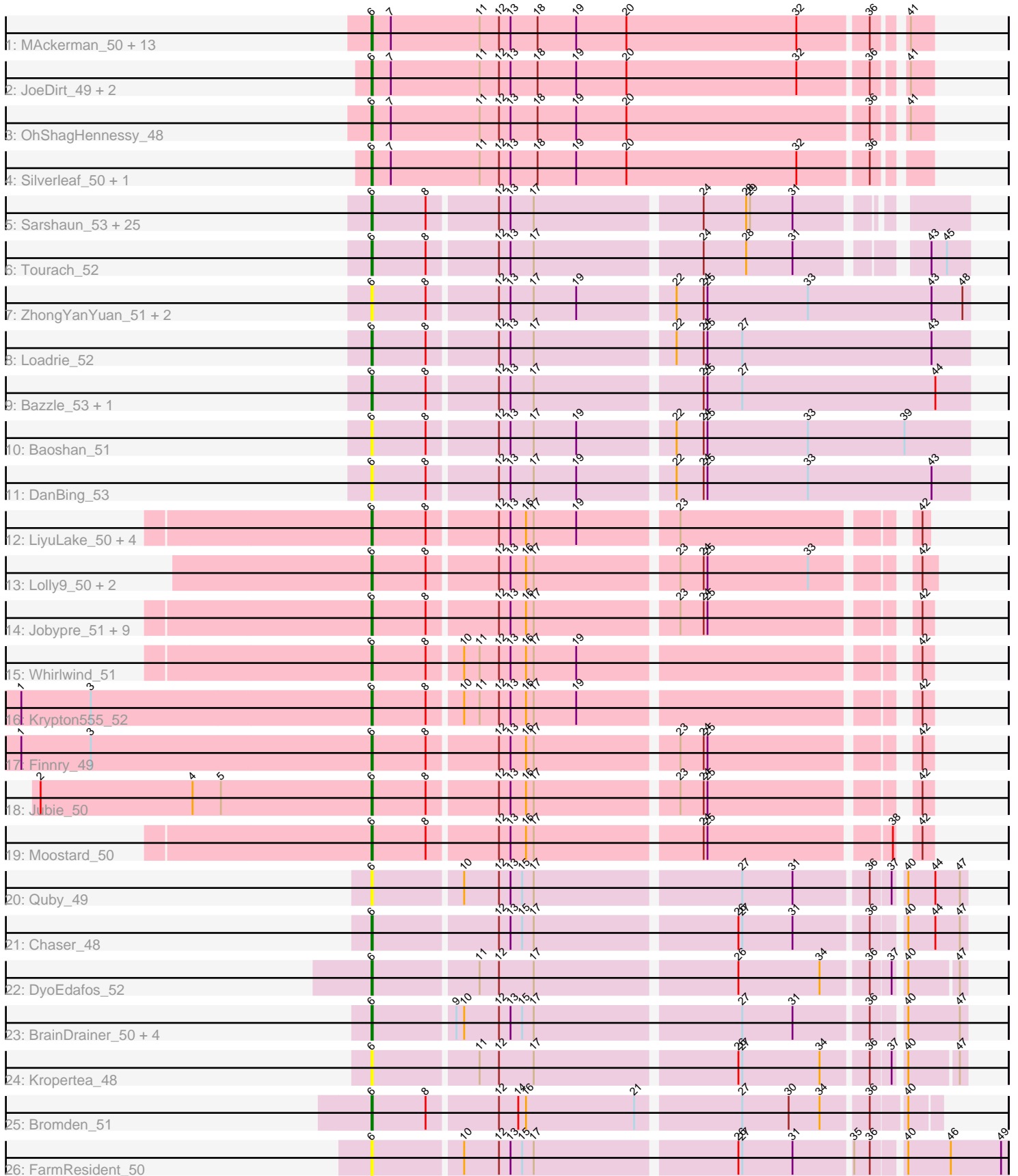


Pham 200163



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 200163 Report

This analysis was run 01/18/25 on database version 583.

Pham number 200163 has 89 members, 23 are drafts.

