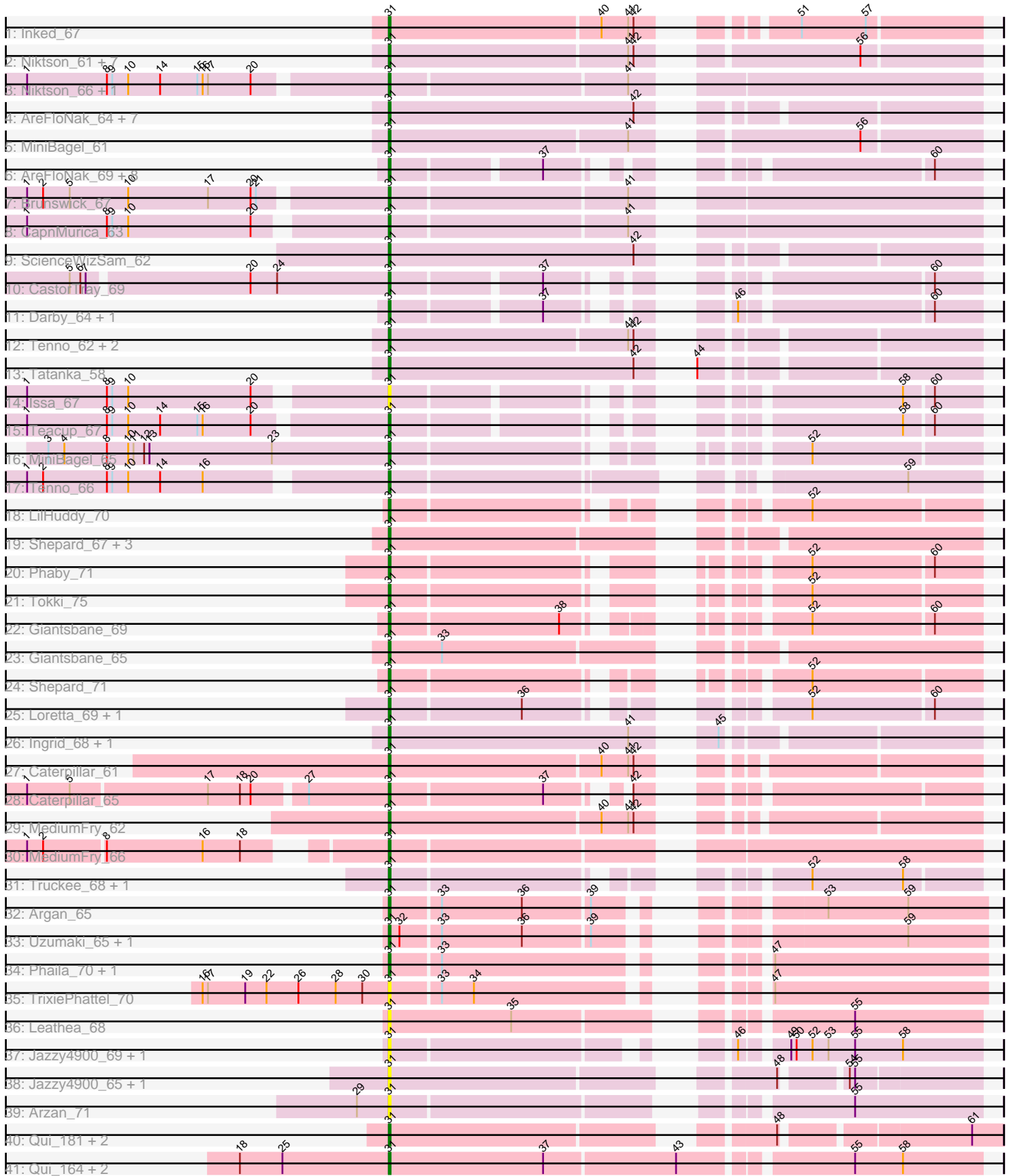


Pham 193941



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 193941 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193941 has 81 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Inked_67
- Track 2 : Niktson_61, ElephantMan_61, Makai_65, Brunswick_62, Teacup_62, Nightmare_63, Gordon_59, Truckee_63
- Track 3 : Niktson_66, ElephantMan_66
- Track 4 : AreFloNak_64, Breylor17_61, CastorTray_65, DevitoJr_61, Darby_60, Trustiboi_61, Nivinsha_63, Synepsis_60
- Track 5 : MiniBagel_61
- Track 6 : AreFloNak_69, ScienceWizSam_67, Gordon_63, Breylor17_65, DevitoJr_65, Synepsis_64, Nivinsha_69, Tatanka_61, Nightmare_67
- Track 7 : Brunswick_67
- Track 8 : CapnMurica_63
- Track 9 : ScienceWizSam_62
- Track 10 : CastorTray_69
- Track 11 : Darby_64, Trustiboi_65
- Track 12 : Tenno_62, Issa_62, CapnMurica_59
- Track 13 : Tatanka_58
- Track 14 : Issa_67
- Track 15 : Teacup_67
- Track 16 : MiniBagel_65
- Track 17 : Tenno_66
- Track 18 : LilHuddy_70
- Track 19 : Shepard_67, Tokki_70, LilHuddy_66, Phaby_67
- Track 20 : Phaby_71
- Track 21 : Tokki_75
- Track 22 : Giantsbane_69
- Track 23 : Giantsbane_65
- Track 24 : Shepard_71
- Track 25 : Loretta_69, Ingrid_72
- Track 26 : Ingrid_68, Loretta_65
- Track 27 : Caterpillar_61
- Track 28 : Caterpillar_65
- Track 29 : MediumFry_62
- Track 30 : MediumFry_66
- Track 31 : Truckee_68, Makai_70
- Track 32 : Argan_65
- Track 33 : Uzumaki_65, GantcherGoblin_66
- Track 34 : Phaila_70, Zeina_70

- Track 35 : TrixiePhattel_70
- Track 36 : Leathea_68
- Track 37 : Jazzy4900_69, Sunny4976_68
- Track 38 : Jazzy4900_65, Sunny4976_64
- Track 39 : Arzan_71
- Track 40 : Qui_181, Elver_177, Paella_181
- Track 41 : Qui_164, Elver_161, Paella_164

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

