 (AK), KingBob_21 (AK), Kittykat_21 (AK), Korra_26 (AK), Lakshmi_25 (AK), Lasagna_21 (AK), Lennox_21 (AK), LilStuart_21 (AK), Litotes_25 (AK), Lucy_21 (AK), Makoto_21 (AK), MamaPearl_21 (AK), Maria1952_21 (AK), MeganNoll_25 (AK), Misaeng_25

(AK), Moki_21 (AK), MrGloopy_25 (AK), Nancia_21 (AK), Nubia_25 (AK), OMalley_21 (AK), OurGirlNessie_21 (AK), Oxynfrius_25 (AK), PartyCup_25 (AK), PinkFriday_21 (AK), PitaDog_21 (AK), Potatoes_25 (AK), Preamble_21 (AK), Pterodactyl_21 (AK), Pumancara_21 (AK), RAP15_25 (AK), RcigaStruga_25 (AK), Riovina_21 (AK), Riverdale_25 (AK), Rozby_25 (AK), Sarge_22 (FB), Savage2526_25 (AK), Scuttle_25 (AK), Sergei_21 (AK), Supakev_21 (AK), Suppi_25 (AK), TattModd_25 (AK), Temper16_21 (AK), Urla_21 (AK), Vallejo_25 (AK), Vulture_21 (AK), Wawa_25 (AK), Wayne_25 (AK), WonderBoy_21 (AK), Zorro_25 (AK),

Summary by clusters:

There are 2 clusters represented in this pham: AK, FB,

Info for manual annotations of cluster AK:

- Start number 3 was manually annotated 82 times for cluster AK.

Info for manual annotations of cluster FB:

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

Gene Information:

Gene: Albanese_25 Start: 20058, Stop: 20894, Start Num: 3

Candidate Starts for Albanese_25:

(Start: 3 @20058 has 84 MA's), (7, 20124), (12, 20220), (13, 20250), (14, 20253), (16, 20268), (18, 20394), (19, 20397), (20, 20406), (26, 20550), (27, 20559), (30, 20589), (31, 20607), (32, 20640), (33, 20646), (41, 20760), (50, 20832), (52, 20859), (53, 20871),

Gene: Aledel_21 Start: 18421, Stop: 19260, Start Num: 3

Candidate Starts for Aledel_21:

(Start: 3 @18421 has 84 MA's), (8, 18517), (16, 18637), (18, 18763), (20, 18775), (26, 18916), (32, 19006), (39, 19111), (50, 19198), (52, 19225),

Gene: AppleCider_25 Start: 20046, Stop: 20882, Start Num: 3

Candidate Starts for AppleCider_25:

(2, 19797), (Start: 3 @20046 has 84 MA's), (13, 20238), (16, 20256), (19, 20385), (20, 20394), (21, 20415), (22, 20424), (25, 20532), (26, 20538), (32, 20628), (33, 20634), (39, 20733), (47, 20805), (52, 20847),

Gene: AustinPowers_21 Start: 18422, Stop: 19261, Start Num: 3

Candidate Starts for AustinPowers_21:

(Start: 3 @18422 has 84 MA's), (8, 18518), (16, 18638), (18, 18764), (20, 18776), (26, 18917), (32, 19007), (38, 19091), (39, 19112), (50, 19199), (52, 19226),

Gene: Beethoven_25 Start: 19983, Stop: 20840, Start Num: 3

Candidate Starts for Beethoven_25:

(Start: 3 @19983 has 84 MA's), (13, 20175), (14, 20178), (15, 20190), (24, 20439), (25, 20469), (26, 20475), (32, 20565), (33, 20571), (39, 20670), (43, 20727), (46, 20760), (50, 20778), (51, 20784), (52, 20805),

Gene: Bennie_21 Start: 18441, Stop: 19298, Start Num: 3

Candidate Starts for Bennie_21:

(2, 18192), (Start: 3 @18441 has 84 MA's), (13, 18633), (16, 18651), (19, 18780), (22, 18819), (25, 18927), (26, 18933), (32, 19023), (33, 19029), (36, 19074), (43, 19185), (50, 19236), (52, 19263),

Gene: BigMack_21 Start: 18430, Stop: 19293, Start Num: 3

Candidate Starts for BigMack_21:

(Start: 3 @18430 has 84 MA's), (13, 18625), (16, 18643), (18, 18769), (19, 18772), (22, 18811), (25, 18919), (26, 18925), (29, 18955), (32, 19015), (33, 19021), (36, 19066), (39, 19120), (43, 19177), (50, 19231), (52, 19258),

