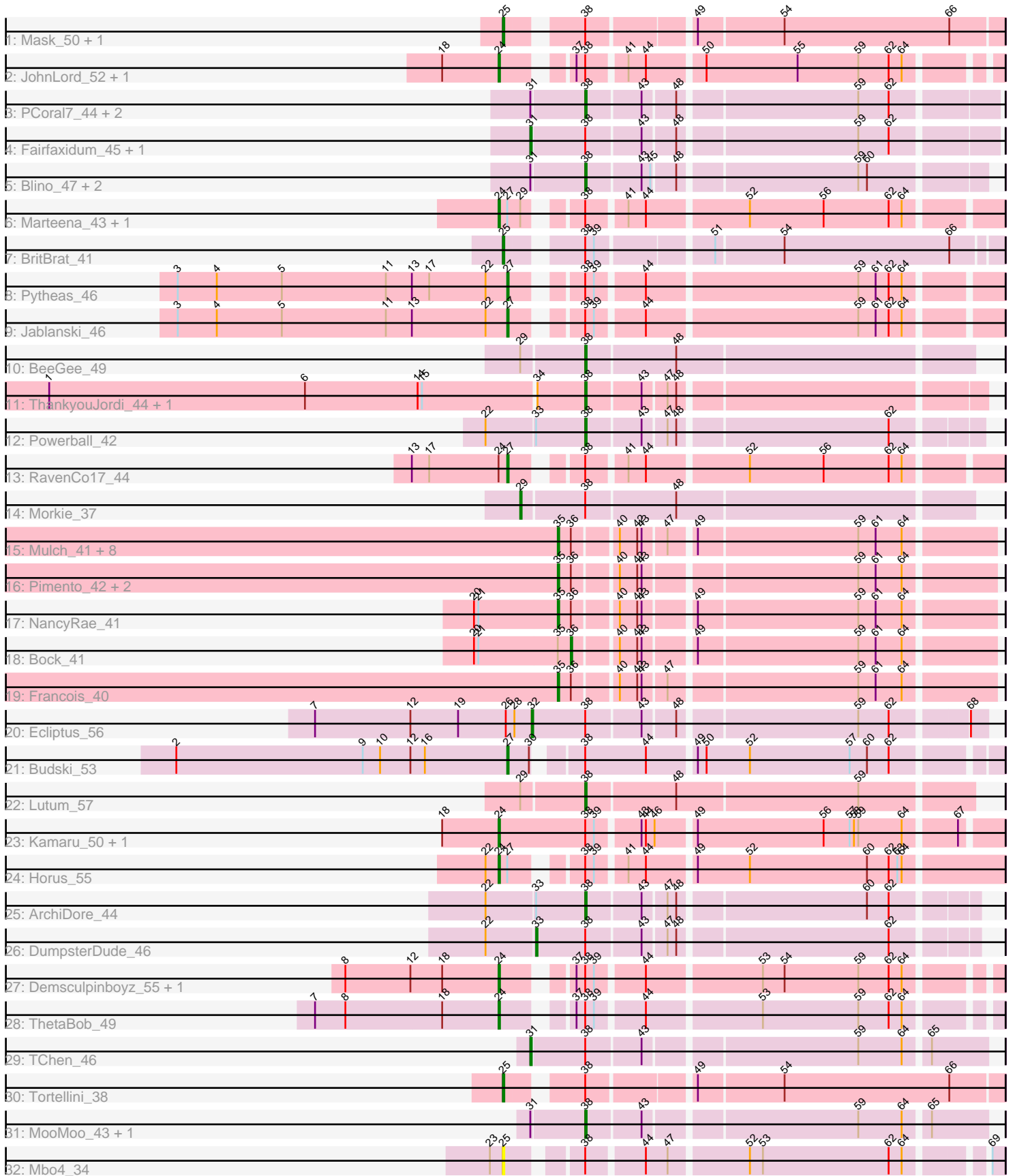


Pham 311651



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 311651 Report

This analysis was run 06/27/26 on database version 652.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 311651 has 54 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Mask_50, Xavia_40
- Track 2 : JohnLord_52, Mao1_49
- Track 3 : PCoral7_44, PrincePatrick_43, William_45
- Track 4 : Fairfaxidum_45, Toast_44
- Track 5 : Blino_47, CarolAnn_46, Soilmate_49
- Track 6 : Marteena_43, EMSquaredA_44
- Track 7 : BritBrat_41
- Track 8 : Pytheas_46
- Track 9 : Jablanski_46
- Track 10 : BeeGee_49
- Track 11 : ThankyouJordi_44, WelcomeAyanna_44
- Track 12 : Powerball_42
- Track 13 : RavenCo17_44
- Track 14 : Morkie_37
- Track 15 : Mulch_41, Ayotoya_41, Chop_41, GrandSlam_41, Nadeem_41, WheatThin_41, Parada_41, Brylie_41, Hamood_41
- Track 16 : Pimento_42, BetterKatz_41, DelRio_42
- Track 17 : NancyRae_41
- Track 18 : Bock_41
- Track 19 : Francois_40
- Track 20 : Ecliptus_56
- Track 21 : Budski_53
- Track 22 : Lutum_57
- Track 23 : Kamaru_50, LitninMcQueen_49
- Track 24 : Horus_55
- Track 25 : ArchiDore_44
- Track 26 : DumpsterDude_46
- Track 27 : Demsculpinboyz_55, Che9d_53
- Track 28 : ThetaBob_49
- Track 29 : TChen_46
- Track 30 : Tortellini_38
- Track 31 : MooMoo_43, LunaStella_44
- Track 32 : Mbo4_34

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

The start number called the most often in the published annotations is 35, it was called in 14 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ayotoya_41, BetterKatz_41, Brylie_41, Chop_41, DelRio_42, Francois_40, GrandSlam_41, Hamood_41, Mulch_41, Nadeem_41, NancyRae_41, Parada_41, Pimento_42, WheatThin_41,

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

- Bock_41,

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