Phages represented in each track:

- Track 1 : MAckerman_50, Halena_49, Poochiewood_50, DirkDirk_49, Wamburgrxpress_50, Calm_51, CicholasNage_50, Wyatt2_51, Rose5_50, Acquire49_51, Tyson_50, UPIE_50, Zaria_51, Enceladus_49
- Track 2 : JoeDirt_49, Appletree2_49, LeBron_50
- Track 3 : OhShagHennessy_48
- Track 4 : Silverleaf_50, AvadaKedavra_50
- Track 5 : Sarshaun_53, Wigglewiggles_53, Kahlid_53, Zakai_53, Hafay_54, Vetric_53, Crossroads_53, Soap141_53, Nicholasp3_53, Itos_52, Winky_53, Breezona_53, Finemlucis_53, BobsGarage_53, Gardann_53, Netyap_54, Wilder_53, Rumpelstiltskin_52, BigCheese_53, Faith1_53, MkaliMitinis3_54, Miley16_53, LilDestine_53, DrSeegs_53, Lewan_54, GuelaD_52
- Track 6 : Tourach_52
- Track 7 : ZhongYanYuan_51, Claus_53, DHan_54
- Track 8 : Loadrie_52
- Track 9 : Bazzle_53, Archie_53
- Track 10 : Baoshan_51
- Track 11 : DanBing_53
- Track 12 : LiyuLake_50, BourbonZero_51, Ellson_50, KirDoubleO7_49, DuncansLeg_50
- Track 13 : Lolly9_50, MiniLon_52, MiniMac_52
- Track 14 : Jobypre_51, MsGreen_50, Samty_50, Clautastrophe_50, Kingsolomon_50, Lumos_51, Bellis_50, Snenia_50, TriFive_51, Nicholas_50
- Track 15 : Whirlwind_51
- Track 16 : Krypton555_52
- Track 17 : Finnry_49
- Track 18 : Jubie_50
- Track 19 : Moostard_50
- Track 20 : Quby_49
- Track 21 : Chaser_48
- Track 22 : DyoEdafos_52
- Track 23 : BrainDrainer_50, PYPDinur_48, Douzhi_50, Sheng711_50, Douge_49
- Track 24 : Kropertea_48
- Track 25 : Bromden_51
- Track 26 : FarmResident_50

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 66 of the 66 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, BourbonZero_51, BrainDrainer_50, Breezona_53, Bromden_51, Calm_51, Chaser_48, CicholasNage_50, Claus_53, Clautastrophe_50, Crossroads_53, DHan_54, DanBing_53, DirkDirk_49, Douge_49, Douzhi_50, DrSeegs_53, DuncansLeg_50, DyoEdafos_52, Ellson_50, Enceladus_49, Faith1_53, FarmResident_50, Finemlucis_53, Finnry_49, Gardann_53, GuuelaD_52, Hafay_54, Halena_49, Itos_52, Jobypre_51, JoeDirt_49, Jubie_50, Kahlid_53, Kingsolomon_50, KirDoubleO7_49, Kropertea_48, Krypton555_52, LeBron_50, Lewan_54, LilDestine_53, LiyuLake_50, Loadrie_52, Lolly9_50, Lumos_51, MAckerman_50, Miley16_53, MiniLon_52, MiniMac_52, MkaliMitinis3_54, Moostard_50, MsGreen_50, Netyap_54, Nicholas_50, Nicholasp3_53, OhShagHennessy_48, PYPDinur_48, Poochiewood_50, Quby_49, Rose5_50, Rumpelstiltskin_52, Samty_50, Sarshaun_53, Sheng711_50, Silverleaf_50, Snenia_50, Soap141_53, Tourach_52, TriFive_51, Tyson_50, UPIE_50, Vetrix_53, Wamburgxpress_50, Whirlwind_51, Wigglewiggles_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 89 of 89 (100.0%) of genes in pham
- Manual Annotations of this start: 66 of 66
- 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), BourbonZero_51 (L3), BrainDrainer_50 (L4), Breezona_53 (L2), Bromden_51 (L4), Calm_51 (L1), Chaser_48 (L4), CicholasNage_50 (L1), Claus_53 (L2), Clautastrophe_50 (L3), Crossroads_53 (L2), DHan_54 (L2), DanBing_53 (L2), DirkDirk_49 (L1), Douge_49 (L4), Douzhi_50 (L4), DrSeegs_53 (L2), DuncansLeg_50 (L3), DyoEdafos_52 (L4), Ellson_50 (L3), Enceladus_49 (L1), Faith1_53 (L2), FarmResident_50 (L4), 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), KirDoubleO7_49 (L3), Kropertea_48 (L4), Krypton555_52 (L3), LeBron_50 (L1), Lewan_54 (L2), LilDestine_53 (L2), LiyuLake_50 (L3), Loadrie_52 (L2), Lolly9_50 (L3), Lumos_51 (L3), MAckerman_50 (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), PYPDinur_48 (L4), Poochiewood_50