Gene: Bodacious_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for Bodacious_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (19, 18785), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: BrayBeast_22 Start: 17377, Stop: 18099, Start Num: 3

Candidate Starts for BrayBeast_22:

(Start: 3 @17377 has 84 MA's), (6, 17431), (9, 17515), (11, 17530), (17, 17593), (23, 17788), (28, 17875), (33, 17950), (35, 17989), (37, 18001),

Gene: BrotherBLo_25 Start: 19989, Stop: 20846, Start Num: 3

Candidate Starts for BrotherBLo_25:

(Start: 3 @19989 has 84 MA's), (13, 20181), (14, 20184), (15, 20196), (22, 20367), (24, 20445), (25, 20475), (26, 20481), (32, 20571), (33, 20577), (39, 20676), (43, 20733), (50, 20784), (51, 20790), (52, 20811),

Gene: CallieOMalley_25 Start: 20046, Stop: 20882, Start Num: 3

Candidate Starts for CallieOMalley_25:

(2, 19797), (Start: 3 @20046 has 84 MA's), (13, 20238), (16, 20256), (18, 20382), (19, 20385), (20, 20394), (21, 20415), (22, 20424), (25, 20532), (26, 20538), (32, 20628), (33, 20634), (39, 20733), (47, 20805), (52, 20847),

Gene: Canowicakte_25 Start: 20081, Stop: 20917, Start Num: 3

Candidate Starts for Canowicakte_25:

(2, 19832), (Start: 3 @20081 has 84 MA's), (13, 20273), (16, 20291), (19, 20420), (20, 20429), (21, 20450), (22, 20459), (25, 20567), (26, 20573), (32, 20663), (33, 20669), (39, 20768), (47, 20840), (52, 20882),

Gene: Carpal_25 Start: 19990, Stop: 20847, Start Num: 3

Candidate Starts for Carpal_25:

(Start: 3 @19990 has 84 MA's), (13, 20182), (14, 20185), (15, 20197), (22, 20368), (24, 20446), (25, 20476), (26, 20482), (32, 20572), (33, 20578), (39, 20677), (43, 20734), (46, 20767), (50, 20785), (51, 20791), (52, 20812),

Gene: ChewChew_21 Start: 18442, Stop: 19305, Start Num: 3

Candidate Starts for ChewChew_21:

(Start: 3 @18442 has 84 MA's), (13, 18637), (16, 18655), (19, 18784), (22, 18823), (25, 18931), (26, 18937), (29, 18967), (32, 19027), (33, 19033), (36, 19078), (40, 19138), (43, 19189), (50, 19243), (52, 19270),

Gene: Cholula_25 Start: 20035, Stop: 20892, Start Num: 3

Candidate Starts for Cholula_25:

(Start: 3 @20035 has 84 MA's), (13, 20227), (14, 20230), (15, 20242), (22, 20413), (24, 20491), (25, 20521), (26, 20527), (32, 20617), (33, 20623), (39, 20722), (43, 20779), (49, 20827), (50, 20830), (51, 20836), (52, 20857),

Gene: Chridison_21 Start: 18422, Stop: 19261, Start Num: 3

Candidate Starts for Chridison_21:

(Start: 3 @18422 has 84 MA's), (8, 18518), (16, 18638), (18, 18764), (20, 18776), (26, 18917), (32, 19007), (39, 19112), (50, 19199), (52, 19226),

Gene: Christian_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for Christian_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (18, 18782), (19, 18785), (20, 18794), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: CristinaYang_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for CristinaYang_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (19, 18785), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: Daiboju_21 Start: 18436, Stop: 19278, Start Num: 3

Candidate Starts for Daiboju_21:

(1, 18094), (2, 18187), (Start: 3 @18436 has 84 MA's), (16, 18652), (26, 18931), (31, 18988), (32, 19021), (33, 19027), (39, 19126), (42, 19150), (45, 19183), (50, 19216), (52, 19243),

Gene: Dino_25 Start: 19988, Stop: 20845, Start Num: 3

Candidate Starts for Dino_25:

(Start: 3 @19988 has 84 MA's), (13, 20180), (14, 20183), (15, 20195), (16, 20198), (22, 20366), (24, 20444), (25, 20474), (26, 20480), (32, 20570), (33, 20576), (39, 20675), (43, 20732), (50, 20783), (51, 20789), (52, 20810),

Gene: DrRobert_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for DrRobert_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (18, 18782), (19, 18785), (20, 18794), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: DreamTeam_21 Start: 18481, Stop: 19338, Start Num: 3