- ArchiDore_44, BeeGee_49, Blino_47, BritBrat_41, Budski_53, CarolAnn_46, Che9d_53, Demsculpinboyz_55, DumpsterDude_46, EMSquaredA_44, Ecliptus_56, Fairfaxidum_45, Horus_55, Jablanski_46, JohnLord_52, Kamaru_50, LitninMcQueen_49, LunaStella_44, Lutum_57, Mao1_49, Marteena_43, Mask_50, Mbo4_34, MooMoo_43, Morkie_37, PCoral7_44, Powerball_42, PrincePatrick_43, Pytheas_46, RavenCo17_44, Soilmate_49, TChen_46, ThankyouJordi_44, ThetaBob_49, Toast_44, Tortellini_38, WelcomeAyanna_44, William_45, Xavia_40,

Summary by start number:

Start 24:

- Found in 11 of 54 (20.4%) of genes in pham
- Manual Annotations of this start: 9 of 51
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Che9d_53 (F2), Demsculpinboyz_55 (F2), EMSquaredA_44 (CY1), Horus_55 (DN1), JohnLord_52 (AD), Kamaru_50 (DN1), LitninMcQueen_49 (DN1), Mao1_49 (AD), Marteena_43 (CY1), ThetaBob_49 (F4),

Start 25:

- Found in 5 of 54 (9.3%) of genes in pham
- Manual Annotations of this start: 4 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BritBrat_41 (CY2), Mask_50 (AD), Mbo4_34 (singleton), Tortellini_38 (P2), Xavia_40 (P3),

Start 27:

- Found in 7 of 54 (13.0%) of genes in pham
- Manual Annotations of this start: 4 of 51
- Called 57.1% of time when present
- Phage (with cluster) where this start called: Budski_53 (DN), Jablanski_46 (CY3), Pytheas_46 (CY3), RavenCo17_44 (CZ8),

Start 29:

- Found in 5 of 54 (9.3%) of genes in pham

- Manual Annotations of this start: 1 of 51
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Morkie_37 (DH),

Start 31:

- Found in 11 of 54 (20.4%) of genes in pham
- Manual Annotations of this start: 3 of 51
- Called 27.3% of time when present
- Phage (with cluster) where this start called: Fairfaxidum_45 (CV), TChen_46 (F4), Toast_44 (CV),

Start 32:

- Found in 1 of 54 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ecliptus_56 (DN),

Start 33:

- Found in 3 of 54 (5.6%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 33.3% of time when present
- Phage (with cluster) where this start called: DumpsterDude_46 (DW),

Start 35:

