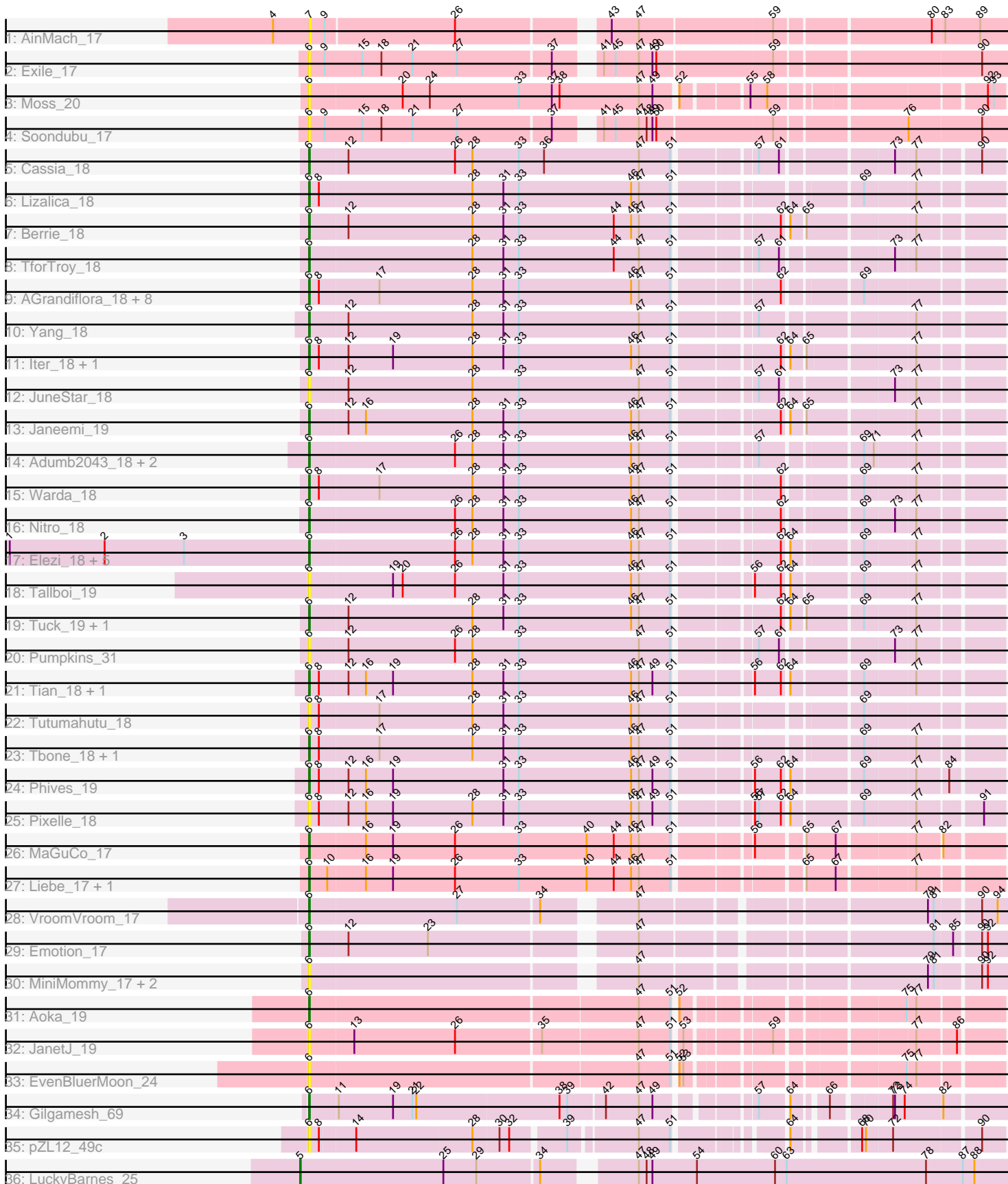


Pham 161882



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 161882 Report

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

Pham number 161882 has 58 members, 25 are drafts.