Candidate Starts for DreamTeam_21:

(2, 18232), (Start: 3 @18481 has 84 MA's), (13, 18673), (16, 18691), (18, 18817), (19, 18820), (20, 18829), (21, 18850), (22, 18859), (25, 18967), (26, 18973), (29, 19003), (32, 19063), (33, 19069), (36, 19114), (43, 19225), (52, 19303),

Gene: EstebanJulior_21 Start: 18446, Stop: 19306, Start Num: 3

Candidate Starts for EstebanJulior_21:

(2, 18197), (Start: 3 @18446 has 84 MA's), (5, 18500), (12, 18608), (14, 18641), (15, 18653), (16, 18656), (19, 18785), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (43, 19190), (50, 19244), (52, 19271),

Gene: Eunoia_21 Start: 18421, Stop: 19260, Start Num: 3

Candidate Starts for Eunoia_21:

(Start: 3 @18421 has 84 MA's), (8, 18517), (16, 18637), (18, 18763), (20, 18775), (26, 18916), (32, 19006), (39, 19111), (50, 19198), (52, 19225),

Gene: Fluke_25 Start: 20031, Stop: 20888, Start Num: 3

Candidate Starts for Fluke_25:

(Start: 3 @20031 has 84 MA's), (13, 20223), (14, 20226), (15, 20238), (22, 20409), (24, 20487), (25, 20517), (26, 20523), (32, 20613), (33, 20619), (39, 20718), (43, 20775), (46, 20808), (50, 20826), (51, 20832), (52, 20853),

Gene: Gisselle_21 Start: 18481, Stop: 19338, Start Num: 3

Candidate Starts for Gisselle_21:

(2, 18232), (Start: 3 @18481 has 84 MA's), (13, 18673), (16, 18691), (18, 18817), (19, 18820), (20, 18829), (21, 18850), (22, 18859), (25, 18967), (26, 18973), (29, 19003), (32, 19063), (33, 19069), (36, 19114), (43, 19225), (52, 19303),

Gene: Glenn_25 Start: 20040, Stop: 20897, Start Num: 3

Candidate Starts for Glenn_25:

(Start: 3 @20040 has 84 MA's), (13, 20232), (14, 20235), (15, 20247), (22, 20418), (24, 20496), (25, 20526), (26, 20532), (32, 20622), (33, 20628), (39, 20727), (43, 20784), (46, 20817), (50, 20835), (51, 20841), (52, 20862),

Gene: GreenHearts_25 Start: 20150, Stop: 20986, Start Num: 3

Candidate Starts for GreenHearts_25:

(Start: 3 @20150 has 84 MA's), (7, 20216), (12, 20312), (13, 20342), (14, 20345), (16, 20360), (18, 20486), (19, 20489), (20, 20498), (22, 20528), (26, 20642), (27, 20651), (30, 20681), (31, 20699), (32, 20732), (33, 20738), (41, 20852), (50, 20924), (52, 20951), (53, 20963),

Gene: Greenhouse_25 Start: 20074, Stop: 20910, Start Num: 3

Candidate Starts for Greenhouse_25:

(Start: 3 @20074 has 84 MA's), (7, 20140), (12, 20236), (13, 20266), (14, 20269), (16, 20284), (18, 20410), (19, 20413), (20, 20422), (26, 20566), (27, 20575), (30, 20605), (31, 20623), (32, 20656), (33, 20662), (41, 20776), (50, 20848), (52, 20875), (53, 20887),

Gene: HeadNerd_21 Start: 18441, Stop: 19298, Start Num: 3

Candidate Starts for HeadNerd_21:

(2, 18192), (Start: 3 @18441 has 84 MA's), (13, 18633), (16, 18651), (19, 18780), (22, 18819), (25, 18927), (26, 18933), (32, 19023), (33, 19029), (36, 19074), (43, 19185), (50, 19236), (52, 19263),

Gene: Herb_21 Start: 18436, Stop: 19278, Start Num: 3

Candidate Starts for Herb_21:

(1, 18094), (2, 18187), (Start: 3 @18436 has 84 MA's), (16, 18652), (26, 18931), (31, 18988), (32, 19021), (33, 19027), (39, 19126), (42, 19150), (45, 19183), (50, 19216), (52, 19243),

Gene: Huckleberry_21 Start: 18441, Stop: 19298, Start Num: 3

Candidate Starts for Huckleberry_21:

(2, 18192), (Start: 3 @18441 has 84 MA's), (13, 18633), (16, 18651), (19, 18780), (22, 18819), (25, 18927), (26, 18933), (32, 19023), (33, 19029), (36, 19074), (43, 19185), (50, 19236), (52, 19263),

