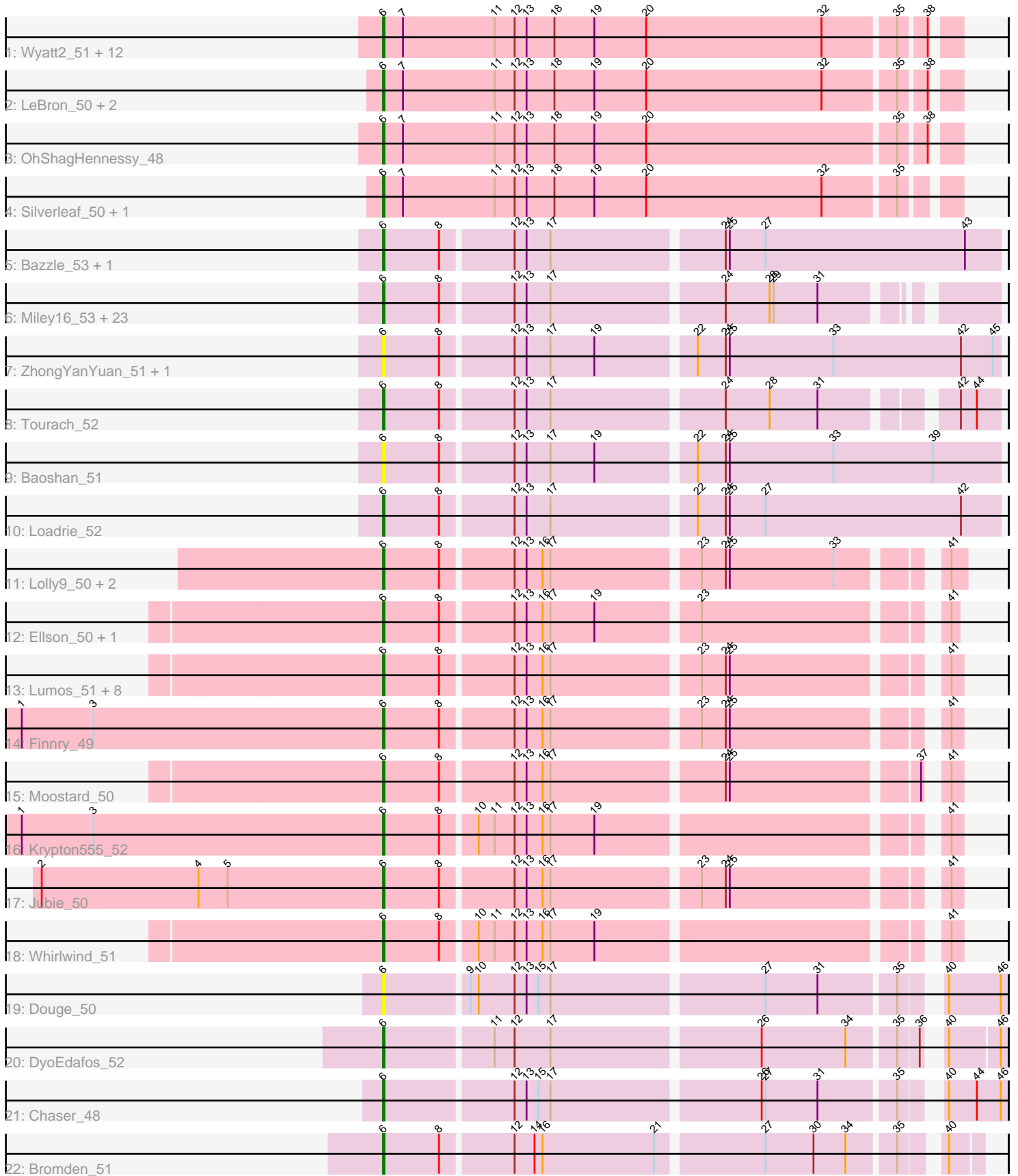


Pham 163573



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 163573 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163573 has 73 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Wyatt2_51, Acquire49_51, Wamburgrxpress_50, Halena_49, Tyson_50, Calm_51, UPIE_50, DirkDirk_49, Rose5_50, MAckerman_49, Zaria_51, Enceladus_49, CicholasNage_50
- Track 2 : LeBron_50, JoeDirt_49, Appletree2_49
- Track 3 : OhShagHennessy_48
- Track 4 : Silverleaf_50, AvadaKedavra_50
- Track 5 : Bazzle_53, Archie_53
- Track 6 : Miley16_53, BobsGarage_53, Kahlid_53, Rumpelstiltskin_52, Zakai_53, LilDestine_53, Itos_52, DrSeegs_53, Winky_53, Hafay_54, Netyap_54, Wigglewiggles_53, Crossroads_53, Breezons_53, Finemlucis_53, BigCheese_53, Lewan_54, Nicholasp3_53, Vetrix_53, GuuelaD_52, Gardann_53, Faith1_53, Wilder_53, MkaliMitinis3_54
- Track 7 : ZhongYanYuan_51, Claus_53
- Track 8 : Tourach_52
- Track 9 : Baoshan_51
- Track 10 : Loadie_52
- Track 11 : Lolly9_50, MiniMac_52, MiniLon_52
- Track 12 : Ellson_50, DuncansLeg_50
- Track 13 : Lumos_51, Samty_50, Snenia_50, Clautastrophe_50, MsGreen_50, Kingsolomon_50, Jobypre_51, Nicholas_50, Bellis_50
- Track 14 : Finnry_49
- Track 15 : Moostard_50
- Track 16 : Krypton555_52
- Track 17 : Jubie_50