Phages represented in each track:

- Track 1 : AinMach_17
- Track 2 : Exile_17
- Track 3 : Moss_20
- Track 4 : Soondubu_17
- Track 5 : Cassia_18
- Track 6 : Lizalica_18
- Track 7 : Berrie_18
- Track 8 : TforTroy_18
- Track 9 : AGrandiflora_18, Cyan_18, Kaylissa_18, Joemato_20, JohnDoe_18, Lego_18, Powerpuff_18, YesChef_18, Simpson_20
- Track 10 : Yang_18
- Track 11 : lter_18, Ascela_18
- Track 12 : JuneStar_18
- Track 13 : Janeemi_19
- Track 14 : Adumb2043_18, Turab_18, AEgle_18
- Track 15 : Warda_18
- Track 16 : Nitro_18
- Track 17 : Elezi_18, Jstan_19, Eraser_18, Asa16_18, London_18, Niobe_18
- Track 18 : Tallboi_19
- Track 19 : Tuck_19, Community_18
- Track 20 : Pumpkins_31
- Track 21 : Tian_18, Amyev_18
- Track 22 : Tutumahutu_18
- Track 23 : Tbone_18, Mudpuppy_19
- Track 24 : Phives_19
- Track 25 : Pixelle_18
- Track 26 : MaGuCo_17
- Track 27 : Liebe_17, Maureen_17
- Track 28 : VroomVroom_17
- Track 29 : Emotion_17
- Track 30 : MiniMommy_17, JasmineDragon_18, ShakeltOph_18
- Track 31 : Aoka_19
- Track 32 : JanetJ_19
- Track 33 : EvenBluerMoon_24
- Track 34 : Gilgamesh_69
- Track 35 : pZL12_49c
- Track 36 : LuckyBarnes_25

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 32 of the 33 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_18, AGrandiflora_18, Adumb2043_18, Amyev_18, Aoka_19, Asa16_18, Ascela_18, Berrie_18, Cassia_18, Community_18, Cyan_18, Elezi_18, Emotion_17, Eraser_18, EvenBluerMoon_24, Exile_17, Gilgamesh_69, Iter_18, Janeemi_19, JanetJ_19, JasmineDragon_18, Joemato_20, JohnDoe_18, Jstan_19, JuneStar_18, Kaylissa_18, Lego_18, Liebe_17, Lizalica_18, London_18, MaGuCo_17, Maureen_17, MiniMommy_17, Moss_20, Mudpuppy_19, Niobe_18, Nitro_18, Phives_19, Pixelle_18, Powerpuff_18, Pumpkins_31, ShakeltOph_18, Simpson_20, Soondubu_17, Tallboi_19, Tbone_18, TforTroy_18, Tian_18, Tuck_19, Turab_18, Tutumahutu_18, VroomVroom_17, Warda_18, Yang_18, YesChef_18, pZL12_49c,

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

-

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

- AinMach_17, LuckyBarnes_25,

Summary by start number:

Start 5:

- Found in 1 of 58 (1.7%) of genes in pham
- Manual Annotations of this start: 1 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LuckyBarnes_25 (singleton),

Start 6:

- Found in 56 of 58 (96.6%) of genes in pham
- Manual Annotations of this start: 32 of 33
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_18 (AZ1), AGrandiflora_18 (AZ1), Adumb2043_18 (AZ1), Amyev_18 (AZ1), Aoka_19 (FO), Asa16_18 (AZ1), Ascela_18 (AZ1), Berrie_18 (AZ1), Cassia_18 (AZ1), Community_18 (AZ1), Cyan_18 (AZ1), Elezi_18 (AZ1), Emotion_17 (AZ4), Eraser_18 (AZ1), EvenBluerMoon_24 (FO), Exile_17 (AZ), Gilgamesh_69 (singleton), Iter_18 (AZ1), Janeemi_19 (AZ1), JanetJ_19 (FO), JasmineDragon_18 (AZ4), Joemato_20 (AZ1), JohnDoe_18 (AZ1), Jstan_19 (AZ1), JuneStar_18 (AZ1), Kaylissa_18 (AZ1), Lego_18 (AZ1), Liebe_17 (AZ2), Lizalica_18 (AZ1), London_18 (AZ1), MaGuCo_17 (AZ2), Maureen_17 (AZ2), MiniMommy_17 (AZ4), Moss_20 (AZ), Mudpuppy_19 (AZ1), Niobe_18 (AZ1), Nitro_18 (AZ1), Phives_19 (AZ1), Pixelle_18 (AZ1), Powerpuff_18 (AZ1), Pumpkins_31 (AZ1), ShakeltOph_18 (AZ4), Simpson_20 (AZ1), Soondubu_17 (AZ), Tallboi_19 (AZ1), Tbone_18 (AZ1), TforTroy_18 (AZ1), Tian_18 (AZ1), Tuck_19 (AZ1), Turab_18 (AZ1), Tutumahutu_18 (AZ1), VroomVroom_17 (AZ4), Warda_18 (AZ1), Yang_18 (AZ1), YesChef_18 (AZ1), pZL12_49c (singleton),