(L1), Quby_49 (L4), Rose5_50 (L1), Rumpelstiltskin_52 (L2), Samty_50 (L3), Sarshaun_53 (L2), Sheng711_50 (L4), Silverleaf_50 (L1), Snenia_50 (L3), Soap141_53 (L2), Tourach_52 (L2), TriFive_51 (L3), Tyson_50 (L1), UPIE_50 (L1), Vetrux_53 (L2), Wamburgexpress_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 19 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 4 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 66 MA's), (7, 38020), (11, 38089), (12, 38104), (13, 38113), (18, 38134), (19, 38164), (20, 38203), (32, 38335), (36, 38386), (41, 38404),

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

Candidate Starts for Appletree2_49:

(Start: 6 @37838 has 66 MA's), (7, 37853), (11, 37922), (12, 37937), (13, 37946), (18, 37967), (19, 37997), (20, 38036), (32, 38168), (36, 38219), (41, 38237),

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

Candidate Starts for Archie_53:

(Start: 6 @39956 has 66 MA's), (8, 39998), (12, 40049), (13, 40058), (17, 40076), (24, 40199), (25, 40202), (27, 40229), (44, 40379),

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

Candidate Starts for AvadaKedavra_50:

(Start: 6 @37907 has 66 MA's), (7, 37922), (11, 37991), (12, 38006), (13, 38015), (18, 38036), (19, 38066), (20, 38105), (32, 38237), (36, 38288),

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

Candidate Starts for Baoshan_51:

(Start: 6 @39640 has 66 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 66 MA's), (8, 40068), (12, 40119), (13, 40128), (17, 40146), (24, 40269), (25, 40272), (27, 40299), (44, 40449),

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

Candidate Starts for Bellis_50:

(Start: 6 @39683 has 66 MA's), (8, 39725), (12, 39776), (13, 39785), (16, 39797), (17, 39803), (23, 39908), (24, 39926), (25, 39929), (42, 40070),

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

Candidate Starts for BigCheese_53:

(Start: 6 @39745 has 66 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 66 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: BourbonZero_51 Start: 39723, Stop: 40115, Start Num: 6

Candidate Starts for BourbonZero_51:

(Start: 6 @39723 has 66 MA's), (8, 39765), (12, 39816), (13, 39825), (16, 39837), (17, 39843), (19, 39876), (23, 39948), (42, 40110),

Gene: BrainDrainer_50 Start: 38369, Stop: 38800, Start Num: 6

Candidate Starts for BrainDrainer_50:

(Start: 6 @38369 has 66 MA's), (9, 38429), (10, 38435), (12, 38462), (13, 38471), (15, 38480), (17, 38489), (27, 38642), (31, 38681), (36, 38735), (40, 38756), (47, 38795),

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

Candidate Starts for Breezona_53:

(Start: 6 @39745 has 66 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 66 MA's), (8, 39227), (12, 39278), (14, 39293), (16, 39299), (21, 39383), (27, 39458), (30, 39494), (34, 39518), (36, 39551), (40, 39575),

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

Candidate Starts for Calm_51:

(Start: 6 @38020 has 66 MA's), (7, 38035), (11, 38104), (12, 38119), (13, 38128), (18, 38149), (19, 38179), (20, 38218), (32, 38350), (36, 38401), (41, 38419),

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

Candidate Starts for Chaser_48:

(Start: 6 @38128 has 66 MA's), (12, 38221), (13, 38230), (15, 38239), (17, 38248), (26, 38398), (27, 38401), (31, 38440), (36, 38494), (40, 38515), (44, 38536), (47, 38554),

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

Candidate Starts for CicholasNage_50:

(Start: 6 @38041 has 66 MA's), (7, 38056), (11, 38125), (12, 38140), (13, 38149), (18, 38170), (19, 38200), (20, 38239), (32, 38371), (36, 38422), (41, 38440),

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

Candidate Starts for Claus_53:

(Start: 6 @39792 has 66 MA's), (8, 39834), (12, 39885), (13, 39894), (17, 39912), (19, 39945), (22, 40014), (24, 40035), (25, 40038), (33, 40116), (43, 40212), (48, 40236),

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

Candidate Starts for Clautastrophe_50:

(Start: 6 @39680 has 66 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (42, 40067),

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

Candidate Starts for Crossroads_53:

(Start: 6 @39815 has 66 MA's), (8, 39857), (12, 39908), (13, 39917), (17, 39935), (24, 40058), (28, 40091), (29, 40094), (31, 40127),

Gene: DHan_54 Start: 39695, Stop: 40144, Start Num: 6

Candidate Starts for DHan_54:

(Start: 6 @39695 has 66 MA's), (8, 39737), (12, 39788), (13, 39797), (17, 39815), (19, 39848), (22, 39917), (24, 39938), (25, 39941), (33, 40019), (43, 40115), (48, 40139),

Gene: DanBing_53 Start: 39645, Stop: 40094, Start Num: 6

Candidate Starts for DanBing_53:

(Start: 6 @39645 has 66 MA's), (8, 39687), (12, 39738), (13, 39747), (17, 39765), (19, 39798), (22, 39867), (24, 39888), (25, 39891), (33, 39969), (43, 40065),

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

Candidate Starts for DirkDirk_49:

(Start: 6 @37884 has 66 MA's), (7, 37899), (11, 37968), (12, 37983), (13, 37992), (18, 38013), (19, 38043), (20, 38082), (32, 38214), (36, 38265), (41, 38283),

Gene: Douge_49 Start: 38123, Stop: 38554, Start Num: 6

Candidate Starts for Douge_49:

(Start: 6 @38123 has 66 MA's), (9, 38183), (10, 38189), (12, 38216), (13, 38225), (15, 38234), (17, 38243), (27, 38396), (31, 38435), (36, 38489), (40, 38510), (47, 38549),

Gene: Douzhi_50 Start: 38197, Stop: 38628, Start Num: 6

Candidate Starts for Douzhi_50:

(Start: 6 @38197 has 66 MA's), (9, 38257), (10, 38263), (12, 38290), (13, 38299), (15, 38308), (17, 38317), (27, 38470), (31, 38509), (36, 38563), (40, 38584), (47, 38623),

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

Candidate Starts for DrSeegs_53:

(Start: 6 @39745 has 66 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 66 MA's), (8, 39748), (12, 39799), (13, 39808), (16, 39820), (17, 39826), (19, 39859), (23, 39931), (42, 40093),

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

Candidate Starts for DyoEdafos_52:

(Start: 6 @38404 has 66 MA's), (11, 38482), (12, 38497), (17, 38524), (26, 38674), (34, 38737), (36, 38770), (37, 38785), (40, 38791), (47, 38827),

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

Candidate Starts for Ellson_50:

(Start: 6 @39736 has 66 MA's), (8, 39778), (12, 39829), (13, 39838), (16, 39850), (17, 39856), (19, 39889), (23, 39961), (42, 40123),

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

Candidate Starts for Enceladus_49:

(Start: 6 @37879 has 66 MA's), (7, 37894), (11, 37963), (12, 37978), (13, 37987), (18, 38008), (19, 38038), (20, 38077), (32, 38209), (36, 38260), (41, 38278),

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

Candidate Starts for Faith1_53:

(Start: 6 @39745 has 66 MA's), (8, 39787), (12, 39838), (13, 39847), (17, 39865), (24, 39988), (28, 40021), (29, 40024), (31, 40057),