Gene: HunterDalle_21 Start: 18421, Stop: 19260, Start Num: 3

Candidate Starts for HunterDalle_21:

(Start: 3 @18421 has 84 MA's), (8, 18517), (10, 18583), (16, 18637), (18, 18763), (20, 18775), (26, 18916), (32, 19006), (38, 19090), (39, 19111), (50, 19198), (52, 19225),

Gene: Huntingdon_25 Start: 20042, Stop: 20878, Start Num: 3

Candidate Starts for Huntingdon_25:

(Start: 3 @20042 has 84 MA's), (13, 20234), (15, 20249), (18, 20378), (19, 20381), (20, 20390), (21, 20411), (22, 20420), (24, 20498), (25, 20528), (26, 20534), (27, 20543), (30, 20573), (32, 20624), (33, 20630), (40, 20735), (42, 20753), (44, 20786), (50, 20816), (52, 20843), (53, 20855),

Gene: Immaculata_25 Start: 20034, Stop: 20891, Start Num: 3

Candidate Starts for Immaculata_25:

(Start: 3 @20034 has 84 MA's), (13, 20226), (14, 20229), (15, 20241), (22, 20412), (24, 20490), (25, 20520), (26, 20526), (32, 20616), (33, 20622), (39, 20721), (43, 20778), (49, 20826), (50, 20829), (51, 20835), (52, 20856),

Gene: Joann_25 Start: 20008, Stop: 20844, Start Num: 3

Candidate Starts for Joann_25:

(Start: 3 @20008 has 84 MA's), (7, 20074), (12, 20170), (13, 20200), (14, 20203), (15, 20215), (16, 20218), (18, 20344), (19, 20347), (20, 20356), (22, 20386), (26, 20500), (27, 20509), (30, 20539), (31, 20557), (32, 20590), (33, 20596), (41, 20710), (50, 20782), (52, 20809), (53, 20821),

Gene: Jumboset_25 Start: 19983, Stop: 20840, Start Num: 3

Candidate Starts for Jumboset_25:

(Start: 3 @19983 has 84 MA's), (13, 20175), (14, 20178), (15, 20190), (22, 20361), (24, 20439), (25, 20469), (26, 20475), (32, 20565), (33, 20571), (39, 20670), (43, 20727), (50, 20778), (51, 20784), (52, 20805),

Gene: Kalizoi_25 Start: 19982, Stop: 20839, Start Num: 3

Candidate Starts for Kalizoi_25:

(Start: 3 @19982 has 84 MA's), (13, 20174), (14, 20177), (15, 20189), (16, 20192), (22, 20360), (24, 20438), (25, 20468), (26, 20474), (32, 20564), (33, 20570), (39, 20669), (43, 20726), (50, 20777), (51, 20783), (52, 20804),

Gene: KingBob_21 Start: 18436, Stop: 19278, Start Num: 3

Candidate Starts for KingBob_21:

(1, 18094), (2, 18187), (Start: 3 @18436 has 84 MA's), (16, 18652), (26, 18931), (31, 18988), (32, 19021), (33, 19027), (39, 19126), (42, 19150), (45, 19183), (50, 19216), (52, 19243),

Gene: Kittykat_21 Start: 18465, Stop: 19322, Start Num: 3

Candidate Starts for Kittykat_21:

(Start: 3 @18465 has 84 MA's), (13, 18657), (16, 18675), (18, 18801), (19, 18804), (22, 18843), (25, 18951), (26, 18957), (29, 18987), (32, 19047), (33, 19053), (36, 19098), (39, 19152), (43, 19209), (50, 19260), (52, 19287),

Gene: Korra_26 Start: 19988, Stop: 20845, Start Num: 3

Candidate Starts for Korra_26:

(Start: 3 @19988 has 84 MA's), (13, 20180), (14, 20183), (15, 20195), (22, 20366), (24, 20444), (25, 20474), (26, 20480), (32, 20570), (33, 20576), (39, 20675), (43, 20732), (50, 20783), (51, 20789), (52, 20810),

Gene: Lakshmi_25 Start: 20034, Stop: 20870, Start Num: 3

Candidate Starts for Lakshmi_25:

(Start: 3 @20034 has 84 MA's), (7, 20100), (12, 20196), (13, 20226), (14, 20229), (16, 20244), (18, 20370), (19, 20373), (20, 20382), (26, 20526), (27, 20535), (30, 20565), (31, 20583), (32, 20616), (33, 20622), (41, 20736), (50, 20808), (52, 20835), (53, 20847),

