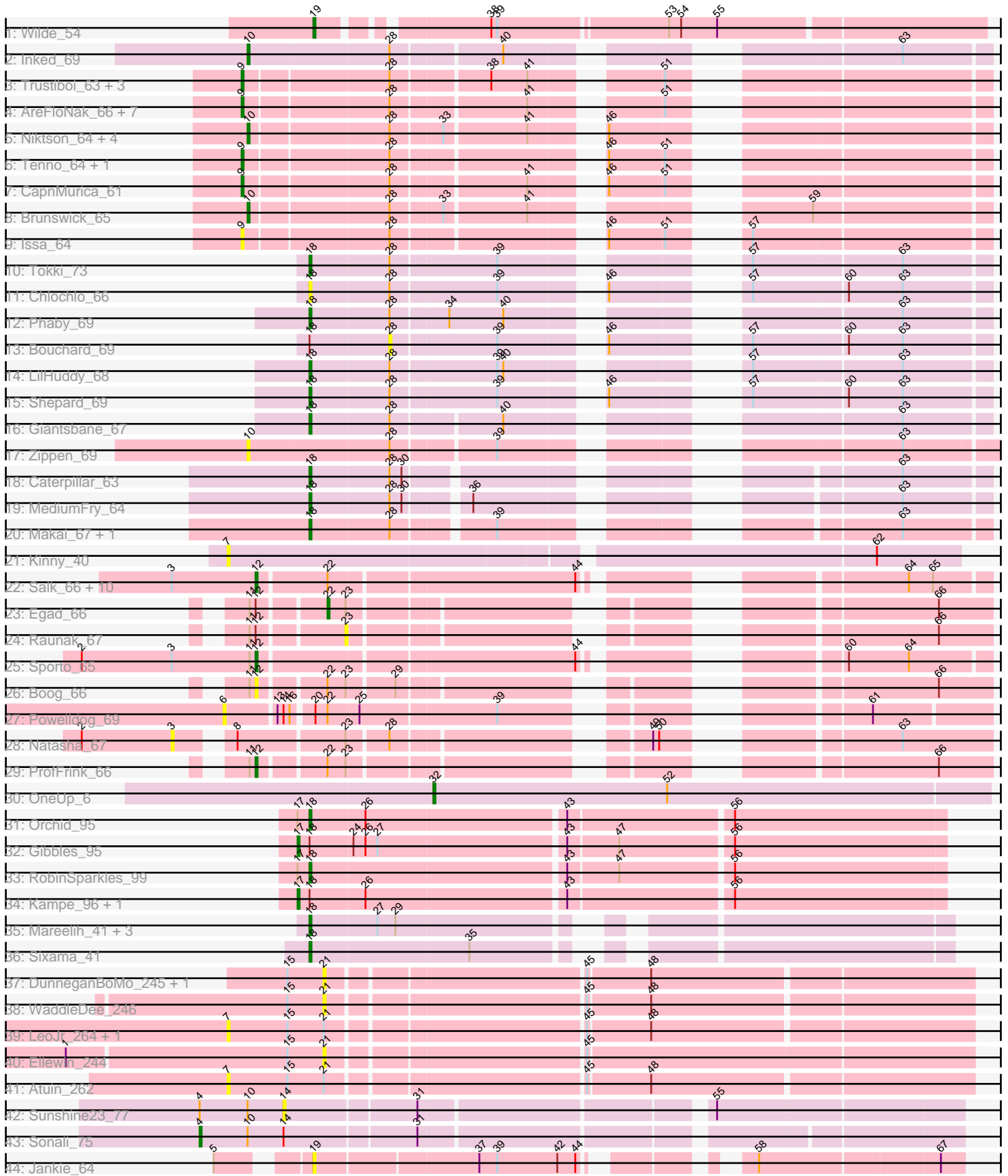


Pham 202895



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 202895 Report

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

Pham number 202895 has 76 members, 22 are drafts.