- Track 18 : Whirlwind_51
- Track 19 : Douge_50
- Track 20 : DyoEdafos_52
- Track 21 : Chaser_48
- Track 22 : Bromden_51

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

The start number called the most often in the published annotations is 6, it was called in 64 of the 64 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_51, Appletree2_49, Archie_53, AvadaKedavra_50, Baoshan_51, Bazzle_53, Bellis_50, BigCheese_53, BobsGarage_53, Breezona_53, Bromden_51, Calm_51, Chaser_48, CicholasNage_50, Claus_53, Clautastrophe_50, Crossroads_53, DirkDirk_49, Douge_50, DrSeegs_53, DuncansLeg_50, DyoEdafos_52, Ellson_50, Enceladus_49, Faith1_53, Finemlucis_53, Finnry_49, Gardann_53, GuuelaD_52, Hafay_54, Halena_49, Itos_52, Jobypre_51, JoeDirt_49, Jubie_50, Kahlid_53, Kingsolomon_50, Krypton555_52, LeBron_50, Lewan_54, LilDestine_53, Loadrie_52, Lolly9_50, Lumos_51, MAckerman_49, Miley16_53, MiniLon_52, MiniMac_52, MkaliMitinis3_54, Moostard_50, MsGreen_50, Netyap_54, Nicholas_50, Nicholasp3_53, OhShagHennessy_48, Rose5_50, Rumpelstiltskin_52, Samty_50, Silverleaf_50, Snenia_50, Tourach_52, Tyson_50, UPIE_50, Vetrix_53, Wamburgrxpress_50, Whirlwind_51, Wigglewiggle_53, Wilder_53, Winky_53, Wyatt2_51, Zakai_53, Zaria_51, ZhongYanYuan_51,

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 6:

- Found in 73 of 73 (100.0%) of genes in pham
- Manual Annotations of this start: 64 of 64
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_51 (L1), Appletree2_49 (L1), Archie_53 (L2), AvadaKedavra_50 (L1), Baoshan_51 (L2), Bazzle_53 (L2), Bellis_50 (L3), BigCheese_53 (L2), BobsGarage_53 (L2), Breezona_53 (L2), Bromden_51 (L4), Calm_51 (L1), Chaser_48 (L4), CicholasNage_50 (L1), Claus_53 (L2), Clautastrophe_50 (L3), Crossroads_53 (L2), DirkDirk_49 (L1), Douge_50 (L4), DrSeegs_53 (L2), DuncansLeg_50 (L3), DyoEdafos_52 (L4), Ellson_50 (L3), Enceladus_49 (L1), Faith1_53 (L2), Finemlucis_53 (L2), Finnry_49 (L3), Gardann_53 (L2), GuuelaD_52 (L2), Hafay_54 (L2), Halena_49 (L1), Itos_52 (L2), Jobypre_51 (L3), JoeDirt_49 (L1), Jubie_50 (L3), Kahlid_53 (L2), Kingsolomon_50 (L3), Krypton555_52 (L3), LeBron_50 (L1), Lewan_54 (L2), LilDestine_53 (L2), Loadrie_52 (L2), Lolly9_50 (L3), Lumos_51 (L3), MAckerman_49 (L1), Miley16_53 (L2), MiniLon_52 (L3), MiniMac_52 (L3), MkaliMitinis3_54 (L2), Moostard_50 (L3), MsGreen_50 (L3), Netyap_54 (L2), Nicholas_50 (L3), Nicholasp3_53 (L2), OhShagHennessy_48 (L1), Rose5_50 (L1), Rumpelstiltskin_52 (L2), Samty_50 (L3), Silverleaf_50 (L1), Snenia_50 (L3), Tourach_52 (L2), Tyson_50 (L1), UPIE_50 (L1), Vetrix_53 (L2), Wamburgrxpress_50 (L1), Whirlwind_51 (L3), Wigglewiggle_53 (L2), Wilder_53 (L2), Winky_53 (L2), Wyatt2_51 (L1), Zakai_53 (L2), Zaria_51 (L1), ZhongYanYuan_51 (L2),

Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 6 was manually annotated 18 times for cluster L1.

Info for manual annotations of cluster L2:

•Start number 6 was manually annotated 27 times for cluster L2.

Info for manual annotations of cluster L3:

•Start number 6 was manually annotated 16 times for cluster L3.

Info for manual annotations of cluster L4:

•Start number 6 was manually annotated 3 times for cluster L4.

Gene Information:

Gene: Acquire49_51 Start: 38005, Stop: 38421, Start Num: 6

Candidate Starts for Acquire49_51:

(Start: 6 @38005 has 64 MA's), (7, 38020), (11, 38089), (12, 38104), (13, 38113), (18, 38134), (19, 38164), (20, 38203), (32, 38335), (35, 38386), (38, 38404),

Gene: Appletree2_49 Start: 37838, Stop: 38254, Start Num: 6

Candidate Starts for Appletree2_49:

(Start: 6 @37838 has 64 MA's), (7, 37853), (11, 37922), (12, 37937), (13, 37946), (18, 37967), (19, 37997), (20, 38036), (32, 38168), (35, 38219), (38, 38237),

Gene: Archie_53 Start: 39956, Stop: 40405, Start Num: 6

Candidate Starts for Archie_53:

(Start: 6 @39956 has 64 MA's), (8, 39998), (12, 40049), (13, 40058), (17, 40076), (24, 40199), (25, 40202), (27, 40229), (43, 40379),

Gene: AvadaKedavra_50 Start: 37907, Stop: 38323, Start Num: 6

Candidate Starts for AvadaKedavra_50:

(Start: 6 @37907 has 64 MA's), (7, 37922), (11, 37991), (12, 38006), (13, 38015), (18, 38036), (19, 38066), (20, 38105), (32, 38237), (35, 38288),

Gene: Baoshan_51 Start: 39640, Stop: 40089, Start Num: 6

Candidate Starts for Baoshan_51:

(Start: 6 @39640 has 64 MA's), (8, 39682), (12, 39733), (13, 39742), (17, 39760), (19, 39793), (22, 39862), (24, 39883), (25, 39886), (33, 39964), (39, 40039),

Gene: Bazzle_53 Start: 40026, Stop: 40475, Start Num: 6

Candidate Starts for Bazzle_53:

(Start: 6 @40026 has 64 MA's), (8, 40068), (12, 40119), (13, 40128), (17, 40146), (24, 40269), (25, 40272), (27, 40299), (43, 40449),