Gene: FarmResident_50 Start: 38125, Stop: 38589, Start Num: 6

Candidate Starts for FarmResident_50:

(Start: 6 @38125 has 66 MA's), (10, 38191), (12, 38218), (13, 38227), (15, 38236), (17, 38245), (26, 38395), (27, 38398), (31, 38437), (35, 38479), (36, 38491), (40, 38512), (46, 38545), (49, 38584),

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

Candidate Starts for Finemlucis_53:

(Start: 6 @40066 has 66 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 66 MA's), (8, 39987), (12, 40038), (13, 40047), (16, 40059), (17, 40065), (23, 40170), (24, 40188), (25, 40191), (42, 40332),

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

Candidate Starts for Gardann_53:

(Start: 6 @39781 has 66 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 66 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 66 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 66 MA's), (7, 37936), (11, 38005), (12, 38020), (13, 38029), (18, 38050), (19, 38080), (20, 38119), (32, 38251), (36, 38302), (41, 38320),

Gene: Itos_52 Start: 38651, Stop: 39070, Start Num: 6

Candidate Starts for Itos_52:

(Start: 6 @38651 has 66 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 66 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (42, 40067),

Gene: JoeDirt_49 Start: 37878, Stop: 38294, Start Num: 6

Candidate Starts for JoeDirt_49:

(Start: 6 @37878 has 66 MA's), (7, 37893), (11, 37962), (12, 37977), (13, 37986), (18, 38007), (19, 38037), (20, 38076), (32, 38208), (36, 38259), (41, 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 66 MA's), (8, 39857), (12, 39908), (13, 39917), (16, 39929), (17, 39935), (23, 40040), (24, 40058), (25, 40061), (42, 40202),

Gene: Kahlid_53 Start: 39751, Stop: 40170, Start Num: 6

Candidate Starts for Kahlid_53:

(Start: 6 @39751 has 66 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 66 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (42, 40067),

Gene: KirDoubleO7_49 Start: 39710, Stop: 40102, Start Num: 6

Candidate Starts for KirDoubleO7_49:

(Start: 6 @39710 has 66 MA's), (8, 39752), (12, 39803), (13, 39812), (16, 39824), (17, 39830), (19, 39863), (23, 39935), (42, 40097),

Gene: Kropertea_48 Start: 38303, Stop: 38731, Start Num: 6

Candidate Starts for Kropertea_48:

(Start: 6 @38303 has 66 MA's), (11, 38381), (12, 38396), (17, 38423), (26, 38573), (27, 38576), (34, 38636), (36, 38669), (37, 38684), (40, 38690), (47, 38726),

Gene: Krypton555_52 Start: 39917, Stop: 40312, Start Num: 6

Candidate Starts for Krypton555_52:

(1, 39647), (3, 39701), (Start: 6 @39917 has 66 MA's), (8, 39959), (10, 39983), (11, 39995), (12, 40010), (13, 40019), (16, 40031), (17, 40037), (19, 40070), (42, 40304),

Gene: LeBron_50 Start: 37922, Stop: 38338, Start Num: 6

Candidate Starts for LeBron_50:

(Start: 6 @37922 has 66 MA's), (7, 37937), (11, 38006), (12, 38021), (13, 38030), (18, 38051), (19, 38081), (20, 38120), (32, 38252), (36, 38303), (41, 38321),

Gene: Lewan_54 Start: 39804, Stop: 40223, Start Num: 6

Candidate Starts for Lewan_54:

(Start: 6 @39804 has 66 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 66 MA's), (8, 39820), (12, 39871), (13, 39880), (17, 39898), (24, 40021), (28, 40054), (29, 40057), (31, 40090),

Gene: LiyuLake_50 Start: 39726, Stop: 40118, Start Num: 6

Candidate Starts for LiyuLake_50:

(Start: 6 @39726 has 66 MA's), (8, 39768), (12, 39819), (13, 39828), (16, 39840), (17, 39846), (19, 39879), (23, 39951), (42, 40113),

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

Candidate Starts for Loadrie_52:

(Start: 6 @39805 has 66 MA's), (8, 39847), (12, 39898), (13, 39907), (17, 39925), (22, 40027), (24, 40048), (25, 40051), (27, 40078), (43, 40225),

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

Candidate Starts for Lolly9_50:

(Start: 6 @39499 has 66 MA's), (8, 39541), (12, 39592), (13, 39601), (16, 39613), (17, 39619), (23, 39724), (24, 39742), (25, 39745), (33, 39823), (42, 39886),

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

Candidate Starts for Lumos_51:

(Start: 6 @39677 has 66 MA's), (8, 39719), (12, 39770), (13, 39779), (16, 39791), (17, 39797), (23, 39902), (24, 39920), (25, 39923), (42, 40064),

Gene: MAckerman_50 Start: 37914, Stop: 38330, Start Num: 6

Candidate Starts for MAckerman_50:

(Start: 6 @37914 has 66 MA's), (7, 37929), (11, 37998), (12, 38013), (13, 38022), (18, 38043), (19, 38073), (20, 38112), (32, 38244), (36, 38295), (41, 38313),

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

Candidate Starts for Miley16_53:

(Start: 6 @39745 has 66 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 66 MA's), (8, 39542), (12, 39593), (13, 39602), (16, 39614), (17, 39620), (23, 39725), (24, 39743), (25, 39746), (33, 39824), (42, 39887),

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

Candidate Starts for MiniMac_52:

(Start: 6 @39498 has 66 MA's), (8, 39540), (12, 39591), (13, 39600), (16, 39612), (17, 39618), (23, 39723), (24, 39741), (25, 39744), (33, 39822), (42, 39885),

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

Candidate Starts for MkaliMitinis3_54:

(Start: 6 @39817 has 66 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 66 MA's), (8, 39725), (12, 39776), (13, 39785), (16, 39797), (17, 39803), (24, 39926), (25, 39929), (38, 40061), (42, 40070),

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

Candidate Starts for MsGreen_50:

(Start: 6 @39680 has 66 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (42, 40067),

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

Candidate Starts for Netyap_54:

(Start: 6 @39746 has 66 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 66 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (42, 40067),

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

Candidate Starts for Nicholasp3_53:

(Start: 6 @39781 has 66 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 66 MA's), (7, 36923), (11, 36992), (12, 37007), (13, 37016), (18, 37037), (19, 37067), (20, 37106), (36, 37289), (41, 37307),

Gene: PYPDinur_48 Start: 38230, Stop: 38661, Start Num: 6

Candidate Starts for PYPDinur_48:

(Start: 6 @38230 has 66 MA's), (9, 38290), (10, 38296), (12, 38323), (13, 38332), (15, 38341), (17, 38350), (27, 38503), (31, 38542), (36, 38596), (40, 38617), (47, 38656),

Gene: Pochiewood_50 Start: 37993, Stop: 38409, Start Num: 6

Candidate Starts for Pochiewood_50:

(Start: 6 @37993 has 66 MA's), (7, 38008), (11, 38077), (12, 38092), (13, 38101), (18, 38122), (19, 38152), (20, 38191), (32, 38323), (36, 38374), (41, 38392),

Gene: Quby_49 Start: 38083, Stop: 38514, Start Num: 6

Candidate Starts for Quby_49:

(Start: 6 @38083 has 66 MA's), (10, 38149), (12, 38176), (13, 38185), (15, 38194), (17, 38203), (27, 38356), (31, 38395), (36, 38449), (37, 38464), (40, 38470), (44, 38491), (47, 38509),

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

Candidate Starts for Rose5_50:

(Start: 6 @38005 has 66 MA's), (7, 38020), (11, 38089), (12, 38104), (13, 38113), (18, 38134), (19, 38164), (20, 38203), (32, 38335), (36, 38386), (41, 38404),

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

Candidate Starts for Rumpelstiltskin_52:

(Start: 6 @39174 has 66 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 66 MA's), (8, 39724), (12, 39775), (13, 39784), (16, 39796), (17, 39802), (23, 39907), (24, 39925), (25, 39928), (42, 40069),

Gene: Sarshaun_53 Start: 39842, Stop: 40261, Start Num: 6

Candidate Starts for Sarshaun_53:

(Start: 6 @39842 has 66 MA's), (8, 39884), (12, 39935), (13, 39944), (17, 39962), (24, 40085), (28, 40118), (29, 40121), (31, 40154),

Gene: Sheng711_50 Start: 38207, Stop: 38638, Start Num: 6

Candidate Starts for Sheng711_50:

(Start: 6 @38207 has 66 MA's), (9, 38267), (10, 38273), (12, 38300), (13, 38309), (15, 38318), (17, 38327), (27, 38480), (31, 38519), (36, 38573), (40, 38594), (47, 38633),

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

Candidate Starts for Silverleaf_50:

(Start: 6 @37900 has 66 MA's), (7, 37915), (11, 37984), (12, 37999), (13, 38008), (18, 38029), (19, 38059), (20, 38098), (32, 38230), (36, 38281),

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

Candidate Starts for Snenia_50:

(Start: 6 @39681 has 66 MA's), (8, 39723), (12, 39774), (13, 39783), (16, 39795), (17, 39801), (23, 39906), (24, 39924), (25, 39927), (42, 40068),

Gene: Soap141_53 Start: 39842, Stop: 40261, Start Num: 6

Candidate Starts for Soap141_53:

(Start: 6 @39842 has 66 MA's), (8, 39884), (12, 39935), (13, 39944), (17, 39962), (24, 40085), (28, 40118), (29, 40121), (31, 40154),

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

Candidate Starts for Tourach_52:

(Start: 6 @39805 has 66 MA's), (8, 39847), (12, 39898), (13, 39907), (17, 39925), (24, 40048), (28, 40081), (31, 40117), (43, 40201), (45, 40213),

Gene: TriFive_51 Start: 39680, Stop: 40075, Start Num: 6

Candidate Starts for TriFive_51:

(Start: 6 @39680 has 66 MA's), (8, 39722), (12, 39773), (13, 39782), (16, 39794), (17, 39800), (23, 39905), (24, 39923), (25, 39926), (42, 40067),

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

Candidate Starts for Tyson_50:

(Start: 6 @38007 has 66 MA's), (7, 38022), (11, 38091), (12, 38106), (13, 38115), (18, 38136), (19, 38166), (20, 38205), (32, 38337), (36, 38388), (41, 38406),

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

Candidate Starts for UPIE_50:

(Start: 6 @37893 has 66 MA's), (7, 37908), (11, 37977), (12, 37992), (13, 38001), (18, 38022), (19, 38052), (20, 38091), (32, 38223), (36, 38274), (41, 38292),

Gene: Vetric_53 Start: 39786, Stop: 40205, Start Num: 6

Candidate Starts for Vetric_53:

(Start: 6 @39786 has 66 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 66 MA's), (7, 37924), (11, 37993), (12, 38008), (13, 38017), (18, 38038), (19, 38068), (20, 38107), (32, 38239), (36, 38290), (41, 38308),

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

Candidate Starts for Whirlwind_51:

(Start: 6 @39496 has 66 MA's), (8, 39538), (10, 39562), (11, 39574), (12, 39589), (13, 39598), (16, 39610), (17, 39616), (19, 39649), (42, 39883),

Gene: Wigglewigggle_53 Start: 39806, Stop: 40225, Start Num: 6

Candidate Starts for Wigglewigggle_53:

(Start: 6 @39806 has 66 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 66 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 66 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 66 MA's), (7, 38020), (11, 38089), (12, 38104), (13, 38113), (18, 38134), (19, 38164), (20, 38203), (32, 38335), (36, 38386), (41, 38404),

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

Candidate Starts for Zakai_53:

(Start: 6 @40071 has 66 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 66 MA's), (7, 38035), (11, 38104), (12, 38119), (13, 38128), (18, 38149), (19, 38179), (20, 38218), (32, 38350), (36, 38401), (41, 38419),

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

Candidate Starts for ZhongYanYuan_51:

(Start: 6 @39605 has 66 MA's), (8, 39647), (12, 39698), (13, 39707), (17, 39725), (19, 39758), (22, 39827), (24, 39848), (25, 39851), (33, 39929), (43, 40025), (48, 40049),