The start number called the most often in the published annotations is 31, it was called in 65 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AreFloNak_64, AreFloNak_69, Argan_65, Arzan_71, Breylor17_61, Breylor17_65, Brunswick_62, Brunswick_67, CapnMurica_59, CapnMurica_63, CastorTray_65, CastorTray_69, Caterpillar_61, Caterpillar_65, Darby_60, Darby_64, DevitoJr_61, DevitoJr_65, ElephantMan_61, ElephantMan_66, Elver_161, Elver_177, GantcherGoblin_66, Giantsbane_65, Giantsbane_69, Gordon_59, Gordon_63, Ingrid_68, Ingrid_72, Inked_67, Issa_62, Issa_67, Jazzy4900_65, Jazzy4900_69, Leathea_68, LilHuddy_66, LilHuddy_70, Loretta_65, Loretta_69, Makai_65, Makai_70, MediumFry_62, MediumFry_66, MiniBagel_61, MiniBagel_65, Nightmare_63, Nightmare_67, Niktson_61, Niktson_66, Nivinsha_63, Nivinsha_69, Paella_164, Paella_181, Phaby_67, Phaby_71, Phaila_70, Qui_164, Qui_181, ScienceWizSam_62, ScienceWizSam_67, Shepard_67, Shepard_71, Sunny4976_64, Sunny4976_68, Synopsis_60, Synopsis_64, Tatanka_58, Tatanka_61, Teacup_62, Teacup_67, Tenno_62, Tenno_66, Tokki_70, Tokki_75, TrixiePhattel_70, Truckee_63, Truckee_68, Trustiboi_61, Trustiboi_65, Uzumaki_65, Zeina_70,

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 31:

- Found in 81 of 81 (100.0%) of genes in pham
- Manual Annotations of this start: 65 of 65
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AreFloNak_64 (AU1), AreFloNak_69 (AU1), Argan_65 (AU6), Arzan_71 (F1), Breylor17_61 (AU1), Breylor17_65 (AU1), Brunswick_62 (AU1), Brunswick_67 (AU1), CapnMurica_59 (AU1), CapnMurica_63 (AU1), CastorTray_65 (AU1), CastorTray_69 (AU1), Caterpillar_61 (AU4), Caterpillar_65 (AU4), Darby_60 (AU1), Darby_64 (AU1), DevitoJr_61 (AU1), DevitoJr_65 (AU1), ElephantMan_61 (AU1), ElephantMan_66 (AU1), Elver_161 (FK), Elver_177 (FK), GantcherGoblin_66 (AU6), Giantsbane_65 (AU2), Giantsbane_69 (AU2), Gordon_59 (AU1), Gordon_63 (AU1), Ingrid_68 (AU3), Ingrid_72 (AU3),