Phages represented in each track:

- Track 1 : Wilde_54
- Track 2 : Inked_69
- Track 3 : Trustiboi_63, Nightmare_65, Breylor17_63, CastorTray_67
- Track 4 : AreFloNak_66, ScienceWizSam_64, Gordon_61, DevitoJr_63, Darby_62, Nivinsha_66, Tatanka_59, Synepsis_62
- Track 5 : Niktson_64, ElephantMan_64, LucySwiss_65, Teacup_65, Acai_64
- Track 6 : Tenno_64, MiniBagel_63
- Track 7 : CapnMurica_61
- Track 8 : Brunswick_65
- Track 9 : Issa_64
- Track 10 : Tokki_73
- Track 11 : Chlochlo_66
- Track 12 : Phaby_69
- Track 13 : Bouchard_69
- Track 14 : LilHuddy_68
- Track 15 : Shepard_69
- Track 16 : Giantsbane_67
- Track 17 : Zippen_69
- Track 18 : Caterpillar_63
- Track 19 : MediumFry_64
- Track 20 : Makai_67, Truckee_65
- Track 21 : Kinny_40
- Track 22 : Salk_66, Sloopyjoe_66, Stayer_66, Linda_66, StarLord_66, Michelle_66, Shiba_65, DoctorPepper_65, MrAaronian_66, Djungelskog_65, BronxBay_66
- Track 23 : Egad_66
- Track 24 : Raunak_67
- Track 25 : Sporto_65
- Track 26 : Boog_66
- Track 27 : PowellDog_69
- Track 28 : Natasha_67
- Track 29 : ProfFrink_66
- Track 30 : OneUp_6
- Track 31 : Orchid_95
- Track 32 : Gibbles_95
- Track 33 : RobinSparkles_99
- Track 34 : Kampe_96, PatrickStar_96
- Track 35 : Mareelih_41, BlueNGold_41, Boopy_43, Forza_42

- Track 36 : Sixama_41
- Track 37 : DunneganBoMo_245, KSunshine22_244
- Track 38 : WaddleDee_246
- Track 39 : LeoJr_264, ReginaGlobina_266
- Track 40 : Ellewin_244
- Track 41 : Atuin_262
- Track 42 : Sunshine23_77
- Track 43 : Sonali_75
- Track 44 : Jankie_64

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

The start number called the most often in the published annotations is 18, it was called in 16 of the 54 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BlueNGold_41, Boopy_43, Caterpillar_63, Chlochlo_66, Forza_42, Giantsbane_67, LilHuddy_68, Makai_67, Mareelih_41, MediumFry_64, Orchid_95, Phaby_69, RobinSparkles_99, Shepard_69, Sixama_41, Tokki_73, Truckee_65,

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

- Bouchard_69, Gibbles_95, Kampe_96, PatrickStar_96,

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

- Acai_64, AreFloNak_66, Atuin_262, Boog_66, Breylor17_63, BronxBay_66, Brunswick_65, CapnMurica_61, CastorTray_67, Darby_62, DevitoJr_63, Djungelskog_65, DoctorPepper_65, DunneganBoMo_245, Egad_66, ElephantMan_64, Ellewin_244, Gordon_61, Inked_69, Issa_64, Jankie_64, KSunshine22_244, Kinny_40, LeoJr_264, Linda_66, LucySwiss_65, Michelle_66, MiniBagel_63, MrAaronian_66, Natasha_67, Nightmare_65, Niktson_64, Nivinsha_66, OneUp_6, PowellDog_69, ProfFrink_66, Raunak_67, ReginaGlobina_266, Salk_66, ScienceWizSam_64, Shiba_65, Sloopyjoe_66, Sonali_75, Sporto_65, StarLord_66, Stayer_66, Sunshine23_77, Synepsis_62, Tatanka_59, Teacup_65, Tenno_64, Trustiboi_63, WaddleDee_246, Wilde_54, Zippen_69,

Summary by start number:

Start 3:

- Found in 13 of 76 (17.1%) of genes in pham
- No Manual Annotations of this start.
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Natasha_67 (AW),

Start 4:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Sonali_75 (FG),

Start 6:

- Found in 1 of 76 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Powellldog_69 (AW),