Gene: Bellis_50 Start: 39683, Stop: 40078, Start Num: 6

Candidate Starts for Bellis_50:

(Start: 6 @39683 has 64 MA's), (8, 39725), (12, 39776), (13, 39785), (16, 39797), (17, 39803), (23, 39908), (24, 39926), (25, 39929), (41, 40070),

Gene: BigCheese_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for BigCheese_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: BobsGarage_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for BobsGarage_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: Breezona_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for Breezona_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: Bromden_51 Start: 39185, Stop: 39598, Start Num: 6

Candidate Starts for Bromden_51:

(Start: 6 @39185 has 64 MA's), (8, 39227), (12, 39278), (14, 39293), (16, 39299), (21, 39383), (27, 39458), (30, 39494), (34, 39518), (35, 39551), (40, 39575),

Gene: Calm_51 Start: 38020, Stop: 38436, Start Num: 6

Candidate Starts for Calm_51:

(Start: 6 @38020 has 64 MA's), (7, 38035), (11, 38104), (12, 38119), (13, 38128), (18, 38149), (19, 38179), (20, 38218), (32, 38350), (35, 38401), (38, 38419),

Gene: Chaser_48 Start: 38128, Stop: 38559, Start Num: 6

Candidate Starts for Chaser_48:

(Start: 6 @38128 has 64 MA's), (12, 38221), (13, 38230), (15, 38239), (17, 38248), (26, 38398), (27, 38401), (31, 38440), (35, 38494), (40, 38515), (44, 38536), (46, 38554),

Gene: CicholasNage_50 Start: 38041, Stop: 38457, Start Num: 6

Candidate Starts for CicholasNage_50:

(Start: 6 @38041 has 64 MA's), (7, 38056), (11, 38125), (12, 38140), (13, 38149), (18, 38170), (19, 38200), (20, 38239), (32, 38371), (35, 38422), (38, 38440),

Gene: Claus_53 Start: 39792, Stop: 40241, Start Num: 6

Candidate Starts for Claus_53:

(Start: 6 @39792 has 64 MA's), (8, 39834), (12, 39885), (13, 39894), (17, 39912), (19, 39945), (22, 40014), (24, 40035), (25, 40038), (33, 40116), (42, 40212), (45, 40236),

Gene: Clautastrophe_50 Start: 39680, Stop: 40075, Start Num: 6

Candidate Starts for Clautastrophe_50:

(Start: 6 @39680 has 64 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (41, 40067),

Gene: Crossroads_53 Start: 39815, Stop: 40234, Start Num: 6

Candidate Starts for Crossroads_53:

(Start: 6 @39815 has 64 MA's), (8, 39857), (12, 39908), (13, 39917), (17, 39935), (24, 40058), (28, 40091), (29, 40094), (31, 40127),

Gene: DirkDirk_49 Start: 37884, Stop: 38300, Start Num: 6

Candidate Starts for DirkDirk_49:

(Start: 6 @37884 has 64 MA's), (7, 37899), (11, 37968), (12, 37983), (13, 37992), (18, 38013), (19, 38043), (20, 38082), (32, 38214), (35, 38265), (38, 38283),

Gene: Douge_50 Start: 38123, Stop: 38554, Start Num: 6

Candidate Starts for Douge_50:

(Start: 6 @38123 has 64 MA's), (9, 38183), (10, 38189), (12, 38216), (13, 38225), (15, 38234), (17, 38243), (27, 38396), (31, 38435), (35, 38489), (40, 38510), (46, 38549),

Gene: DrSeegs_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for DrSeegs_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: DuncansLeg_50 Start: 39706, Stop: 40098, Start Num: 6

Candidate Starts for DuncansLeg_50:

(Start: 6 @39706 has 64 MA's), (8, 39748), (12, 39799), (13, 39808), (16, 39820), (17, 39826), (19, 39859), (23, 39931), (41, 40093),

Gene: DyoEdafos_52 Start: 38404, Stop: 38832, Start Num: 6

Candidate Starts for DyoEdafos_52:

(Start: 6 @38404 has 64 MA's), (11, 38482), (12, 38497), (17, 38524), (26, 38674), (34, 38737), (35, 38770), (36, 38785), (40, 38791), (46, 38827),

Gene: Ellson_50 Start: 39736, Stop: 40128, Start Num: 6

Candidate Starts for Ellson_50:

(Start: 6 @39736 has 64 MA's), (8, 39778), (12, 39829), (13, 39838), (16, 39850), (17, 39856), (19, 39889), (23, 39961), (41, 40123),

Gene: Enceladus_49 Start: 37879, Stop: 38295, Start Num: 6

Candidate Starts for Enceladus_49:

(Start: 6 @37879 has 64 MA's), (7, 37894), (11, 37963), (12, 37978), (13, 37987), (18, 38008), (19, 38038), (20, 38077), (32, 38209), (35, 38260), (38, 38278),

Gene: Faith1_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for Faith1_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: Finemlucis_53 Start: 40066, Stop: 40485, Start Num: 6

Candidate Starts for Finemlucis_53:

(Start: 6 @40066 has 64 MA's), (8, 40108), (12, 40159), (13, 40168), (17, 40186), (24, 40309), (28, 40342), (29, 40345), (31, 40378),

Gene: Finnry_49 Start: 39945, Stop: 40340, Start Num: 6

Candidate Starts for Finnry_49:

(1, 39675), (3, 39729), (Start: 6 @39945 has 64 MA's), (8, 39987), (12, 40038), (13, 40047), (16, 40059), (17, 40065), (23, 40170), (24, 40188), (25, 40191), (41, 40332),

Gene: Gardann_53 Start: 39781, Stop: 40200, Start Num: 6

Candidate Starts for Gardann_53:

(Start: 6 @39781 has 64 MA's), (8, 39823), (12, 39874), (13, 39883), (17, 39901), (24, 40024), (28, 40057), (29, 40060), (31, 40093),

Gene: GuuelaD_52 Start: 39852, Stop: 40271, Start Num: 6

Candidate Starts for GuuelaD_52:

(Start: 6 @39852 has 64 MA's), (8, 39894), (12, 39945), (13, 39954), (17, 39972), (24, 40095), (28, 40128), (29, 40131), (31, 40164),

Gene: Hafay_54 Start: 39849, Stop: 40268, Start Num: 6
Candidate Starts for Hafay_54:
(Start: 6 @39849 has 64 MA's), (8, 39891), (12, 39942), (13, 39951), (17, 39969), (24, 40092), (28, 40125), (29, 40128), (31, 40161),

Gene: Halena_49 Start: 37921, Stop: 38337, Start Num: 6
Candidate Starts for Halena_49:
(Start: 6 @37921 has 64 MA's), (7, 37936), (11, 38005), (12, 38020), (13, 38029), (18, 38050), (19, 38080), (20, 38119), (32, 38251), (35, 38302), (38, 38320),

Gene: Itos_52 Start: 38651, Stop: 39070, Start Num: 6
Candidate Starts for Itos_52:
(Start: 6 @38651 has 64 MA's), (8, 38693), (12, 38744), (13, 38753), (17, 38771), (24, 38894), (28, 38927), (29, 38930), (31, 38963),

Gene: Jobypre_51 Start: 39680, Stop: 40075, Start Num: 6
Candidate Starts for Jobypre_51:
(Start: 6 @39680 has 64 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (41, 40067),

Gene: JoeDirt_49 Start: 37878, Stop: 38294, Start Num: 6
Candidate Starts for JoeDirt_49:
(Start: 6 @37878 has 64 MA's), (7, 37893), (11, 37962), (12, 37977), (13, 37986), (18, 38007), (19, 38037), (20, 38076), (32, 38208), (35, 38259), (38, 38277),

Gene: Jubie_50 Start: 39815, Stop: 40210, Start Num: 6
Candidate Starts for Jubie_50:
(2, 39560), (4, 39677), (5, 39698), (Start: 6 @39815 has 64 MA's), (8, 39857), (12, 39908), (13, 39917), (16, 39929), (17, 39935), (23, 40040), (24, 40058), (25, 40061), (41, 40202),