Inked_67 (AU), Issa_62 (AU1), Issa_67 (AU1), Jazzy4900_65 (FI), Jazzy4900_69 (FI), Leathea_68 (AU6), LilHuddy_66 (AU2), LilHuddy_70 (AU2), Loretta_65 (AU3), Loretta_69 (AU3), Makai_65 (AU5), Makai_70 (AU5), MediumFry_62 (AU4), MediumFry_66 (AU4), MiniBagel_61 (AU1), MiniBagel_65 (AU1), Nightmare_63 (AU1), Nightmare_67 (AU1), Niktson_61 (AU1), Niktson_66 (AU1), Nivinsha_63 (AU1), Nivinsha_69 (AU1), Paella_164 (FK), Paella_181 (FK), Phaby_67 (AU2), Phaby_71 (AU2), Phaila_70 (AU6), Qui_164 (FK), Qui_181 (FK), ScienceWizSam_62 (AU1), ScienceWizSam_67 (AU1), Shepard_67 (AU2), Shepard_71 (AU2), Sunny4976_64 (FI), Sunny4976_68 (FI), Synopsis_60 (AU1), Synopsis_64 (AU1), Tatanka_58 (AU1), Tatanka_61 (AU1), Teacup_62 (AU1), Teacup_67 (AU1), Tenno_62 (AU1), Tenno_66 (AU1), Tokki_70 (AU2), Tokki_75 (AU2), TrixiePhattel_70 (AU6), Truckee_63 (AU5), Truckee_68 (AU5), Trustiboi_61 (AU1), Trustiboi_65 (AU1), Uzumaki_65 (AU6), Zeina_70 (AU6),

Summary by clusters:

There are 9 clusters represented in this pham: AU1, AU3, AU2, AU5, AU4, AU6, FI, FK, AU,

Info for manual annotations of cluster AU:

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

Info for manual annotations of cluster AU1:

- Start number 31 was manually annotated 34 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 31 was manually annotated 10 times for cluster AU2.

Info for manual annotations of cluster AU3:

- Start number 31 was manually annotated 4 times for cluster AU3.

Info for manual annotations of cluster AU4:

- Start number 31 was manually annotated 4 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 31 was manually annotated 4 times for cluster AU5.

Info for manual annotations of cluster AU6:

- Start number 31 was manually annotated 4 times for cluster AU6.

Info for manual annotations of cluster FK:

- Start number 31 was manually annotated 4 times for cluster FK.

Gene Information:

Gene: AreFloNak_64 Start: 44018, Stop: 44311, Start Num: 31

Candidate Starts for AreFloNak_64:

(Start: 31 @44018 has 65 MA's), (42, 44156),

Gene: AreFloNak_69 Start: 45830, Stop: 46093, Start Num: 31

Candidate Starts for AreFloNak_69:
(Start: 31 @45830 has 65 MA's), (37, 45908), (60, 46067),

Gene: Argan_65 Start: 42966, Stop: 43247, Start Num: 31
Candidate Starts for Argan_65:
(Start: 31 @42966 has 65 MA's), (33, 42993), (36, 43038), (39, 43074), (53, 43158), (59, 43203),

Gene: Arzan_71 Start: 45586, Stop: 45873, Start Num: 31
Candidate Starts for Arzan_71:
(29, 45568), (Start: 31 @45586 has 65 MA's), (55, 45802),

Gene: Breylor17_61 Start: 44593, Stop: 44886, Start Num: 31
Candidate Starts for Breylor17_61:
(Start: 31 @44593 has 65 MA's), (42, 44731),

Gene: Breylor17_65 Start: 46223, Stop: 46486, Start Num: 31
Candidate Starts for Breylor17_65:
(Start: 31 @46223 has 65 MA's), (37, 46301), (60, 46460),

Gene: Brunswick_67 Start: 45626, Stop: 45928, Start Num: 31
Candidate Starts for Brunswick_67:
(1, 45431), (2, 45440), (5, 45455), (10, 45488), (17, 45533), (20, 45557), (21, 45560), (Start: 31 @45626 has 65 MA's), (41, 45755),