Start 7:

- Found in 4 of 76 (5.3%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin_262 (FC), Kinny_40 (AU6), LeoJr_264 (FC), ReginaGlobina_266 (FC),

Start 9:

- Found in 16 of 76 (21.1%) of genes in pham
- Manual Annotations of this start: 13 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AreFloNak_66 (AU1), Breylor17_63 (AU1), CapnMurica_61 (AU1), CastorTray_67 (AU1), Darby_62 (AU1), DevitoJr_63 (AU1), Gordon_61 (AU1), Issa_64 (AU1), MiniBagel_63 (AU1), Nightmare_65 (AU1), Nivinsha_66 (AU1), ScienceWizSam_64 (AU1), Synepsis_62 (AU1), Tatanka_59 (AU1), Tenno_64 (AU1), Trustiboi_63 (AU1),

Start 10:

- Found in 10 of 76 (13.2%) of genes in pham
- Manual Annotations of this start: 5 of 54
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Acai_64 (AU1), Brunswick_65 (AU1), ElephantMan_64 (AU1), Inked_69 (AU), LucySwiss_65 (AU1), Niktson_64 (AU1), Teacup_65 (AU1), Zippen_69 (AU3),

Start 12:

- Found in 16 of 76 (21.1%) of genes in pham
- Manual Annotations of this start: 13 of 54
- Called 87.5% of time when present
- Phage (with cluster) where this start called: Boog_66 (AW), BronxBay_66 (AW), Djungelskog_65 (AW), DoctorPepper_65 (AW), Linda_66 (AW), Michelle_66 (AW), MrAaronian_66 (AW), ProfFrink_66 (AW), Salk_66 (AW), Shiba_65 (AW), Sloopyjoe_66 (AW), Sporto_65 (AW), StarLord_66 (AW), Stayer_66 (AW),

Start 14:

- Found in 3 of 76 (3.9%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Sunshine23_77 (FG),

Start 17:

- Found in 5 of 76 (6.6%) of genes in pham
- Manual Annotations of this start: 3 of 54
- Called 60.0% of time when present
- Phage (with cluster) where this start called: Gibbles_95 (CX), Kampe_96 (CX), PatrickStar_96 (CX),

Start 18:

- Found in 21 of 76 (27.6%) of genes in pham
- Manual Annotations of this start: 16 of 54
- Called 81.0% of time when present
- Phage (with cluster) where this start called: BlueNGold_41 (DS), Boopy_43 (DS), Caterpillar_63 (AU4), Chlochlo_66 (AU2), Forza_42 (DS), Giantsbane_67 (AU2), LilHuddy_68 (AU2), Makai_67 (AU5), Mareelih_41 (DS), MediumFry_64 (AU4), Orchid_95 (CX), Phaby_69 (AU2), RobinSparkles_99 (CX), Shepard_69 (AU2), Sixama_41 (DS), Tokki_73 (AU2), Truckee_65 (AU5),

Start 19:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jankie_64 (FP), Wilde_54 (AP1),

Start 21:

- Found in 7 of 76 (9.2%) of genes in pham
- No Manual Annotations of this start.
- Called 57.1% of time when present
- Phage (with cluster) where this start called: DunneganBoMo_245 (FC), Ellewin_244 (FC), KSunshine22_244 (FC), WaddleDee_246 (FC),

Start 22:

- Found in 15 of 76 (19.7%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Egad_66 (AW),

Start 23:

- Found in 5 of 76 (6.6%) of genes in pham
- No Manual Annotations of this start.
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Raunak_67 (AW),

Start 28:

- Found in 36 of 76 (47.4%) of genes in pham
- No Manual Annotations of this start.
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Bouchard_69 (AU2),

Start 32:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 54
- Called 100.0% of time when present
- Phage (with cluster) where this start called: OneUp_6 (CQ2),

Summary by clusters:

There are 15 clusters represented in this pham: FP, AU6, FC, AU2, AP1, AU1, AU3, CX, AU5, AU4, AW, FG, CQ2, AU, DS,

Info for manual annotations of cluster AP1:

- Start number 19 was manually annotated 1 time for cluster AP1.