Gene: Kahlid_53 Start: 39751, Stop: 40170, Start Num: 6
Candidate Starts for Kahlid_53:
(Start: 6 @39751 has 64 MA's), (8, 39793), (12, 39844), (13, 39853), (17, 39871), (24, 39994), (28, 40027), (29, 40030), (31, 40063),

Gene: Kingsolomon_50 Start: 39680, Stop: 40075, Start Num: 6
Candidate Starts for Kingsolomon_50:
(Start: 6 @39680 has 64 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (41, 40067),

Gene: Krypton555_52 Start: 39917, Stop: 40312, Start Num: 6
Candidate Starts for Krypton555_52:
(1, 39647), (3, 39701), (Start: 6 @39917 has 64 MA's), (8, 39959), (10, 39983), (11, 39995), (12, 40010), (13, 40019), (16, 40031), (17, 40037), (19, 40070), (41, 40304),

Gene: LeBron_50 Start: 37922, Stop: 38338, Start Num: 6
Candidate Starts for LeBron_50:
(Start: 6 @37922 has 64 MA's), (7, 37937), (11, 38006), (12, 38021), (13, 38030), (18, 38051), (19, 38081), (20, 38120), (32, 38252), (35, 38303), (38, 38321),

Gene: Lewan_54 Start: 39804, Stop: 40223, Start Num: 6
Candidate Starts for Lewan_54:

(Start: 6 @39804 has 64 MA's), (8, 39846), (12, 39897), (13, 39906), (17, 39924), (24, 40047), (28, 40080), (29, 40083), (31, 40116),

Gene: LilDestine_53 Start: 39778, Stop: 40197, Start Num: 6

Candidate Starts for LilDestine_53:

(Start: 6 @39778 has 64 MA's), (8, 39820), (12, 39871), (13, 39880), (17, 39898), (24, 40021), (28, 40054), (29, 40057), (31, 40090),

Gene: Loadrie_52 Start: 39805, Stop: 40254, Start Num: 6

Candidate Starts for Loadrie_52:

(Start: 6 @39805 has 64 MA's), (8, 39847), (12, 39898), (13, 39907), (17, 39925), (22, 40027), (24, 40048), (25, 40051), (27, 40078), (42, 40225),

Gene: Lolly9_50 Start: 39499, Stop: 39897, Start Num: 6

Candidate Starts for Lolly9_50:

(Start: 6 @39499 has 64 MA's), (8, 39541), (12, 39592), (13, 39601), (16, 39613), (17, 39619), (23, 39724), (24, 39742), (25, 39745), (33, 39823), (41, 39886),

Gene: Lumos_51 Start: 39677, Stop: 40072, Start Num: 6

Candidate Starts for Lumos_51:

(Start: 6 @39677 has 64 MA's), (8, 39719), (12, 39770), (13, 39779), (16, 39791), (17, 39797), (23, 39902), (24, 39920), (25, 39923), (41, 40064),

Gene: MAckerman_49 Start: 37914, Stop: 38330, Start Num: 6

Candidate Starts for MAckerman_49:

(Start: 6 @37914 has 64 MA's), (7, 37929), (11, 37998), (12, 38013), (13, 38022), (18, 38043), (19, 38073), (20, 38112), (32, 38244), (35, 38295), (38, 38313),

Gene: Miley16_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for Miley16_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: MiniLon_52 Start: 39500, Stop: 39898, Start Num: 6

Candidate Starts for MiniLon_52:

(Start: 6 @39500 has 64 MA's), (8, 39542), (12, 39593), (13, 39602), (16, 39614), (17, 39620), (23, 39725), (24, 39743), (25, 39746), (33, 39824), (41, 39887),

Gene: MiniMac_52 Start: 39498, Stop: 39896, Start Num: 6

Candidate Starts for MiniMac_52:

(Start: 6 @39498 has 64 MA's), (8, 39540), (12, 39591), (13, 39600), (16, 39612), (17, 39618), (23, 39723), (24, 39741), (25, 39744), (33, 39822), (41, 39885),