Gene: Brunswick_62 Start: 43890, Stop: 44189, Start Num: 31
Candidate Starts for Brunswick_62:
(Start: 31 @43890 has 65 MA's), (41, 44022), (42, 44025), (56, 44124),

Gene: CapnMurica_63 Start: 46364, Stop: 46666, Start Num: 31
Candidate Starts for CapnMurica_63:
(1, 46172), (8, 46217), (9, 46220), (10, 46229), (20, 46298), (Start: 31 @46364 has 65 MA's), (41, 46493),

Gene: CapnMurica_59 Start: 44782, Stop: 45072, Start Num: 31
Candidate Starts for CapnMurica_59:
(Start: 31 @44782 has 65 MA's), (41, 44914), (42, 44917),

Gene: CastorTray_65 Start: 44782, Stop: 45075, Start Num: 31
Candidate Starts for CastorTray_65:
(Start: 31 @44782 has 65 MA's), (42, 44920),

Gene: CastorTray_69 Start: 46412, Stop: 46675, Start Num: 31
Candidate Starts for CastorTray_69:
(5, 46238), (6, 46244), (7, 46247), (20, 46334), (24, 46349), (Start: 31 @46412 has 65 MA's), (37, 46490), (60, 46649),

Gene: Caterpillar_61 Start: 43710, Stop: 44000, Start Num: 31
Candidate Starts for Caterpillar_61:
(Start: 31 @43710 has 65 MA's), (40, 43827), (41, 43842), (42, 43845),

Gene: Caterpillar_65 Start: 45261, Stop: 45530, Start Num: 31
Candidate Starts for Caterpillar_65:

(1, 45066), (5, 45090), (17, 45165), (18, 45183), (20, 45189), (27, 45216), (Start: 31 @45261 has 65 MA's), (37, 45345), (42, 45375),

Gene: Darby_60 Start: 43828, Stop: 44121, Start Num: 31
Candidate Starts for Darby_60:
(Start: 31 @43828 has 65 MA's), (42, 43966),

Gene: Darby_64 Start: 45407, Stop: 45670, Start Num: 31
Candidate Starts for Darby_64:
(Start: 31 @45407 has 65 MA's), (37, 45485), (46, 45545), (60, 45644),

Gene: DevitoJr_61 Start: 44214, Stop: 44507, Start Num: 31
Candidate Starts for DevitoJr_61:
(Start: 31 @44214 has 65 MA's), (42, 44352),

Gene: DevitoJr_65 Start: 45793, Stop: 46056, Start Num: 31
Candidate Starts for DevitoJr_65:
(Start: 31 @45793 has 65 MA's), (37, 45871), (60, 46030),

Gene: ElephantMan_66 Start: 46256, Stop: 46558, Start Num: 31
Candidate Starts for ElephantMan_66:
(1, 46061), (8, 46106), (9, 46109), (10, 46118), (14, 46136), (15, 46157), (16, 46160), (17, 46163), (20, 46187), (Start: 31 @46256 has 65 MA's), (41, 46385),

Gene: ElephantMan_61 Start: 44520, Stop: 44819, Start Num: 31
Candidate Starts for ElephantMan_61:
(Start: 31 @44520 has 65 MA's), (41, 44652), (42, 44655), (56, 44754),

Gene: Elver_177 Start: 88404, Stop: 88703, Start Num: 31
Candidate Starts for Elver_177:
(Start: 31 @88404 has 65 MA's), (48, 88590), (61, 88686),

Gene: Elver_161 Start: 81584, Stop: 81901, Start Num: 31
Candidate Starts for Elver_161:
(18, 81500), (25, 81524), (Start: 31 @81584 has 65 MA's), (37, 81671), (43, 81743), (55, 81830), (58, 81857),

Gene: GantcherGoblin_66 Start: 43022, Stop: 43303, Start Num: 31
Candidate Starts for GantcherGoblin_66:
(Start: 31 @43022 has 65 MA's), (32, 43028), (33, 43049), (36, 43094), (39, 43130), (59, 43259),

Gene: Giantsbane_69 Start: 44963, Stop: 45232, Start Num: 31
Candidate Starts for Giantsbane_69:
(Start: 31 @44963 has 65 MA's), (38, 45056), (52, 45140), (60, 45206),

Gene: Giantsbane_65 Start: 43403, Stop: 43696, Start Num: 31
Candidate Starts for Giantsbane_65:
(Start: 31 @43403 has 65 MA's), (33, 43433),