Info for manual annotations of cluster AU:

- Start number 10 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU1:

- Start number 9 was manually annotated 13 times for cluster AU1.
- Start number 10 was manually annotated 4 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 18 was manually annotated 5 times for cluster AU2.

Info for manual annotations of cluster AU4:

- Start number 18 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 18 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AW:

- Start number 12 was manually annotated 13 times for cluster AW.
- Start number 22 was manually annotated 1 time for cluster AW.

Info for manual annotations of cluster CQ2:

- Start number 32 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CX:

- Start number 17 was manually annotated 3 times for cluster CX.
- Start number 18 was manually annotated 2 times for cluster CX.

Info for manual annotations of cluster DS:

- Start number 18 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster FG:

- Start number 4 was manually annotated 1 time for cluster FG.

Gene Information:

Gene: Acai_64 Start: 44756, Stop: 45067, Start Num: 10

Candidate Starts for Acai_64:

(Start: 10 @44756 has 5 MA's), (28, 44822), (33, 44846), (41, 44885), (46, 44909),

Gene: AreFloNak_66 Start: 44576, Stop: 44890, Start Num: 9

Candidate Starts for AreFloNak_66:

(Start: 9 @44576 has 13 MA's), (28, 44645), (41, 44708), (51, 44759),

Gene: Atuin_262 Start: 161281, Stop: 161634, Start Num: 7

Candidate Starts for Atuin_262:

(7, 161281), (15, 161311), (21, 161329), (45, 161449), (48, 161479),

Gene: BlueNGold_41 Start: 14735, Stop: 14454, Start Num: 18

Candidate Starts for BlueNGold_41:

(Start: 18 @14735 has 16 MA's), (27, 14702), (29, 14693),

Gene: Boog_66 Start: 42487, Stop: 42786, Start Num: 12

Candidate Starts for Boog_66:

(11, 42484), (Start: 12 @42487 has 13 MA's), (Start: 22 @42517 has 1 MA's), (23, 42526), (29, 42547), (66, 42760),

Gene: Boopy_43 Start: 14747, Stop: 14466, Start Num: 18

Candidate Starts for Boopy_43:

(Start: 18 @14747 has 16 MA's), (27, 14714), (29, 14705),

Gene: Bouchard_69 Start: 45490, Stop: 45738, Start Num: 28

Candidate Starts for Bouchard_69:

(Start: 18 @45451 has 16 MA's), (28, 45490), (39, 45541), (46, 45580), (57, 45625), (60, 45670), (63, 45697),

Gene: Breylor17_63 Start: 45151, Stop: 45465, Start Num: 9

Candidate Starts for Breylor17_63:

(Start: 9 @45151 has 13 MA's), (28, 45220), (38, 45265), (41, 45283), (51, 45334),

Gene: BronxBay_66 Start: 42743, Stop: 43054, Start Num: 12

Candidate Starts for BronxBay_66:

(3, 42701), (Start: 12 @42743 has 13 MA's), (Start: 22 @42776 has 1 MA's), (44, 42893), (64, 43016), (65, 43028),

Gene: Brunswick_65 Start: 44599, Stop: 44910, Start Num: 10

Candidate Starts for Brunswick_65:

(Start: 10 @44599 has 5 MA's), (28, 44665), (33, 44689), (41, 44728), (59, 44827),

Gene: CapnMurica_61 Start: 45337, Stop: 45651, Start Num: 9

Candidate Starts for CapnMurica_61:

(Start: 9 @45337 has 13 MA's), (28, 45406), (41, 45469), (46, 45493), (51, 45520),

Gene: CastorTray_67 Start: 45340, Stop: 45654, Start Num: 9

Candidate Starts for CastorTray_67:

(Start: 9 @45340 has 13 MA's), (28, 45409), (38, 45454), (41, 45472), (51, 45523),

Gene: Caterpillar_63 Start: 44268, Stop: 44546, Start Num: 18

Candidate Starts for Caterpillar_63:

(Start: 18 @44268 has 16 MA's), (28, 44307), (30, 44313), (63, 44505),

Gene: Chlochlo_66 Start: 44978, Stop: 45265, Start Num: 18

Candidate Starts for Chlochlo_66:

(Start: 18 @44978 has 16 MA's), (28, 45017), (39, 45068), (46, 45107), (57, 45152), (60, 45197), (63, 45224),

Gene: Darby_62 Start: 44386, Stop: 44700, Start Num: 9

Candidate Starts for Darby_62:

(Start: 9 @44386 has 13 MA's), (28, 44455), (41, 44518), (51, 44569),

Gene: DevitoJr_63 Start: 44772, Stop: 45086, Start Num: 9
Candidate Starts for DevitoJr_63:
(Start: 9 @44772 has 13 MA's), (28, 44841), (41, 44904), (51, 44955),

Gene: Djungelskog_65 Start: 42742, Stop: 43056, Start Num: 12
Candidate Starts for Djungelskog_65:
(3, 42700), (Start: 12 @42742 has 13 MA's), (Start: 22 @42775 has 1 MA's), (44, 42895), (64, 43018),
(65, 43030),

Gene: DoctorPepper_65 Start: 42447, Stop: 42758, Start Num: 12
Candidate Starts for DoctorPepper_65:
(3, 42405), (Start: 12 @42447 has 13 MA's), (Start: 22 @42480 has 1 MA's), (44, 42597), (64, 42720),
(65, 42732),

Gene: DunneganBoMo_245 Start: 159407, Stop: 159712, Start Num: 21
Candidate Starts for DunneganBoMo_245:
(15, 159389), (21, 159407), (45, 159527), (48, 159557),

Gene: Egad_66 Start: 42768, Stop: 43037, Start Num: 22
Candidate Starts for Egad_66:
(11, 42735), (Start: 12 @42738 has 13 MA's), (Start: 22 @42768 has 1 MA's), (23, 42777), (66, 43011),

Gene: ElephantMan_64 Start: 45229, Stop: 45540, Start Num: 10
Candidate Starts for ElephantMan_64:
(Start: 10 @45229 has 5 MA's), (28, 45295), (33, 45319), (41, 45358), (46, 45382),

Gene: Ellewin_244 Start: 158948, Stop: 159256, Start Num: 21
Candidate Starts for Ellewin_244:
(1, 158822), (15, 158930), (21, 158948), (45, 159068),

Gene: Forza_42 Start: 14663, Stop: 14382, Start Num: 18
Candidate Starts for Forza_42:
(Start: 18 @14663 has 16 MA's), (27, 14630), (29, 14621),

Gene: Giantsbane_67 Start: 43961, Stop: 44245, Start Num: 18
Candidate Starts for Giantsbane_67:
(Start: 18 @43961 has 16 MA's), (28, 44000), (40, 44051), (63, 44204),

Gene: Gibbles_95 Start: 69566, Stop: 69255, Start Num: 17
Candidate Starts for Gibbles_95:
(Start: 17 @69566 has 3 MA's), (Start: 18 @69560 has 16 MA's), (24, 69539), (26, 69533), (27, 69527),
(43, 69437), (47, 69413), (56, 69359),

Gene: Gordon_61 Start: 45264, Stop: 45578, Start Num: 9
Candidate Starts for Gordon_61:
(Start: 9 @45264 has 13 MA's), (28, 45333), (41, 45396), (51, 45447),

Gene: Inked_69 Start: 45815, Stop: 46129, Start Num: 10
Candidate Starts for Inked_69:
(Start: 10 @45815 has 5 MA's), (28, 45884), (40, 45935), (63, 46088),

Gene: Issa_64 Start: 44432, Stop: 44746, Start Num: 9

Candidate Starts for Issa_64:

(Start: 9 @44432 has 13 MA's), (28, 44501), (46, 44588), (51, 44615), (57, 44633),

Gene: Jankie_64 Start: 40246, Stop: 40524, Start Num: 19

Candidate Starts for Jankie_64:

(5, 40210), (Start: 19 @40246 has 1 MA's), (37, 40324), (39, 40333), (42, 40363), (44, 40372), (58, 40426), (67, 40513),

Gene: KSunshine22_244 Start: 158806, Stop: 159111, Start Num: 21

Candidate Starts for KSunshine22_244:

(15, 158788), (21, 158806), (45, 158926), (48, 158956),

Gene: Kampe_96 Start: 69516, Stop: 69205, Start Num: 17

Candidate Starts for Kampe_96:

(Start: 17 @69516 has 3 MA's), (Start: 18 @69510 has 16 MA's), (26, 69483), (43, 69387), (56, 69309),

Gene: Kinny_40 Start: 30437, Stop: 30787, Start Num: 7

Candidate Starts for Kinny_40:

(7, 30437), (62, 30746),

Gene: LeoJr_264 Start: 160668, Stop: 161021, Start Num: 7

Candidate Starts for LeoJr_264:

(7, 160668), (15, 160698), (21, 160716), (45, 160836), (48, 160866),

Gene: LilHuddy_68 Start: 45074, Stop: 45361, Start Num: 18

Candidate Starts for LilHuddy_68:

(Start: 18 @45074 has 16 MA's), (28, 45113), (39, 45164), (40, 45167), (57, 45248), (63, 45320),

Gene: Linda_66 Start: 42740, Stop: 43051, Start Num: 12

Candidate Starts for Linda_66:

(3, 42698), (Start: 12 @42740 has 13 MA's), (Start: 22 @42773 has 1 MA's), (44, 42890), (64, 43013), (65, 43025),

Gene: LucySwiss_65 Start: 44380, Stop: 44691, Start Num: 10

Candidate Starts for LucySwiss_65:

(Start: 10 @44380 has 5 MA's), (28, 44446), (33, 44470), (41, 44509), (46, 44533),

Gene: Makai_67 Start: 45228, Stop: 45506, Start Num: 18

Candidate Starts for Makai_67:

(Start: 18 @45228 has 16 MA's), (28, 45267), (39, 45312), (63, 45465),

Gene: Mareelih_41 Start: 14165, Stop: 13884, Start Num: 18

Candidate Starts for Mareelih_41:

(Start: 18 @14165 has 16 MA's), (27, 14132), (29, 14123),

Gene: MediumFry_64 Start: 44564, Stop: 44842, Start Num: 18

Candidate Starts for MediumFry_64:

(Start: 18 @44564 has 16 MA's), (28, 44603), (30, 44609), (36, 44636), (63, 44801),

Gene: Michelle_66 Start: 42742, Stop: 43053, Start Num: 12

Candidate Starts for Michelle_66:

(3, 42700), (Start: 12 @42742 has 13 MA's), (Start: 22 @42775 has 1 MA's), (44, 42892), (64, 43015), (65, 43027),

Gene: MiniBagel_63 Start: 45328, Stop: 45642, Start Num: 9
Candidate Starts for MiniBagel_63:
(Start: 9 @45328 has 13 MA's), (28, 45397), (46, 45484), (51, 45511),

Gene: MrAaronian_66 Start: 42742, Stop: 43053, Start Num: 12
Candidate Starts for MrAaronian_66:
(3, 42700), (Start: 12 @42742 has 13 MA's), (Start: 22 @42775 has 1 MA's), (44, 42892), (64, 43015),
(65, 43027),

Gene: Natasha_67 Start: 42650, Stop: 42982, Start Num: 3
Candidate Starts for Natasha_67:
(2, 42605), (3, 42650), (8, 42671), (23, 42722), (28, 42740), (49, 42845), (50, 42848), (63, 42938),

Gene: Nightmare_65 Start: 45626, Stop: 45940, Start Num: 9
Candidate Starts for Nightmare_65:
(Start: 9 @45626 has 13 MA's), (28, 45695), (38, 45740), (41, 45758), (51, 45809),

Gene: Niktson_64 Start: 45229, Stop: 45540, Start Num: 10
Candidate Starts for Niktson_64:
(Start: 10 @45229 has 5 MA's), (28, 45295), (33, 45319), (41, 45358), (46, 45382),