Gene: MkaliMitinis3_54 Start: 39817, Stop: 40236, Start Num: 6

Candidate Starts for MkaliMitinis3_54:

(Start: 6 @39817 has 64 MA's), (8, 39859), (12, 39910), (13, 39919), (17, 39937), (24, 40060), (28, 40093), (29, 40096), (31, 40129),

Gene: Moostard_50 Start: 39683, Stop: 40078, Start Num: 6

Candidate Starts for Moostard_50:

(Start: 6 @39683 has 64 MA's), (8, 39725), (12, 39776), (13, 39785), (16, 39797), (17, 39803), (24, 39926), (25, 39929), (37, 40061), (41, 40070),

Gene: MsGreen_50 Start: 39680, Stop: 40075, Start Num: 6

Candidate Starts for MsGreen_50:

(Start: 6 @39680 has 64 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (41, 40067),

Gene: Netyap_54 Start: 39746, Stop: 40165, Start Num: 6

Candidate Starts for Netyap_54:

(Start: 6 @39746 has 64 MA's), (8, 39788), (12, 39839), (13, 39848), (17, 39866), (24, 39989), (28, 40022), (29, 40025), (31, 40058),

Gene: Nicholas_50 Start: 39680, Stop: 40075, Start Num: 6

Candidate Starts for Nicholas_50:

(Start: 6 @39680 has 64 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (41, 40067),

Gene: Nicholasp3_53 Start: 39781, Stop: 40200, Start Num: 6

Candidate Starts for Nicholasp3_53:

(Start: 6 @39781 has 64 MA's), (8, 39823), (12, 39874), (13, 39883), (17, 39901), (24, 40024), (28, 40057), (29, 40060), (31, 40093),

Gene: OhShagHennessy_48 Start: 36908, Stop: 37324, Start Num: 6

Candidate Starts for OhShagHennessy_48:

(Start: 6 @36908 has 64 MA's), (7, 36923), (11, 36992), (12, 37007), (13, 37016), (18, 37037), (19, 37067), (20, 37106), (35, 37289), (38, 37307),

Gene: Rose5_50 Start: 38005, Stop: 38421, Start Num: 6

Candidate Starts for Rose5_50:

(Start: 6 @38005 has 64 MA's), (7, 38020), (11, 38089), (12, 38104), (13, 38113), (18, 38134), (19, 38164), (20, 38203), (32, 38335), (35, 38386), (38, 38404),

Gene: Rumpelstiltskin_52 Start: 39174, Stop: 39593, Start Num: 6

Candidate Starts for Rumpelstiltskin_52:

(Start: 6 @39174 has 64 MA's), (8, 39216), (12, 39267), (13, 39276), (17, 39294), (24, 39417), (28, 39450), (29, 39453), (31, 39486),

Gene: Samty_50 Start: 39682, Stop: 40077, Start Num: 6

Candidate Starts for Samty_50:

(Start: 6 @39682 has 64 MA's), (8, 39724), (12, 39775), (13, 39784), (16, 39796), (17, 39802), (23, 39907), (24, 39925), (25, 39928), (41, 40069),

Gene: Silverleaf_50 Start: 37900, Stop: 38316, Start Num: 6

Candidate Starts for Silverleaf_50:

(Start: 6 @37900 has 64 MA's), (7, 37915), (11, 37984), (12, 37999), (13, 38008), (18, 38029), (19, 38059), (20, 38098), (32, 38230), (35, 38281),

Gene: Snenia_50 Start: 39681, Stop: 40076, Start Num: 6

Candidate Starts for Snenia_50:

(Start: 6 @39681 has 64 MA's), (8, 39723), (12, 39774), (13, 39783), (16, 39795), (17, 39801), (23, 39906), (24, 39924), (25, 39927), (41, 40068),

Gene: Tourach_52 Start: 39805, Stop: 40230, Start Num: 6

Candidate Starts for Tourach_52:

(Start: 6 @39805 has 64 MA's), (8, 39847), (12, 39898), (13, 39907), (17, 39925), (24, 40048), (28, 40081), (31, 40117), (42, 40201), (44, 40213),