- Found in 15 of 54 (27.8%) of genes in pham
- Manual Annotations of this start: 14 of 51
- Called 93.3% of time when present
- Phage (with cluster) where this start called: Ayotoya_41 (DI), BetterKatz_41 (DI), Brylie_41 (DI), Chop_41 (DI), DelRio_42 (DI), Francois_40 (DI), GrandSlam_41 (DI), Hamood_41 (DI), Mulch_41 (DI), Nadeem_41 (DI), NancyRae_41 (DI), Parada_41 (DI), Pimento_42 (DI), WheatThin_41 (DI),

Start 36:

- Found in 15 of 54 (27.8%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Bock_41 (DI),

Start 38:

- Found in 39 of 54 (72.2%) of genes in pham
- Manual Annotations of this start: 13 of 51
- Called 35.9% of time when present
- Phage (with cluster) where this start called: ArchiDore_44 (DW), BeeGee_49 (CY5), Blino_47 (CV), CarolAnn_46 (CV), LunaStella_44 (F4), Lutum_57 (DN1), MooMoo_43 (singleton), PCoral7_44 (CV), Powerball_42 (CZ4), PrincePatrick_43 (CV), Soilmate_49 (CV), ThankyouJordi_44 (CZ1), WelcomeAyanna_44 (CZ1), William_45 (CV),

Summary by clusters:

There are 19 clusters represented in this pham: DN, P2, CY1, F4, AD, CY5, DI, P3, CZ1, CZ8, CZ4, DH, DN1, CY3, F2, DW, singleton, CY2, CV,

Info for manual annotations of cluster AD:

- Start number 24 was manually annotated 1 time for cluster AD.
- Start number 25 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster CV:

- Start number 31 was manually annotated 2 times for cluster CV.
- Start number 38 was manually annotated 5 times for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 24 was manually annotated 2 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 25 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster CY3:

- Start number 27 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY5:

- Start number 38 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CZ1:

- Start number 38 was manually annotated 2 times for cluster CZ1.

Info for manual annotations of cluster CZ4:

- Start number 38 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ8:

- Start number 27 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DH:

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

Info for manual annotations of cluster DI:

- Start number 35 was manually annotated 14 times for cluster DI.
- Start number 36 was manually annotated 1 time for cluster DI.

Info for manual annotations of cluster DN:

- Start number 27 was manually annotated 1 time for cluster DN.
- Start number 32 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 24 was manually annotated 3 times for cluster DN1.
- Start number 38 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DW:

- Start number 33 was manually annotated 1 time for cluster DW.
- Start number 38 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster F2:

- Start number 24 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 24 was manually annotated 1 time for cluster F4.

- Start number 31 was manually annotated 1 time for cluster F4.
- Start number 38 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster P2:

- Start number 25 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:

- Start number 25 was manually annotated 1 time for cluster P3.

Gene Information:

Gene: ArchiDore_44 Start: 36013, Stop: 36261, Start Num: 38

Candidate Starts for ArchiDore_44:

(22, 35947), (Start: 33 @35980 has 1 MA's), (Start: 38 @36013 has 13 MA's), (43, 36049), (47, 36064), (48, 36070), (60, 36193), (62, 36208),

Gene: Ayotoya_41 Start: 33075, Stop: 33353, Start Num: 35

Candidate Starts for Ayotoya_41:

(Start: 35 @33075 has 14 MA's), (Start: 36 @33084 has 1 MA's), (40, 33111), (42, 33123), (43, 33126), (47, 33141), (49, 33156), (59, 33264), (61, 33276), (64, 33294),

Gene: BeeGee_49 Start: 36014, Stop: 36271, Start Num: 38

Candidate Starts for BeeGee_49:

(Start: 29 @35972 has 1 MA's), (Start: 38 @36014 has 13 MA's), (48, 36074),

Gene: BetterKatz_41 Start: 32601, Stop: 32837, Start Num: 35

Candidate Starts for BetterKatz_41:

(Start: 35 @32601 has 14 MA's), (Start: 36 @32610 has 1 MA's), (40, 32637), (42, 32649), (43, 32652), (59, 32790), (61, 32802), (64, 32820),

Gene: Blino_47 Start: 38067, Stop: 38321, Start Num: 38

Candidate Starts for Blino_47:

(Start: 31 @38031 has 3 MA's), (Start: 38 @38067 has 13 MA's), (43, 38103), (45, 38109), (48, 38124), (59, 38241), (60, 38247),