Start 7:

- Found in 1 of 58 (1.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AinMach_17 (AZ),

Summary by clusters:

There are 6 clusters represented in this pham: singleton, AZ1, AZ2, AZ, AZ4, FO,

Info for manual annotations of cluster AZ1:

- Start number 6 was manually annotated 25 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 6 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ4:

- Start number 6 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster FO:

- Start number 6 was manually annotated 1 time for cluster FO.

Gene Information:

Gene: AEgle_18 Start: 13938, Stop: 14930, Start Num: 6

Candidate Starts for AEgle_18:

(Start: 6 @13938 has 32 MA's), (26, 14160), (28, 14187), (31, 14235), (33, 14259), (46, 14433), (47, 14445), (51, 14493), (57, 14598), (69, 14733), (71, 14748), (77, 14808),

Gene: AGrandiflora_18 Start: 13923, Stop: 14915, Start Num: 6

Candidate Starts for AGrandiflora_18:

(Start: 6 @13923 has 32 MA's), (8, 13938), (17, 14028), (28, 14172), (31, 14220), (33, 14244), (46, 14418), (47, 14430), (51, 14478), (62, 14616), (69, 14718),

Gene: Adumb2043_18 Start: 13937, Stop: 14929, Start Num: 6

Candidate Starts for Adumb2043_18:

(Start: 6 @13937 has 32 MA's), (26, 14159), (28, 14186), (31, 14234), (33, 14258), (46, 14432), (47, 14444), (51, 14492), (57, 14597), (69, 14732), (71, 14747), (77, 14807),

Gene: AinMach_17 Start: 13100, Stop: 14092, Start Num: 7

Candidate Starts for AinMach_17:

(4, 13043), (7, 13100), (9, 13121), (26, 13316), (43, 13517), (47, 13559), (59, 13754), (80, 13979), (83, 13997), (89, 14051),

Gene: Amyev_18 Start: 13952, Stop: 14950, Start Num: 6

Candidate Starts for Amyev_18:

(Start: 6 @13952 has 32 MA's), (8, 13967), (12, 14009), (16, 14036), (19, 14078), (28, 14201), (31, 14249), (33, 14273), (46, 14447), (47, 14459), (49, 14480), (51, 14507), (56, 14609), (62, 14648), (64, 14654), (69, 14753), (77, 14828),

Gene: Aoka_19 Start: 15069, Stop: 16034, Start Num: 6
Candidate Starts for Aoka_19:
(Start: 6 @15069 has 32 MA's), (47, 15561), (51, 15609), (52, 15612), (75, 15900), (77, 15912),

Gene: Asa16_18 Start: 13907, Stop: 14899, Start Num: 6
Candidate Starts for Asa16_18:
(1, 13445), (2, 13592), (3, 13715), (Start: 6 @13907 has 32 MA's), (26, 14129), (28, 14156), (31, 14204), (33, 14228), (46, 14402), (47, 14414), (51, 14462), (62, 14600), (64, 14606), (69, 14702), (77, 14777),

Gene: Ascela_18 Start: 13935, Stop: 14927, Start Num: 6
Candidate Starts for Ascela_18:
(Start: 6 @13935 has 32 MA's), (8, 13950), (12, 13992), (19, 14061), (28, 14184), (31, 14232), (33, 14256), (46, 14430), (47, 14442), (51, 14490), (62, 14628), (64, 14634), (65, 14652), (77, 14805),

Gene: Berrie_18 Start: 14069, Stop: 15064, Start Num: 6
Candidate Starts for Berrie_18:
(Start: 6 @14069 has 32 MA's), (12, 14126), (28, 14318), (31, 14366), (33, 14390), (44, 14537), (46, 14564), (47, 14576), (51, 14624), (62, 14762), (64, 14768), (65, 14786), (77, 14942),