Gene: Lasagna_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for Lasagna_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (19, 18785), (20, 18794), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: Lennox_21 Start: 18431, Stop: 19294, Start Num: 3

Candidate Starts for Lennox_21:

(Start: 3 @18431 has 84 MA's), (13, 18626), (16, 18644), (19, 18773), (22, 18812), (25, 18920), (26, 18926), (29, 18956), (32, 19016), (33, 19022), (36, 19067), (40, 19127), (43, 19178), (50, 19232), (52, 19259),

Gene: LilStuart_21 Start: 18431, Stop: 19294, Start Num: 3

Candidate Starts for LilStuart_21:

(Start: 3 @18431 has 84 MA's), (13, 18626), (16, 18644), (19, 18773), (22, 18812), (25, 18920), (26, 18926), (29, 18956), (32, 19016), (33, 19022), (36, 19067), (40, 19127), (43, 19178), (50, 19232), (52, 19259),

Gene: Litotes_25 Start: 20031, Stop: 20867, Start Num: 3

Candidate Starts for Litotes_25:

(2, 19782), (Start: 3 @20031 has 84 MA's), (8, 20121), (13, 20223), (16, 20241), (19, 20370), (20, 20379), (21, 20400), (25, 20517), (26, 20523), (32, 20613), (33, 20619), (39, 20718), (47, 20790), (52, 20832),

Gene: Lucy_21 Start: 18423, Stop: 19286, Start Num: 3

Candidate Starts for Lucy_21:

(Start: 3 @18423 has 84 MA's), (13, 18618), (16, 18636), (18, 18762), (19, 18765), (20, 18774), (22, 18804), (25, 18912), (26, 18918), (29, 18948), (32, 19008), (33, 19014), (36, 19059), (40, 19119), (43, 19170), (50, 19224), (52, 19251),

Gene: Makoto_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for Makoto_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (18, 18782), (19, 18785), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: MamaPearl_21 Start: 18446, Stop: 19306, Start Num: 3

Candidate Starts for MamaPearl_21:

(2, 18197), (Start: 3 @18446 has 84 MA's), (5, 18500), (12, 18608), (14, 18641), (15, 18653), (16, 18656), (19, 18785), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (43, 19190), (50, 19244), (52, 19271),

Gene: Maria1952_21 Start: 18436, Stop: 19278, Start Num: 3

Candidate Starts for Maria1952_21:

(1, 18094), (2, 18187), (Start: 3 @18436 has 84 MA's), (16, 18652), (26, 18931), (31, 18988), (32, 19021), (33, 19027), (39, 19126), (42, 19150), (45, 19183), (50, 19216), (52, 19243),

Gene: MeganNoll_25 Start: 20040, Stop: 20897, Start Num: 3

Candidate Starts for MeganNoll_25:

(Start: 3 @20040 has 84 MA's), (13, 20232), (14, 20235), (15, 20247), (22, 20418), (24, 20496), (25, 20526), (26, 20532), (32, 20622), (33, 20628), (39, 20727), (43, 20784), (50, 20835), (51, 20841), (52, 20862),

Gene: Misaeng_25 Start: 20124, Stop: 20981, Start Num: 3

Candidate Starts for Misaeng_25:

(Start: 3 @20124 has 84 MA's), (7, 20190), (12, 20286), (13, 20316), (15, 20331), (18, 20460), (19, 20463), (20, 20472), (22, 20502), (25, 20610), (26, 20616), (29, 20646), (30, 20655), (32, 20706), (33, 20712), (34, 20733), (36, 20757), (41, 20826), (43, 20868), (48, 20916), (50, 20919), (52, 20946), (53, 20958),

Gene: Moki_21 Start: 18441, Stop: 19298, Start Num: 3

Candidate Starts for Moki_21:

(2, 18192), (Start: 3 @18441 has 84 MA's), (13, 18633), (16, 18651), (19, 18780), (22, 18819), (25, 18927), (26, 18933), (32, 19023), (33, 19029), (36, 19074), (43, 19185), (50, 19236), (52, 19263),

Gene: MrGloopy_25 Start: 19974, Stop: 20831, Start Num: 3

Candidate Starts for MrGloopy_25:

(Start: 3 @19974 has 84 MA's), (13, 20166), (14, 20169), (15, 20181), (22, 20352), (24, 20430), (25, 20460), (26, 20466), (32, 20556), (33, 20562), (39, 20661), (43, 20718), (50, 20769), (51, 20775), (52, 20796),