Gene: Bock_41 Start: 32304, Stop: 32573, Start Num: 36

Candidate Starts for Bock_41:

(20, 32238), (21, 32241), (Start: 35 @32295 has 14 MA's), (Start: 36 @32304 has 1 MA's), (40, 32331), (42, 32343), (43, 32346), (49, 32376), (59, 32484), (61, 32496), (64, 32514),

Gene: BritBrat_41 Start: 34303, Stop: 34614, Start Num: 25

Candidate Starts for BritBrat_41:

(Start: 25 @34303 has 4 MA's), (Start: 38 @34345 has 13 MA's), (39, 34351), (51, 34423), (54, 34468), (66, 34582),

Gene: Brylie_41 Start: 32342, Stop: 32620, Start Num: 35

Candidate Starts for Brylie_41:

(Start: 35 @32342 has 14 MA's), (Start: 36 @32351 has 1 MA's), (40, 32378), (42, 32390), (43, 32393), (47, 32408), (49, 32423), (59, 32531), (61, 32543), (64, 32561),

Gene: Budski_53 Start: 35974, Stop: 36282, Start Num: 27

Candidate Starts for Budski_53:

(2, 35746), (9, 35875), (10, 35887), (12, 35908), (16, 35917), (Start: 27 @35974 has 4 MA's), (30, 35989), (Start: 38 @36013 has 13 MA's), (44, 36055), (49, 36085), (50, 36091), (52, 36121), (57, 36190), (60, 36202), (62, 36217),

Gene: CarolAnn_46 Start: 38066, Stop: 38320, Start Num: 38

Candidate Starts for CarolAnn_46:

(Start: 31 @38030 has 3 MA's), (Start: 38 @38066 has 13 MA's), (43, 38102), (45, 38108), (48, 38123), (59, 38240), (60, 38246),

Gene: Che9d_53 Start: 34308, Stop: 34610, Start Num: 24

Candidate Starts for Che9d_53:

(8, 34203), (12, 34248), (18, 34269), (Start: 24 @34308 has 9 MA's), (37, 34344), (Start: 38 @34350 has 13 MA's), (39, 34356), (44, 34386), (53, 34461), (54, 34476), (59, 34527), (62, 34548), (64, 34557),

Gene: Chop_41 Start: 32822, Stop: 33100, Start Num: 35

Candidate Starts for Chop_41:

(Start: 35 @32822 has 14 MA's), (Start: 36 @32831 has 1 MA's), (40, 32858), (42, 32870), (43, 32873), (47, 32888), (49, 32903), (59, 33011), (61, 33023), (64, 33041),

Gene: DelRio_42 Start: 33530, Stop: 33808, Start Num: 35

Candidate Starts for DelRio_42:

(Start: 35 @33530 has 14 MA's), (Start: 36 @33539 has 1 MA's), (40, 33566), (42, 33578), (43, 33581), (59, 33719), (61, 33731), (64, 33749),

Gene: Demsculpinboyz_55 Start: 34420, Stop: 34722, Start Num: 24

Candidate Starts for Demsculpinboyz_55:

(8, 34315), (12, 34360), (18, 34381), (Start: 24 @34420 has 9 MA's), (37, 34456), (Start: 38 @34462 has 13 MA's), (39, 34468), (44, 34498), (53, 34573), (54, 34588), (59, 34639), (62, 34660), (64, 34669),

Gene: DumpsterDude_46 Start: 38205, Stop: 38486, Start Num: 33

Candidate Starts for DumpsterDude_46:

(22, 38172), (Start: 33 @38205 has 1 MA's), (Start: 38 @38238 has 13 MA's), (43, 38274), (47, 38289), (48, 38295), (62, 38433),

Gene: EMSquaredA_44 Start: 35048, Stop: 35356, Start Num: 24

Candidate Starts for EMSquaredA_44:

(Start: 24 @35048 has 9 MA's), (Start: 27 @35054 has 4 MA's), (Start: 29 @35063 has 1 MA's), (Start: 38 @35090 has 13 MA's), (41, 35114), (44, 35126), (52, 35192), (56, 35243), (62, 35288), (64, 35297),

Gene: Ecliptus_56 Start: 37774, Stop: 38064, Start Num: 32

Candidate Starts for Ecliptus_56:

(7, 37624), (12, 37690), (19, 37723), (26, 37756), (28, 37762), (Start: 32 @37774 has 1 MA's), (Start: 38 @37810 has 13 MA's), (43, 37846), (48, 37867), (59, 37984), (62, 38005), (68, 38053),

Gene: Fairfaxidum_45 Start: 35457, Stop: 35756, Start Num: 31

Candidate Starts for Fairfaxidum_45:

(Start: 31 @35457 has 3 MA's), (Start: 38 @35493 has 13 MA's), (43, 35529), (48, 35550), (59, 35667), (62, 35688),

Gene: Francois_40 Start: 32426, Stop: 32704, Start Num: 35

Candidate Starts for Francois_40:

(Start: 35 @32426 has 14 MA's), (Start: 36 @32435 has 1 MA's), (40, 32462), (42, 32474), (43, 32477), (47, 32492), (59, 32615), (61, 32627), (64, 32645),

Gene: GrandSlam_41 Start: 32822, Stop: 33100, Start Num: 35
Candidate Starts for GrandSlam_41:

(Start: 35 @32822 has 14 MA's), (Start: 36 @32831 has 1 MA's), (40, 32858), (42, 32870), (43, 32873), (47, 32888), (49, 32903), (59, 33011), (61, 33023), (64, 33041),

Gene: Hamood_41 Start: 32822, Stop: 33100, Start Num: 35
Candidate Starts for Hamood_41:

(Start: 35 @32822 has 14 MA's), (Start: 36 @32831 has 1 MA's), (40, 32858), (42, 32870), (43, 32873), (47, 32888), (49, 32903), (59, 33011), (61, 33023), (64, 33041),

Gene: Horus_55 Start: 37171, Stop: 37485, Start Num: 24
Candidate Starts for Horus_55:

(22, 37162), (Start: 24 @37171 has 9 MA's), (Start: 27 @37177 has 4 MA's), (Start: 38 @37213 has 13 MA's), (39, 37219), (41, 37237), (44, 37249), (49, 37279), (52, 37315), (60, 37396), (62, 37411), (63, 37417), (64, 37420),

Gene: Jablanski_46 Start: 37298, Stop: 37600, Start Num: 27
Candidate Starts for Jablanski_46:

(3, 37070), (4, 37097), (5, 37142), (11, 37214), (13, 37232), (22, 37283), (Start: 27 @37298 has 4 MA's), (Start: 38 @37334 has 13 MA's), (39, 37340), (44, 37370), (59, 37511), (61, 37523), (62, 37532), (64, 37541),

Gene: JohnLord_52 Start: 43681, Stop: 43983, Start Num: 24
Candidate Starts for JohnLord_52:

(18, 43642), (Start: 24 @43681 has 9 MA's), (37, 43717), (Start: 38 @43723 has 13 MA's), (41, 43747), (44, 43759), (50, 43795), (55, 43858), (59, 43900), (62, 43921), (64, 43930),

Gene: Kamaru_50 Start: 35537, Stop: 35863, Start Num: 24
Candidate Starts for Kamaru_50:

(18, 35498), (Start: 24 @35537 has 9 MA's), (Start: 38 @35597 has 13 MA's), (39, 35603), (43, 35630), (44, 35633), (46, 35639), (49, 35663), (56, 35750), (57, 35768), (58, 35771), (59, 35774), (64, 35804), (67, 35837),

Gene: LitninMcQueen_49 Start: 35286, Stop: 35612, Start Num: 24
Candidate Starts for LitninMcQueen_49:

(18, 35247), (Start: 24 @35286 has 9 MA's), (Start: 38 @35346 has 13 MA's), (39, 35352), (43, 35379), (44, 35382), (46, 35388), (49, 35412), (56, 35499), (57, 35517), (58, 35520), (59, 35523), (64, 35553), (67, 35586),

Gene: LunaStella_44 Start: 33802, Stop: 34059, Start Num: 38
Candidate Starts for LunaStella_44:

(Start: 31 @33766 has 3 MA's), (Start: 38 @33802 has 13 MA's), (43, 33838), (59, 33976), (64, 34006), (65, 34021),

Gene: Lutum_57 Start: 36995, Stop: 37252, Start Num: 38
Candidate Starts for Lutum_57:

(Start: 29 @36953 has 1 MA's), (Start: 38 @36995 has 13 MA's), (48, 37055), (59, 37178),

Gene: Mao1_49 Start: 42684, Stop: 42986, Start Num: 24
Candidate Starts for Mao1_49:

(18, 42645), (Start: 24 @42684 has 9 MA's), (37, 42720), (Start: 38 @42726 has 13 MA's), (41, 42750), (44, 42762), (50, 42798), (55, 42861), (59, 42903), (62, 42924), (64, 42933),

Gene: Marteena_43 Start: 35048, Stop: 35356, Start Num: 24

Candidate Starts for Marteena_43:

(Start: 24 @35048 has 9 MA's), (Start: 27 @35054 has 4 MA's), (Start: 29 @35063 has 1 MA's), (Start: 38 @35090 has 13 MA's), (41, 35114), (44, 35126), (52, 35192), (56, 35243), (62, 35288), (64, 35297),

Gene: Mask_50 Start: 45382, Stop: 45696, Start Num: 25

Candidate Starts for Mask_50:

(Start: 25 @45382 has 4 MA's), (Start: 38 @45424 has 13 MA's), (49, 45490), (54, 45547), (66, 45661),

Gene: Mbo4_34 Start: 31400, Stop: 31702, Start Num: 25

Candidate Starts for Mbo4_34:

(23, 31391), (Start: 25 @31400 has 4 MA's), (Start: 38 @31442 has 13 MA's), (44, 31478), (47, 31493), (52, 31544), (53, 31553), (62, 31640), (64, 31649), (69, 31694),

Gene: MooMoo_43 Start: 34078, Stop: 34335, Start Num: 38

Candidate Starts for MooMoo_43:

(Start: 31 @34042 has 3 MA's), (Start: 38 @34078 has 13 MA's), (43, 34114), (59, 34252), (64, 34282), (65, 34297),

Gene: Morkie_37 Start: 28817, Stop: 29116, Start Num: 29

Candidate Starts for Morkie_37:

(Start: 29 @28817 has 1 MA's), (Start: 38 @28859 has 13 MA's), (48, 28919),

Gene: Mulch_41 Start: 32342, Stop: 32620, Start Num: 35

Candidate Starts for Mulch_41:

(Start: 35 @32342 has 14 MA's), (Start: 36 @32351 has 1 MA's), (40, 32378), (42, 32390), (43, 32393), (47, 32408), (49, 32423), (59, 32531), (61, 32543), (64, 32561),

Gene: Nadeem_41 Start: 32342, Stop: 32620, Start Num: 35

Candidate Starts for Nadeem_41:

(Start: 35 @32342 has 14 MA's), (Start: 36 @32351 has 1 MA's), (40, 32378), (42, 32390), (43, 32393), (47, 32408), (49, 32423), (59, 32531), (61, 32543), (64, 32561),

Gene: NancyRae_41 Start: 32352, Stop: 32630, Start Num: 35

Candidate Starts for NancyRae_41:

(20, 32295), (21, 32298), (Start: 35 @32352 has 14 MA's), (Start: 36 @32361 has 1 MA's), (40, 32388), (42, 32400), (43, 32403), (49, 32433), (59, 32541), (61, 32553), (64, 32571),

Gene: PCoral7_44 Start: 34911, Stop: 35174, Start Num: 38

Candidate Starts for PCoral7_44:

(Start: 31 @34875 has 3 MA's), (Start: 38 @34911 has 13 MA's), (43, 34947), (48, 34968), (59, 35085), (62, 35106),

Gene: Parada_41 Start: 32342, Stop: 32620, Start Num: 35

Candidate Starts for Parada_41:

(Start: 35 @32342 has 14 MA's), (Start: 36 @32351 has 1 MA's), (40, 32378), (42, 32390), (43, 32393), (47, 32408), (49, 32423), (59, 32531), (61, 32543), (64, 32561),

Gene: Pimento_42 Start: 31999, Stop: 32277, Start Num: 35

Candidate Starts for Pimento_42:

(Start: 35 @31999 has 14 MA's), (Start: 36 @32008 has 1 MA's), (40, 32035), (42, 32047), (43, 32050), (59, 32188), (61, 32200), (64, 32218),

Gene: Powerball_42 Start: 33050, Stop: 33301, Start Num: 38

Candidate Starts for Powerball_42:

(22, 32984), (Start: 33 @33017 has 1 MA's), (Start: 38 @33050 has 13 MA's), (43, 33086), (47, 33101), (48, 33107), (62, 33245),