Gene: Gordon_63 Start: 46285, Stop: 46548, Start Num: 31
Candidate Starts for Gordon_63:
(Start: 31 @46285 has 65 MA's), (37, 46363), (60, 46522),

Gene: Gordon_59 Start: 44700, Stop: 44999, Start Num: 31
Candidate Starts for Gordon_59:
(Start: 31 @44700 has 65 MA's), (41, 44832), (42, 44835), (56, 44934),

Gene: Ingrid_68 Start: 44584, Stop: 44877, Start Num: 31
Candidate Starts for Ingrid_68:
(Start: 31 @44584 has 65 MA's), (41, 44719), (45, 44746),

Gene: Ingrid_72 Start: 46231, Stop: 46503, Start Num: 31
Candidate Starts for Ingrid_72:
(Start: 31 @46231 has 65 MA's), (36, 46303), (52, 46411), (60, 46477),

Gene: Inked_67 Start: 45260, Stop: 45550, Start Num: 31
Candidate Starts for Inked_67:
(Start: 31 @45260 has 65 MA's), (40, 45377), (41, 45392), (42, 45395), (51, 45452), (57, 45488),

Gene: Issa_62 Start: 43876, Stop: 44166, Start Num: 31
Candidate Starts for Issa_62:
(Start: 31 @43876 has 65 MA's), (41, 44008), (42, 44011),

Gene: Issa_67 Start: 45459, Stop: 45722, Start Num: 31
Candidate Starts for Issa_67:
(1, 45267), (8, 45312), (9, 45315), (10, 45324), (20, 45393), (Start: 31 @45459 has 65 MA's), (58, 45681), (60, 45696),

Gene: Jazzy4900_69 Start: 46463, Stop: 46738, Start Num: 31
Candidate Starts for Jazzy4900_69:
(Start: 31 @46463 has 65 MA's), (46, 46610), (49, 46631), (50, 46634), (52, 46643), (53, 46652), (55, 46667), (58, 46694),

Gene: Jazzy4900_65 Start: 44572, Stop: 44859, Start Num: 31
Candidate Starts for Jazzy4900_65:
(Start: 31 @44572 has 65 MA's), (48, 44758), (54, 44788), (55, 44791),

Gene: Leathea_68 Start: 42920, Stop: 43210, Start Num: 31
Candidate Starts for Leathea_68:
(Start: 31 @42920 has 65 MA's), (35, 42989), (55, 43139),

Gene: LilHuddy_70 Start: 46088, Stop: 46360, Start Num: 31
Candidate Starts for LilHuddy_70:
(Start: 31 @46088 has 65 MA's), (52, 46268),

Gene: LilHuddy_66 Start: 44510, Stop: 44803, Start Num: 31
Candidate Starts for LilHuddy_66:
(Start: 31 @44510 has 65 MA's),

Gene: Loretta_69 Start: 46231, Stop: 46503, Start Num: 31
Candidate Starts for Loretta_69:
(Start: 31 @46231 has 65 MA's), (36, 46303), (52, 46411), (60, 46477),

Gene: Loretta_65 Start: 44584, Stop: 44877, Start Num: 31
Candidate Starts for Loretta_65:
(Start: 31 @44584 has 65 MA's), (41, 44719), (45, 44746),

Gene: Makai_65 Start: 44655, Stop: 44951, Start Num: 31
Candidate Starts for Makai_65:
(Start: 31 @44655 has 65 MA's), (41, 44787), (42, 44790), (56, 44886),

Gene: Makai_70 Start: 46375, Stop: 46647, Start Num: 31
Candidate Starts for Makai_70:
(Start: 31 @46375 has 65 MA's), (52, 46555), (58, 46606),

Gene: MediumFry_62 Start: 44006, Stop: 44296, Start Num: 31
Candidate Starts for MediumFry_62:
(Start: 31 @44006 has 65 MA's), (40, 44123), (41, 44138), (42, 44141),

Gene: MediumFry_66 Start: 45539, Stop: 45841, Start Num: 31
Candidate Starts for MediumFry_66:
(1, 45362), (2, 45371), (8, 45404), (16, 45458), (18, 45479), (Start: 31 @45539 has 65 MA's),

Gene: MiniBagel_61 Start: 44764, Stop: 45063, Start Num: 31
Candidate Starts for MiniBagel_61:
(Start: 31 @44764 has 65 MA's), (41, 44896), (56, 44998),