Gene: Tyson_50 Start: 38007, Stop: 38423, Start Num: 6

Candidate Starts for Tyson_50:

(Start: 6 @38007 has 64 MA's), (7, 38022), (11, 38091), (12, 38106), (13, 38115), (18, 38136), (19, 38166), (20, 38205), (32, 38337), (35, 38388), (38, 38406),

Gene: UPIE_50 Start: 37893, Stop: 38309, Start Num: 6

Candidate Starts for UPIE_50:

(Start: 6 @37893 has 64 MA's), (7, 37908), (11, 37977), (12, 37992), (13, 38001), (18, 38022), (19, 38052), (20, 38091), (32, 38223), (35, 38274), (38, 38292),

Gene: Vetrrix_53 Start: 39786, Stop: 40205, Start Num: 6

Candidate Starts for Vetrrix_53:

(Start: 6 @39786 has 64 MA's), (8, 39828), (12, 39879), (13, 39888), (17, 39906), (24, 40029), (28, 40062), (29, 40065), (31, 40098),

Gene: Wamburgexpress_50 Start: 37909, Stop: 38325, Start Num: 6

Candidate Starts for Wamburgexpress_50:

(Start: 6 @37909 has 64 MA's), (7, 37924), (11, 37993), (12, 38008), (13, 38017), (18, 38038), (19, 38068), (20, 38107), (32, 38239), (35, 38290), (38, 38308),

Gene: Whirlwind_51 Start: 39496, Stop: 39891, Start Num: 6

Candidate Starts for Whirlwind_51:

(Start: 6 @39496 has 64 MA's), (8, 39538), (10, 39562), (11, 39574), (12, 39589), (13, 39598), (16, 39610), (17, 39616), (19, 39649), (41, 39883),

Gene: Wigglewobble_53 Start: 39806, Stop: 40225, Start Num: 6

Candidate Starts for Wigglewobble_53:

(Start: 6 @39806 has 64 MA's), (8, 39848), (12, 39899), (13, 39908), (17, 39926), (24, 40049), (28, 40082), (29, 40085), (31, 40118),

Gene: Wilder_53 Start: 39751, Stop: 40170, Start Num: 6

Candidate Starts for Wilder_53:

(Start: 6 @39751 has 64 MA's), (8, 39793), (12, 39844), (13, 39853), (17, 39871), (24, 39994), (28, 40027), (29, 40030), (31, 40063),

Gene: Winky_53 Start: 39745, Stop: 40164, Start Num: 6

Candidate Starts for Winky_53:

(Start: 6 @39745 has 64 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: Wyatt2_51 Start: 38005, Stop: 38421, Start Num: 6

Candidate Starts for Wyatt2_51:

(Start: 6 @38005 has 64 MA's), (7, 38020), (11, 38089), (12, 38104), (13, 38113), (18, 38134), (19, 38164), (20, 38203), (32, 38335), (35, 38386), (38, 38404),

Gene: Zakai_53 Start: 40071, Stop: 40490, Start Num: 6

Candidate Starts for Zakai_53:

(Start: 6 @40071 has 64 MA's), (8, 40113), (12, 40164), (13, 40173), (17, 40191), (24, 40314), (28, 40347), (29, 40350), (31, 40383),

Gene: Zaria_51 Start: 38020, Stop: 38436, Start Num: 6

Candidate Starts for Zaria_51:

(Start: 6 @38020 has 64 MA's), (7, 38035), (11, 38104), (12, 38119), (13, 38128), (18, 38149), (19, 38179), (20, 38218), (32, 38350), (35, 38401), (38, 38419),

Gene: ZhongYanYuan_51 Start: 39605, Stop: 40054, Start Num: 6

Candidate Starts for ZhongYanYuan_51:

(Start: 6 @39605 has 64 MA's), (8, 39647), (12, 39698), (13, 39707), (17, 39725), (19, 39758), (22, 39827), (24, 39848), (25, 39851), (33, 39929), (42, 40025), (45, 40049),