Gene: Cassia_18 Start: 14031, Stop: 15026, Start Num: 6
Candidate Starts for Cassia_18:
(Start: 6 @14031 has 32 MA's), (12, 14088), (26, 14253), (28, 14280), (33, 14352), (36, 14391), (47, 14538), (51, 14586), (57, 14691), (61, 14721), (73, 14874), (77, 14904), (90, 14991),

Gene: Community_18 Start: 15151, Stop: 16146, Start Num: 6
Candidate Starts for Community_18:
(Start: 6 @15151 has 32 MA's), (12, 15208), (28, 15400), (31, 15448), (33, 15472), (46, 15646), (47, 15658), (51, 15706), (62, 15844), (64, 15850), (65, 15868), (69, 15949), (77, 16024),

Gene: Cyan_18 Start: 13926, Stop: 14918, Start Num: 6
Candidate Starts for Cyan_18:
(Start: 6 @13926 has 32 MA's), (8, 13941), (17, 14031), (28, 14175), (31, 14223), (33, 14247), (46, 14421), (47, 14433), (51, 14481), (62, 14619), (69, 14721),

Gene: Elezi_18 Start: 13908, Stop: 14900, Start Num: 6
Candidate Starts for Elezi_18:
(1, 13446), (2, 13593), (3, 13716), (Start: 6 @13908 has 32 MA's), (26, 14130), (28, 14157), (31, 14205), (33, 14229), (46, 14403), (47, 14415), (51, 14463), (62, 14601), (64, 14607), (69, 14703), (77, 14778),

Gene: Emotion_17 Start: 12170, Stop: 13147, Start Num: 6
Candidate Starts for Emotion_17:
(Start: 6 @12170 has 32 MA's), (12, 12227), (23, 12350), (47, 12635), (81, 13037), (85, 13064), (90, 13100), (92, 13109),

Gene: Eraser_18 Start: 13908, Stop: 14900, Start Num: 6
Candidate Starts for Eraser_18:
(1, 13446), (2, 13593), (3, 13716), (Start: 6 @13908 has 32 MA's), (26, 14130), (28, 14157), (31, 14205), (33, 14229), (46, 14403), (47, 14415), (51, 14463), (62, 14601), (64, 14607), (69, 14703), (77, 14778),

Gene: EvenBluerMoon_24 Start: 15104, Stop: 16069, Start Num: 6

Candidate Starts for EvenBluerMoon_24:

(Start: 6 @15104 has 32 MA's), (47, 15596), (51, 15644), (52, 15647), (53, 15653), (75, 15935), (77, 15947),

Gene: Exile_17 Start: 14567, Stop: 15568, Start Num: 6

Candidate Starts for Exile_17:

(Start: 6 @14567 has 32 MA's), (9, 14591), (15, 14648), (18, 14678), (21, 14726), (27, 14795), (37, 14933), (41, 14981), (45, 14999), (47, 15035), (49, 15056), (50, 15062), (59, 15230), (90, 15530),

Gene: Gilgamesh_69 Start: 63750, Stop: 64724, Start Num: 6

Candidate Starts for Gilgamesh_69:

(Start: 6 @63750 has 32 MA's), (11, 63792), (19, 63876), (21, 63906), (22, 63912), (38, 64131), (39, 64143), (42, 64197), (47, 64248), (49, 64269), (57, 64389), (64, 64428), (66, 64470), (72, 64551), (73, 64554), (74, 64569), (82, 64626),

Gene: Iter_18 Start: 13935, Stop: 14927, Start Num: 6

Candidate Starts for Iter_18:

(Start: 6 @13935 has 32 MA's), (8, 13950), (12, 13992), (19, 14061), (28, 14184), (31, 14232), (33, 14256), (46, 14430), (47, 14442), (51, 14490), (62, 14628), (64, 14634), (65, 14652), (77, 14805),

Gene: Janeemi_19 Start: 15179, Stop: 16174, Start Num: 6

Candidate Starts for Janeemi_19:

(Start: 6 @15179 has 32 MA's), (12, 15236), (16, 15263), (28, 15428), (31, 15476), (33, 15500), (46, 15674), (47, 15686), (51, 15734), (62, 15872), (64, 15878), (65, 15896), (77, 16052),