Gene: MiniBagel_65 Start: 46355, Stop: 46624, Start Num: 31
Candidate Starts for MiniBagel_65:
(3, 46163), (4, 46172), (8, 46196), (10, 46208), (11, 46211), (12, 46217), (13, 46220), (23, 46289),
(Start: 31 @46355 has 65 MA's), (52, 46532),

Gene: Nightmare_63 Start: 45062, Stop: 45361, Start Num: 31
Candidate Starts for Nightmare_63:
(Start: 31 @45062 has 65 MA's), (41, 45194), (42, 45197), (56, 45296),

Gene: Nightmare_67 Start: 46698, Stop: 46961, Start Num: 31
Candidate Starts for Nightmare_67:
(Start: 31 @46698 has 65 MA's), (37, 46776), (60, 46935),

Gene: Niktson_61 Start: 44520, Stop: 44819, Start Num: 31
Candidate Starts for Niktson_61:
(Start: 31 @44520 has 65 MA's), (41, 44652), (42, 44655), (56, 44754),

Gene: Niktson_66 Start: 46256, Stop: 46558, Start Num: 31
Candidate Starts for Niktson_66:
(1, 46061), (8, 46106), (9, 46109), (10, 46118), (14, 46136), (15, 46157), (16, 46160), (17, 46163), (20, 46187), (Start: 31 @46256 has 65 MA's), (41, 46385),

Gene: Nivinsha_63 Start: 44018, Stop: 44311, Start Num: 31
Candidate Starts for Nivinsha_63:
(Start: 31 @44018 has 65 MA's), (42, 44156),

Gene: Nivinsha_69 Start: 45830, Stop: 46093, Start Num: 31
Candidate Starts for Nivinsha_69:
(Start: 31 @45830 has 65 MA's), (37, 45908), (60, 46067),

Gene: Paella_181 Start: 89280, Stop: 89579, Start Num: 31
Candidate Starts for Paella_181:

(Start: 31 @89280 has 65 MA's), (48, 89466), (61, 89562),

Gene: Paella_164 Start: 82455, Stop: 82772, Start Num: 31

Candidate Starts for Paella_164:

(18, 82371), (25, 82395), (Start: 31 @82455 has 65 MA's), (37, 82542), (43, 82614), (55, 82701), (58, 82728),

Gene: Phaby_71 Start: 46619, Stop: 46891, Start Num: 31

Candidate Starts for Phaby_71:

(Start: 31 @46619 has 65 MA's), (52, 46799), (60, 46865),

Gene: Phaby_67 Start: 45074, Stop: 45367, Start Num: 31

Candidate Starts for Phaby_67:

(Start: 31 @45074 has 65 MA's),

Gene: Phaila_70 Start: 43149, Stop: 43433, Start Num: 31

Candidate Starts for Phaila_70:

(Start: 31 @43149 has 65 MA's), (33, 43176), (47, 43314),

Gene: Qui_181 Start: 89277, Stop: 89576, Start Num: 31

Candidate Starts for Qui_181:

(Start: 31 @89277 has 65 MA's), (48, 89463), (61, 89559),

Gene: Qui_164 Start: 82455, Stop: 82772, Start Num: 31

Candidate Starts for Qui_164:

(18, 82371), (25, 82395), (Start: 31 @82455 has 65 MA's), (37, 82542), (43, 82614), (55, 82701), (58, 82728),

Gene: ScienceWizSam_67 Start: 45992, Stop: 46255, Start Num: 31

Candidate Starts for ScienceWizSam_67:

(Start: 31 @45992 has 65 MA's), (37, 46070), (60, 46229),

Gene: ScienceWizSam_62 Start: 44180, Stop: 44473, Start Num: 31

Candidate Starts for ScienceWizSam_62:

(Start: 31 @44180 has 65 MA's), (42, 44318),

Gene: Shepard_67 Start: 44369, Stop: 44662, Start Num: 31

Candidate Starts for Shepard_67:

(Start: 31 @44369 has 65 MA's),

Gene: Shepard_71 Start: 45944, Stop: 46213, Start Num: 31

Candidate Starts for Shepard_71:

(Start: 31 @45944 has 65 MA's), (52, 46121),

Gene: Sunny4976_68 Start: 46463, Stop: 46738, Start Num: 31

Candidate Starts for Sunny4976_68:

(Start: 31 @46463 has 65 MA's), (46, 46610), (49, 46631), (50, 46634), (52, 46643), (53, 46652), (55, 46667), (58, 46694),

Gene: Sunny4976_64 Start: 44572, Stop: 44859, Start Num: 31

Candidate Starts for Sunny4976_64:

(Start: 31 @44572 has 65 MA's), (48, 44758), (54, 44788), (55, 44791),

Gene: Synopsis_64 Start: 45760, Stop: 46023, Start Num: 31
Candidate Starts for Synopsis_64:
(Start: 31 @45760 has 65 MA's), (37, 45838), (60, 45997),

Gene: Synopsis_60 Start: 44184, Stop: 44477, Start Num: 31
Candidate Starts for Synopsis_60:
(Start: 31 @44184 has 65 MA's), (42, 44322),

Gene: Tatanka_58 Start: 44317, Stop: 44610, Start Num: 31
Candidate Starts for Tatanka_58:
(Start: 31 @44317 has 65 MA's), (42, 44455), (44, 44467),

Gene: Tatanka_61 Start: 45896, Stop: 46159, Start Num: 31
Candidate Starts for Tatanka_61:
(Start: 31 @45896 has 65 MA's), (37, 45974), (60, 46133),

Gene: Teacup_62 Start: 44599, Stop: 44898, Start Num: 31
Candidate Starts for Teacup_62:
(Start: 31 @44599 has 65 MA's), (41, 44731), (42, 44734), (56, 44833),

Gene: Teacup_67 Start: 46335, Stop: 46598, Start Num: 31
Candidate Starts for Teacup_67:
(1, 46140), (8, 46185), (9, 46188), (10, 46197), (14, 46215), (15, 46236), (16, 46239), (20, 46266),
(Start: 31 @46335 has 65 MA's), (58, 46557), (60, 46572),

Gene: Tenno_62 Start: 44837, Stop: 45127, Start Num: 31
Candidate Starts for Tenno_62:
(Start: 31 @44837 has 65 MA's), (41, 44969), (42, 44972),

Gene: Tenno_66 Start: 46419, Stop: 46703, Start Num: 31
Candidate Starts for Tenno_66:
(1, 46227), (2, 46236), (8, 46272), (9, 46275), (10, 46284), (14, 46302), (16, 46326), (Start: 31
@46419 has 65 MA's), (59, 46662),

Gene: Tokki_70 Start: 44723, Stop: 45016, Start Num: 31
Candidate Starts for Tokki_70:
(Start: 31 @44723 has 65 MA's),

Gene: Tokki_75 Start: 46487, Stop: 46759, Start Num: 31
Candidate Starts for Tokki_75:
(Start: 31 @46487 has 65 MA's), (52, 46667),

Gene: TrixiePhattel_70 Start: 43311, Stop: 43595, Start Num: 31
Candidate Starts for TrixiePhattel_70:
(16, 43206), (17, 43209), (19, 43230), (22, 43242), (26, 43260), (28, 43281), (30, 43296), (Start: 31
@43311 has 65 MA's), (33, 43338), (34, 43356), (47, 43476),

Gene: Truckee_63 Start: 44439, Stop: 44735, Start Num: 31
Candidate Starts for Truckee_63:
(Start: 31 @44439 has 65 MA's), (41, 44571), (42, 44574), (56, 44670),

Gene: Truckee_68 Start: 46153, Stop: 46425, Start Num: 31
Candidate Starts for Truckee_68:

(Start: 31 @46153 has 65 MA's), (52, 46333), (58, 46384),

Gene: Trustiboi_61 Start: 44439, Stop: 44732, Start Num: 31

Candidate Starts for Trustiboi_61:

(Start: 31 @44439 has 65 MA's), (42, 44577),

Gene: Trustiboi_65 Start: 46015, Stop: 46278, Start Num: 31

Candidate Starts for Trustiboi_65:

(Start: 31 @46015 has 65 MA's), (37, 46093), (46, 46153), (60, 46252),

Gene: Uzumaki_65 Start: 43123, Stop: 43404, Start Num: 31

Candidate Starts for Uzumaki_65:

(Start: 31 @43123 has 65 MA's), (32, 43129), (33, 43150), (36, 43195), (39, 43231), (59, 43360),

Gene: Zeina_70 Start: 43817, Stop: 44101, Start Num: 31

Candidate Starts for Zeina_70:

(Start: 31 @43817 has 65 MA's), (33, 43844), (47, 43982),