Gene: Nancia_21 Start: 18443, Stop: 19306, Start Num: 3

Candidate Starts for Nancia_21:

(Start: 3 @18443 has 84 MA's), (13, 18638), (16, 18656), (19, 18785), (22, 18824), (25, 18932), (26, 18938), (29, 18968), (32, 19028), (33, 19034), (36, 19079), (40, 19139), (43, 19190), (50, 19244), (52, 19271),

Gene: Nubia_25 Start: 19994, Stop: 20830, Start Num: 3

Candidate Starts for Nubia_25:

(Start: 3 @19994 has 84 MA's), (7, 20060), (12, 20156), (13, 20186), (14, 20189), (16, 20204), (18, 20330), (19, 20333), (20, 20342), (22, 20372), (26, 20486), (27, 20495), (30, 20525), (31, 20543), (32, 20576), (33, 20582), (41, 20696), (50, 20768), (52, 20795), (53, 20807),

Gene: OMalley_21 Start: 18421, Stop: 19260, Start Num: 3

Candidate Starts for OMalley_21:

(Start: 3 @18421 has 84 MA's), (8, 18517), (16, 18637), (18, 18763), (20, 18775), (26, 18916), (32, 19006), (39, 19111), (50, 19198), (52, 19225),

Gene: OurGirlNessie_21 Start: 18423, Stop: 19286, Start Num: 3

Candidate Starts for OurGirlNessie_21:

(Start: 3 @18423 has 84 MA's), (13, 18618), (16, 18636), (18, 18762), (19, 18765), (20, 18774), (22, 18804), (25, 18912), (26, 18918), (29, 18948), (32, 19008), (33, 19014), (36, 19059), (40, 19119), (43, 19170), (50, 19224), (52, 19251),

Gene: Oxynfrius_25 Start: 20007, Stop: 20843, Start Num: 3

Candidate Starts for Oxynfrius_25:

(Start: 3 @20007 has 84 MA's), (7, 20073), (12, 20169), (13, 20199), (14, 20202), (16, 20217), (18, 20343), (19, 20346), (20, 20355), (22, 20385), (26, 20499), (27, 20508), (30, 20538), (31, 20556), (32, 20589), (33, 20595), (41, 20709), (50, 20781), (52, 20808), (53, 20820),

Gene: PartyCup_25 Start: 20078, Stop: 20914, Start Num: 3

Candidate Starts for PartyCup_25:

(2, 19829), (Start: 3 @20078 has 84 MA's), (13, 20270), (16, 20288), (18, 20414), (19, 20417), (20, 20426), (21, 20447), (22, 20456), (25, 20564), (26, 20570), (32, 20660), (33, 20666), (39, 20765), (47, 20837), (52, 20879),

Gene: PinkFriday_21 Start: 18457, Stop: 19320, Start Num: 3

Candidate Starts for PinkFriday_21:

(Start: 3 @18457 has 84 MA's), (16, 18673), (26, 18952), (29, 18982), (31, 19009), (32, 19042), (33, 19048), (36, 19093), (39, 19147), (43, 19204), (50, 19258), (52, 19285),

Gene: PitaDog_21 Start: 18434, Stop: 19297, Start Num: 3

Candidate Starts for PitaDog_21:

(Start: 3 @18434 has 84 MA's), (13, 18629), (16, 18647), (18, 18773), (19, 18776), (20, 18785), (22, 18815), (25, 18923), (26, 18929), (29, 18959), (32, 19019), (33, 19025), (36, 19070), (40, 19130), (43, 19181), (50, 19235), (52, 19262),

Gene: Potatoes_25 Start: 20035, Stop: 20892, Start Num: 3

Candidate Starts for Potatoes_25:

(Start: 3 @20035 has 84 MA's), (13, 20227), (14, 20230), (15, 20242), (22, 20413), (24, 20491), (25, 20521), (26, 20527), (32, 20617), (33, 20623), (39, 20722), (43, 20779), (49, 20827), (50, 20830), (51, 20836), (52, 20857),

Gene: Preamble_21 Start: 18442, Stop: 19299, Start Num: 3

Candidate Starts for Preamble_21:

(Start: 3 @18442 has 84 MA's), (13, 18634), (16, 18652), (18, 18778), (19, 18781), (22, 18820), (25, 18928), (26, 18934), (29, 18964), (32, 19024), (33, 19030), (36, 19075), (39, 19129), (43, 19186), (50, 19237), (52, 19264),

Gene: Pterodactyl_21 Start: 18424, Stop: 19287, Start Num: 3

Candidate Starts for Pterodactyl_21:

(Start: 3 @18424 has 84 MA's), (13, 18619), (16, 18637), (18, 18763), (19, 18766), (22, 18805), (25, 18913), (26, 18919), (29, 18949), (32, 19009), (33, 19015), (36, 19060), (40, 19120), (43, 19171), (50, 19225), (52, 19252),

Gene: Pumancara_21 Start: 18439, Stop: 19302, Start Num: 3

Candidate Starts for Pumancara_21:

(Start: 3 @18439 has 84 MA's), (16, 18655), (26, 18934), (29, 18964), (31, 18991), (32, 19024), (33, 19030), (36, 19075), (39, 19129), (43, 19186), (50, 19240), (52, 19267),

Gene: RAP15_25 Start: 20040, Stop: 20897, Start Num: 3

Candidate Starts for RAP15_25:

(Start: 3 @20040 has 84 MA's), (13, 20232), (14, 20235), (15, 20247), (22, 20418), (24, 20496), (25, 20526), (26, 20532), (32, 20622), (33, 20628), (39, 20727), (43, 20784), (50, 20835), (51, 20841), (52, 20862),

Gene: RcigaStruga_25 Start: 20042, Stop: 20878, Start Num: 3

Candidate Starts for RcigaStruga_25:

(Start: 3 @20042 has 84 MA's), (13, 20234), (15, 20249), (18, 20378), (19, 20381), (20, 20390), (21, 20411), (22, 20420), (24, 20498), (25, 20528), (26, 20534), (27, 20543), (30, 20573), (32, 20624), (33, 20630), (40, 20735), (42, 20753), (44, 20786), (50, 20816), (52, 20843), (53, 20855),

Gene: Riovina_21 Start: 18421, Stop: 19260, Start Num: 3

Candidate Starts for Riovina_21:

(Start: 3 @18421 has 84 MA's), (8, 18517), (16, 18637), (18, 18763), (20, 18775), (26, 18916), (32, 19006), (39, 19111), (50, 19198), (52, 19225),

Gene: Riverdale_25 Start: 19970, Stop: 20827, Start Num: 3

Candidate Starts for Riverdale_25:

(Start: 3 @19970 has 84 MA's), (13, 20162), (14, 20165), (15, 20177), (24, 20426), (25, 20456), (26, 20462), (32, 20552), (33, 20558), (39, 20657), (43, 20714), (46, 20747), (50, 20765), (51, 20771), (52, 20792),

Gene: Rozby_25 Start: 19971, Stop: 20828, Start Num: 3

Candidate Starts for Rozby_25:

(Start: 3 @19971 has 84 MA's), (13, 20163), (14, 20166), (15, 20178), (24, 20427), (25, 20457), (26, 20463), (32, 20553), (33, 20559), (39, 20658), (43, 20715), (46, 20748), (50, 20766), (51, 20772), (52, 20793),

Gene: Sarge_22 Start: 17291, Stop: 18013, Start Num: 3

Candidate Starts for Sarge_22:

(Start: 3 @17291 has 84 MA's), (6, 17345), (9, 17429), (11, 17444), (17, 17507), (23, 17702), (28, 17789), (33, 17864), (35, 17903), (37, 17915),

Gene: Savage2526_25 Start: 20034, Stop: 20891, Start Num: 3

Candidate Starts for Savage2526_25:

(Start: 3 @20034 has 84 MA's), (13, 20226), (14, 20229), (15, 20241), (22, 20412), (24, 20490), (25, 20520), (26, 20526), (32, 20616), (33, 20622), (39, 20721), (43, 20778), (50, 20829), (51, 20835), (52, 20856),

Gene: Scuttle_25 Start: 20039, Stop: 20896, Start Num: 3

Candidate Starts for Scuttle_25:

(Start: 3 @20039 has 84 MA's), (13, 20231), (14, 20234), (15, 20246), (22, 20417), (24, 20495), (25, 20525), (26, 20531), (32, 20621), (33, 20627), (39, 20726), (43, 20783), (50, 20834), (51, 20840), (52, 20861),

Gene: Sergei_21 Start: 18436, Stop: 19278, Start Num: 3

Candidate Starts for Sergei_21:

(1, 18094), (2, 18187), (Start: 3 @18436 has 84 MA's), (16, 18652), (26, 18931), (31, 18988), (32, 19021), (33, 19027), (39, 19126), (42, 19150), (45, 19183), (50, 19216), (52, 19243),

Gene: Supakev_21 Start: 18423, Stop: 19262, Start Num: 3

Candidate Starts for Supakev_21:

(Start: 3 @18423 has 84 MA's), (8, 18519), (16, 18639), (18, 18765), (20, 18777), (26, 18918), (32, 19008), (39, 19113), (50, 19200), (52, 19227),

Gene: Suppi_25 Start: 20081, Stop: 20917, Start Num: 3

Candidate Starts for Suppi_25:

(2, 19832), (Start: 3 @20081 has 84 MA's), (13, 20273), (16, 20291), (19, 20420), (20, 20429), (21, 20450), (22, 20459), (25, 20567), (26, 20573), (32, 20663), (33, 20669), (39, 20768), (47, 20840), (52, 20882),

Gene: TattModd_25 Start: 20033, Stop: 20890, Start Num: 3

Candidate Starts for TattModd_25:

(Start: 3 @20033 has 84 MA's), (13, 20225), (14, 20228), (15, 20240), (22, 20411), (24, 20489), (25, 20519), (26, 20525), (32, 20615), (33, 20621), (39, 20720), (43, 20777), (46, 20810), (50, 20828), (51, 20834), (52, 20855),

Gene: Temper16_21 Start: 18436, Stop: 19278, Start Num: 3

Candidate Starts for Temper16_21:

(1, 18094), (2, 18187), (Start: 3 @18436 has 84 MA's), (16, 18652), (26, 18931), (31, 18988), (32, 19021), (33, 19027), (39, 19126), (42, 19150), (45, 19183), (50, 19216), (52, 19243),

Gene: Urla_21 Start: 18448, Stop: 19308, Start Num: 3

Candidate Starts for Urla_21:

(2, 18199), (Start: 3 @18448 has 84 MA's), (5, 18502), (12, 18610), (13, 18640), (14, 18643), (15, 18655), (16, 18658), (19, 18787), (22, 18826), (25, 18934), (26, 18940), (29, 18970), (32, 19030), (33, 19036), (36, 19081), (43, 19192), (50, 19246), (52, 19273),

Gene: Vallejo_25 Start: 19972, Stop: 20829, Start Num: 3

Candidate Starts for Vallejo_25:

(Start: 3 @19972 has 84 MA's), (13, 20164), (14, 20167), (15, 20179), (22, 20350), (24, 20428), (25, 20458), (26, 20464), (32, 20554), (33, 20560), (39, 20659), (43, 20716), (46, 20749), (50, 20767), (51, 20773), (52, 20794),

Gene: Vulture_21 Start: 18421, Stop: 19260, Start Num: 3

Candidate Starts for Vulture_21:

(Start: 3 @18421 has 84 MA's), (8, 18517), (10, 18583), (16, 18637), (18, 18763), (20, 18775), (26, 18916), (32, 19006), (38, 19090), (39, 19111), (50, 19198), (52, 19225),

Gene: Wawa_25 Start: 20009, Stop: 20866, Start Num: 3

Candidate Starts for Wawa_25:

(Start: 3 @20009 has 84 MA's), (4, 20021), (13, 20201), (14, 20204), (15, 20216), (24, 20465), (25, 20495), (26, 20501), (32, 20591), (33, 20597), (39, 20696), (43, 20753), (46, 20786), (50, 20804), (51, 20810), (52, 20831),

Gene: Wayne_25 Start: 20127, Stop: 20963, Start Num: 3

Candidate Starts for Wayne_25:

(2, 19878), (Start: 3 @20127 has 84 MA's), (13, 20319), (16, 20337), (18, 20463), (19, 20466), (20, 20475), (21, 20496), (22, 20505), (25, 20613), (26, 20619), (32, 20709), (33, 20715), (39, 20814), (47, 20886), (52, 20928),

Gene: WonderBoy_21 Start: 18424, Stop: 19287, Start Num: 3

Candidate Starts for WonderBoy_21:

(Start: 3 @18424 has 84 MA's), (13, 18619), (16, 18637), (18, 18763), (19, 18766), (22, 18805), (25, 18913), (26, 18919), (29, 18949), (32, 19009), (33, 19015), (36, 19060), (43, 19171), (50, 19225), (52, 19252),

Gene: Zorro_25 Start: 19988, Stop: 20845, Start Num: 3

Candidate Starts for Zorro_25:

(Start: 3 @19988 has 84 MA's), (13, 20180), (14, 20183), (15, 20195), (16, 20198), (22, 20366), (24, 20444), (25, 20474), (26, 20480), (32, 20570), (33, 20576), (39, 20675), (43, 20732), (50, 20783), (51, 20789), (52, 20810),