Gene: JanetJ_19 Start: 14886, Stop: 15851, Start Num: 6

Candidate Starts for JanetJ_19:

(Start: 6 @14886 has 32 MA's), (13, 14952), (26, 15108), (35, 15234), (47, 15378), (51, 15426), (53, 15435), (59, 15540), (77, 15729), (86, 15786),

Gene: JasmineDragon_18 Start: 12097, Stop: 13074, Start Num: 6

Candidate Starts for JasmineDragon_18:

(Start: 6 @12097 has 32 MA's), (47, 12562), (79, 12955), (81, 12964), (90, 13027), (92, 13036),

Gene: Joemato_20 Start: 13926, Stop: 14918, Start Num: 6

Candidate Starts for Joemato_20:

(Start: 6 @13926 has 32 MA's), (8, 13941), (17, 14031), (28, 14175), (31, 14223), (33, 14247), (46, 14421), (47, 14433), (51, 14481), (62, 14619), (69, 14721),

Gene: JohnDoe_18 Start: 13921, Stop: 14913, Start Num: 6

Candidate Starts for JohnDoe_18:

(Start: 6 @13921 has 32 MA's), (8, 13936), (17, 14026), (28, 14170), (31, 14218), (33, 14242), (46, 14416), (47, 14428), (51, 14476), (62, 14614), (69, 14716),

Gene: Jstan_19 Start: 13908, Stop: 14900, Start Num: 6

Candidate Starts for Jstan_19:

(1, 13446), (2, 13593), (3, 13716), (Start: 6 @13908 has 32 MA's), (26, 14130), (28, 14157), (31, 14205), (33, 14229), (46, 14403), (47, 14415), (51, 14463), (62, 14601), (64, 14607), (69, 14703), (77, 14778),

Gene: JuneStar_18 Start: 14029, Stop: 15024, Start Num: 6

Candidate Starts for JuneStar_18:

(Start: 6 @14029 has 32 MA's), (12, 14086), (28, 14278), (33, 14350), (47, 14536), (51, 14584), (57, 14689), (61, 14719), (73, 14872), (77, 14902),

Gene: Kaylissa_18 Start: 13927, Stop: 14919, Start Num: 6

Candidate Starts for Kaylissa_18:

(Start: 6 @13927 has 32 MA's), (8, 13942), (17, 14032), (28, 14176), (31, 14224), (33, 14248), (46, 14422), (47, 14434), (51, 14482), (62, 14620), (69, 14722),

Gene: Lego_18 Start: 13926, Stop: 14918, Start Num: 6

Candidate Starts for Lego_18:

(Start: 6 @13926 has 32 MA's), (8, 13941), (17, 14031), (28, 14175), (31, 14223), (33, 14247), (46, 14421), (47, 14433), (51, 14481), (62, 14619), (69, 14721),

Gene: Liebe_17 Start: 12447, Stop: 13442, Start Num: 6

Candidate Starts for Liebe_17:

(Start: 6 @12447 has 32 MA's), (10, 12474), (16, 12531), (19, 12573), (26, 12669), (33, 12768), (40, 12873), (44, 12915), (46, 12942), (47, 12954), (51, 13002), (65, 13164), (67, 13209), (77, 13320),

Gene: Lizalica_18 Start: 13911, Stop: 14903, Start Num: 6

Candidate Starts for Lizalica_18:

(Start: 6 @13911 has 32 MA's), (8, 13926), (28, 14160), (31, 14208), (33, 14232), (46, 14406), (47, 14418), (51, 14466), (69, 14706), (77, 14781),

Gene: London_18 Start: 13908, Stop: 14900, Start Num: 6

Candidate Starts for London_18:

(1, 13446), (2, 13593), (3, 13716), (Start: 6 @13908 has 32 MA's), (26, 14130), (28, 14157), (31, 14205), (33, 14229), (46, 14403), (47, 14415), (51, 14463), (62, 14601), (64, 14607), (69, 14703), (77, 14778),

Gene: LuckyBarnes_25 Start: 20888, Stop: 21940, Start Num: 5

Candidate Starts for LuckyBarnes_25:

(Start: 5 @20888 has 1 MA's), (25, 21110), (29, 21161), (34, 21251), (47, 21368), (48, 21380), (49, 21389), (54, 21458), (60, 21578), (63, 21596), (78, 21812), (87, 21869), (88, 21887),

Gene: MaGuCo_17 Start: 12381, Stop: 13376, Start Num: 6

Candidate Starts for MaGuCo_17:

(Start: 6 @12381 has 32 MA's), (16, 12465), (19, 12507), (26, 12603), (33, 12702), (40, 12807), (44, 12849), (46, 12876), (47, 12888), (51, 12936), (56, 13035), (65, 13098), (67, 13143), (77, 13254), (82, 13290),

Gene: Maureen_17 Start: 12447, Stop: 13442, Start Num: 6

Candidate Starts for Maureen_17:

(Start: 6 @12447 has 32 MA's), (10, 12474), (16, 12531), (19, 12573), (26, 12669), (33, 12768), (40, 12873), (44, 12915), (46, 12942), (47, 12954), (51, 13002), (65, 13164), (67, 13209), (77, 13320),

Gene: MiniMommy_17 Start: 12098, Stop: 13075, Start Num: 6

Candidate Starts for MiniMommy_17:

(Start: 6 @12098 has 32 MA's), (47, 12563), (79, 12956), (81, 12965), (90, 13028), (92, 13037),

Gene: Moss_20 Start: 13636, Stop: 14622, Start Num: 6

Candidate Starts for Moss_20:

(Start: 6 @13636 has 32 MA's), (20, 13777), (24, 13819), (33, 13957), (37, 14008), (38, 14020), (47, 14143), (49, 14164), (52, 14194), (55, 14281), (58, 14305), (92, 14596), (93, 14605),

Gene: Mudpuppy_19 Start: 13925, Stop: 14917, Start Num: 6

Candidate Starts for Mudpuppy_19:

(Start: 6 @13925 has 32 MA's), (8, 13940), (17, 14030), (28, 14174), (31, 14222), (33, 14246), (46, 14420), (47, 14432), (51, 14480), (69, 14720), (77, 14795),

Gene: Niobe_18 Start: 13908, Stop: 14900, Start Num: 6

Candidate Starts for Niobe_18:

(1, 13446), (2, 13593), (3, 13716), (Start: 6 @13908 has 32 MA's), (26, 14130), (28, 14157), (31, 14205), (33, 14229), (46, 14403), (47, 14415), (51, 14463), (62, 14601), (64, 14607), (69, 14703), (77, 14778),

Gene: Nitro_18 Start: 13933, Stop: 14928, Start Num: 6

Candidate Starts for Nitro_18:

(Start: 6 @13933 has 32 MA's), (26, 14155), (28, 14182), (31, 14230), (33, 14254), (46, 14428), (47, 14440), (51, 14488), (62, 14629), (69, 14731), (73, 14776), (77, 14806),

Gene: Phives_19 Start: 15012, Stop: 16010, Start Num: 6

Candidate Starts for Phives_19:

(Start: 6 @15012 has 32 MA's), (8, 15027), (12, 15069), (16, 15096), (19, 15138), (31, 15309), (33, 15333), (46, 15507), (47, 15519), (49, 15540), (51, 15567), (56, 15669), (62, 15708), (64, 15714), (69, 15813), (77, 15888), (84, 15933),

Gene: Pixelle_18 Start: 13955, Stop: 14953, Start Num: 6

Candidate Starts for Pixelle_18:

(Start: 6 @13955 has 32 MA's), (8, 13970), (12, 14012), (16, 14039), (19, 14081), (28, 14204), (31, 14252), (33, 14276), (46, 14450), (47, 14462), (49, 14483), (51, 14510), (56, 14612), (57, 14618), (62, 14651), (64, 14657), (69, 14756), (77, 14831), (91, 14921),

Gene: Powerpuff_18 Start: 13977, Stop: 14969, Start Num: 6

Candidate Starts for Powerpuff_18:

(Start: 6 @13977 has 32 MA's), (8, 13992), (17, 14082), (28, 14226), (31, 14274), (33, 14298), (46, 14472), (47, 14484), (51, 14532), (62, 14670), (69, 14772),