Gene: Nivinsha_66 Start: 44576, Stop: 44890, Start Num: 9
Candidate Starts for Nivinsha_66:
(Start: 9 @44576 has 13 MA's), (28, 44645), (41, 44708), (51, 44759),

Gene: OneUp_6 Start: 1509, Stop: 1234, Start Num: 32
Candidate Starts for OneUp_6:
(Start: 32 @1509 has 1 MA's), (52, 1392),

Gene: Orchid_95 Start: 69511, Stop: 69206, Start Num: 18
Candidate Starts for Orchid_95:
(Start: 17 @69517 has 3 MA's), (Start: 18 @69511 has 16 MA's), (26, 69484), (43, 69388), (56, 69310),

Gene: PatrickStar_96 Start: 69516, Stop: 69205, Start Num: 17
Candidate Starts for PatrickStar_96:
(Start: 17 @69516 has 3 MA's), (Start: 18 @69510 has 16 MA's), (26, 69483), (43, 69387), (56, 69309),

Gene: Phaby_69 Start: 45635, Stop: 45922, Start Num: 18
Candidate Starts for Phaby_69:
(Start: 18 @45635 has 16 MA's), (28, 45674), (34, 45701), (40, 45728), (63, 45881),

Gene: Powelldog_69 Start: 43177, Stop: 43494, Start Num: 6
Candidate Starts for Powelldog_69:
(6, 43177), (13, 43201), (14, 43204), (16, 43207), (20, 43216), (Start: 22 @43222 has 1 MA's), (25,
43237), (39, 43303), (61, 43438),

Gene: ProfFrink_66 Start: 42737, Stop: 43036, Start Num: 12
Candidate Starts for ProfFrink_66:
(11, 42734), (Start: 12 @42737 has 13 MA's), (Start: 22 @42767 has 1 MA's), (23, 42776), (66, 43010),

Gene: Raunak_67 Start: 42437, Stop: 42697, Start Num: 23
Candidate Starts for Raunak_67:

(11, 42395), (Start: 12 @42398 has 13 MA's), (23, 42437), (66, 42671),

Gene: ReginaGlobina_266 Start: 161874, Stop: 162227, Start Num: 7

Candidate Starts for ReginaGlobina_266:

(7, 161874), (15, 161904), (21, 161922), (45, 162042), (48, 162072),

Gene: RobinSparkles_99 Start: 69573, Stop: 69268, Start Num: 18

Candidate Starts for RobinSparkles_99:

(Start: 17 @69579 has 3 MA's), (Start: 18 @69573 has 16 MA's), (43, 69450), (47, 69426), (56, 69372),

Gene: Salk_66 Start: 42740, Stop: 43051, Start Num: 12

Candidate Starts for Salk_66:

(3, 42698), (Start: 12 @42740 has 13 MA's), (Start: 22 @42773 has 1 MA's), (44, 42890), (64, 43013), (65, 43025),

Gene: ScienceWizSam_64 Start: 44738, Stop: 45052, Start Num: 9

Candidate Starts for ScienceWizSam_64:

(Start: 9 @44738 has 13 MA's), (28, 44807), (41, 44870), (51, 44921),

Gene: Shepard_69 Start: 44933, Stop: 45220, Start Num: 18

Candidate Starts for Shepard_69:

(Start: 18 @44933 has 16 MA's), (28, 44972), (39, 45023), (46, 45062), (57, 45107), (60, 45152), (63, 45179),

Gene: Shiba_65 Start: 42398, Stop: 42709, Start Num: 12

Candidate Starts for Shiba_65:

(3, 42356), (Start: 12 @42398 has 13 MA's), (Start: 22 @42431 has 1 MA's), (44, 42548), (64, 42671), (65, 42683),

Gene: Sixama_41 Start: 13852, Stop: 13571, Start Num: 18

Candidate Starts for Sixama_41:

(Start: 18 @13852 has 16 MA's), (35, 13774),

Gene: Sloopyjoe_66 Start: 42744, Stop: 43055, Start Num: 12

Candidate Starts for Sloopyjoe_66:

(3, 42702), (Start: 12 @42744 has 13 MA's), (Start: 22 @42777 has 1 MA's), (44, 42894), (64, 43017), (65, 43029),

Gene: Sonali_75 Start: 48306, Stop: 48659, Start Num: 4

Candidate Starts for Sonali_75:

(Start: 4 @48306 has 1 MA's), (Start: 10 @48330 has 5 MA's), (14, 48348), (31, 48411),

Gene: Sporto_65 Start: 43859, Stop: 44170, Start Num: 12

Candidate Starts for Sporto_65:

(2, 43772), (3, 43817), (11, 43856), (Start: 12 @43859 has 13 MA's), (44, 44009), (60, 44102), (64, 44132),

Gene: StarLord_66 Start: 42737, Stop: 43048, Start Num: 12

Candidate Starts for StarLord_66:

(3, 42695), (Start: 12 @42737 has 13 MA's), (Start: 22 @42770 has 1 MA's), (44, 42887), (64, 43010), (65, 43022),

Gene: Stayer_66 Start: 42740, Stop: 43051, Start Num: 12

Candidate Starts for Stayer_66:

(3, 42698), (Start: 12 @42740 has 13 MA's), (Start: 22 @42773 has 1 MA's), (44, 42890), (64, 43013), (65, 43025),

Gene: Sunshine23_77 Start: 48481, Stop: 48795, Start Num: 14

Candidate Starts for Sunshine23_77:

(Start: 4 @48439 has 1 MA's), (Start: 10 @48463 has 5 MA's), (14, 48481), (31, 48544), (55, 48676),

Gene: Synopsis_62 Start: 44739, Stop: 45053, Start Num: 9

Candidate Starts for Synopsis_62:

(Start: 9 @44739 has 13 MA's), (28, 44808), (41, 44871), (51, 44922),

Gene: Tatanka_59 Start: 44875, Stop: 45189, Start Num: 9

Candidate Starts for Tatanka_59:

(Start: 9 @44875 has 13 MA's), (28, 44944), (41, 45007), (51, 45058),

Gene: Teacup_65 Start: 45308, Stop: 45619, Start Num: 10

Candidate Starts for Teacup_65:

(Start: 10 @45308 has 5 MA's), (28, 45374), (33, 45398), (41, 45437), (46, 45461),

Gene: Tenno_64 Start: 45392, Stop: 45706, Start Num: 9

Candidate Starts for Tenno_64:

(Start: 9 @45392 has 13 MA's), (28, 45461), (46, 45548), (51, 45575),

Gene: Tokki_73 Start: 45503, Stop: 45790, Start Num: 18

Candidate Starts for Tokki_73:

(Start: 18 @45503 has 16 MA's), (28, 45542), (39, 45593), (57, 45677), (63, 45749),

Gene: Truckee_65 Start: 45012, Stop: 45290, Start Num: 18

Candidate Starts for Truckee_65:

(Start: 18 @45012 has 16 MA's), (28, 45051), (39, 45096), (63, 45249),

Gene: Trustiboi_63 Start: 44994, Stop: 45308, Start Num: 9

Candidate Starts for Trustiboi_63:

(Start: 9 @44994 has 13 MA's), (28, 45063), (38, 45108), (41, 45126), (51, 45177),

Gene: WaddleDee_246 Start: 158940, Stop: 159245, Start Num: 21

Candidate Starts for WaddleDee_246:

(15, 158922), (21, 158940), (45, 159060), (48, 159090),

Gene: Wilde_54 Start: 41249, Stop: 40941, Start Num: 19

Candidate Starts for Wilde_54:

(Start: 19 @41249 has 1 MA's), (38, 41177), (39, 41174), (53, 41093), (54, 41087), (55, 41069),

Gene: Zippen_69 Start: 45683, Stop: 46003, Start Num: 10

Candidate Starts for Zippen_69:

(Start: 10 @45683 has 5 MA's), (28, 45752), (39, 45800), (63, 45956),