Gene: PrincePatrick_43 Start: 33264, Stop: 33527, Start Num: 38

Candidate Starts for PrincePatrick_43:

(Start: 31 @33228 has 3 MA's), (Start: 38 @33264 has 13 MA's), (43, 33300), (48, 33321), (59, 33438), (62, 33459),

Gene: Pytheas_46 Start: 37297, Stop: 37599, Start Num: 27

Candidate Starts for Pytheas_46:

(3, 37069), (4, 37096), (5, 37141), (11, 37213), (13, 37231), (17, 37243), (22, 37282), (Start: 27 @37297 has 4 MA's), (Start: 38 @37333 has 13 MA's), (39, 37339), (44, 37369), (59, 37510), (61, 37522), (62, 37531), (64, 37540),

Gene: RavenCo17_44 Start: 35359, Stop: 35661, Start Num: 27

Candidate Starts for RavenCo17_44:

(13, 35293), (17, 35305), (Start: 24 @35353 has 9 MA's), (Start: 27 @35359 has 4 MA's), (Start: 38 @35395 has 13 MA's), (41, 35419), (44, 35431), (52, 35497), (56, 35548), (62, 35593), (64, 35602),

Gene: Soilmate_49 Start: 38066, Stop: 38320, Start Num: 38

Candidate Starts for Soilmate_49:

(Start: 31 @38030 has 3 MA's), (Start: 38 @38066 has 13 MA's), (43, 38102), (45, 38108), (48, 38123), (59, 38240), (60, 38246),

Gene: TChen_46 Start: 35717, Stop: 36010, Start Num: 31

Candidate Starts for TChen_46:

(Start: 31 @35717 has 3 MA's), (Start: 38 @35753 has 13 MA's), (43, 35789), (59, 35927), (64, 35957), (65, 35972),

Gene: ThankyouJordi_44 Start: 36245, Stop: 36499, Start Num: 38

Candidate Starts for ThankyouJordi_44:

(1, 35879), (6, 36056), (14, 36134), (15, 36137), (34, 36212), (Start: 38 @36245 has 13 MA's), (43, 36281), (47, 36296), (48, 36302),

Gene: ThetaBob_49 Start: 35232, Stop: 35534, Start Num: 24

Candidate Starts for ThetaBob_49:

(7, 35106), (8, 35127), (18, 35193), (Start: 24 @35232 has 9 MA's), (37, 35268), (Start: 38 @35274 has 13 MA's), (39, 35280), (44, 35310), (53, 35385), (59, 35451), (62, 35472), (64, 35481),

Gene: Toast_44 Start: 34875, Stop: 35174, Start Num: 31

Candidate Starts for Toast_44:

(Start: 31 @34875 has 3 MA's), (Start: 38 @34911 has 13 MA's), (43, 34947), (48, 34968), (59, 35085), (62, 35106),

Gene: Tortellini_38 Start: 33573, Stop: 33887, Start Num: 25

Candidate Starts for Tortellini_38:

(Start: 25 @33573 has 4 MA's), (Start: 38 @33615 has 13 MA's), (49, 33681), (54, 33738), (66, 33852),

Gene: WelcomeAyanna_44 Start: 36392, Stop: 36646, Start Num: 38

Candidate Starts for WelcomeAyanna_44:

(1, 36026), (6, 36203), (14, 36281), (15, 36284), (34, 36359), (Start: 38 @36392 has 13 MA's), (43, 36428), (47, 36443), (48, 36449),

Gene: WheatThin_41 Start: 32342, Stop: 32620, Start Num: 35

Candidate Starts for WheatThin_41:

(Start: 35 @32342 has 14 MA's), (Start: 36 @32351 has 1 MA's), (40, 32378), (42, 32390), (43, 32393), (47, 32408), (49, 32423), (59, 32531), (61, 32543), (64, 32561),

Gene: William_45 Start: 34949, Stop: 35212, Start Num: 38

Candidate Starts for William_45:

(Start: 31 @34913 has 3 MA's), (Start: 38 @34949 has 13 MA's), (43, 34985), (48, 35006), (59, 35123), (62, 35144),

Gene: Xavia_40 Start: 34156, Stop: 34470, Start Num: 25

Candidate Starts for Xavia_40:

(Start: 25 @34156 has 4 MA's), (Start: 38 @34198 has 13 MA's), (49, 34264), (54, 34321), (66, 34435),