Gene: Pumpkins_31 Start: 14041, Stop: 15036, Start Num: 6

Candidate Starts for Pumpkins_31:

(Start: 6 @14041 has 32 MA's), (12, 14098), (26, 14263), (28, 14290), (33, 14362), (47, 14548), (51, 14596), (57, 14701), (61, 14731), (73, 14884), (77, 14914),

Gene: ShakeltOph_18 Start: 12097, Stop: 13074, Start Num: 6

Candidate Starts for ShakeltOph_18:

(Start: 6 @12097 has 32 MA's), (47, 12562), (79, 12955), (81, 12964), (90, 13027), (92, 13036),

Gene: Simpson_20 Start: 13926, Stop: 14918, Start Num: 6

Candidate Starts for Simpson_20:

(Start: 6 @13926 has 32 MA's), (8, 13941), (17, 14031), (28, 14175), (31, 14223), (33, 14247), (46, 14421), (47, 14433), (51, 14481), (62, 14619), (69, 14721),

Gene: Soondubu_17 Start: 14575, Stop: 15576, Start Num: 6

Candidate Starts for Soondubu_17:

(Start: 6 @14575 has 32 MA's), (9, 14599), (15, 14656), (18, 14686), (21, 14734), (27, 14803), (37, 14941), (41, 14989), (45, 15007), (47, 15043), (48, 15055), (49, 15064), (50, 15070), (59, 15238), (76, 15427), (90, 15538),

Gene: Tallboi_19 Start: 13934, Stop: 14932, Start Num: 6

Candidate Starts for Tallboi_19:

(Start: 6 @13934 has 32 MA's), (19, 14060), (20, 14075), (26, 14156), (31, 14231), (33, 14255), (46, 14429), (47, 14441), (51, 14489), (56, 14591), (62, 14630), (64, 14636), (69, 14735), (77, 14810),

Gene: Tbone_18 Start: 13930, Stop: 14922, Start Num: 6

Candidate Starts for Tbone_18:

(Start: 6 @13930 has 32 MA's), (8, 13945), (17, 14035), (28, 14179), (31, 14227), (33, 14251), (46, 14425), (47, 14437), (51, 14485), (69, 14725), (77, 14800),

Gene: TforTroy_18 Start: 14059, Stop: 15054, Start Num: 6

Candidate Starts for TforTroy_18:

(Start: 6 @14059 has 32 MA's), (28, 14308), (31, 14356), (33, 14380), (44, 14527), (47, 14566), (51, 14614), (57, 14719), (61, 14749), (73, 14902), (77, 14932),

Gene: Tian_18 Start: 13952, Stop: 14950, Start Num: 6

Candidate Starts for Tian_18:

(Start: 6 @13952 has 32 MA's), (8, 13967), (12, 14009), (16, 14036), (19, 14078), (28, 14201), (31, 14249), (33, 14273), (46, 14447), (47, 14459), (49, 14480), (51, 14507), (56, 14609), (62, 14648), (64, 14654), (69, 14753), (77, 14828),

Gene: Tuck_19 Start: 15131, Stop: 16126, Start Num: 6

Candidate Starts for Tuck_19:

(Start: 6 @15131 has 32 MA's), (12, 15188), (28, 15380), (31, 15428), (33, 15452), (46, 15626), (47, 15638), (51, 15686), (62, 15824), (64, 15830), (65, 15848), (69, 15929), (77, 16004),

Gene: Turab_18 Start: 13937, Stop: 14929, Start Num: 6

Candidate Starts for Turab_18:

(Start: 6 @13937 has 32 MA's), (26, 14159), (28, 14186), (31, 14234), (33, 14258), (46, 14432), (47, 14444), (51, 14492), (57, 14597), (69, 14732), (71, 14747), (77, 14807),

Gene: Tutumahutu_18 Start: 13977, Stop: 14969, Start Num: 6

Candidate Starts for Tutumahutu_18:

(Start: 6 @13977 has 32 MA's), (8, 13992), (17, 14082), (28, 14226), (31, 14274), (33, 14298), (46, 14472), (47, 14484), (51, 14532), (69, 14772),

Gene: VroomVroom_17 Start: 12110, Stop: 13087, Start Num: 6

Candidate Starts for VroomVroom_17:

(Start: 6 @12110 has 32 MA's), (27, 12335), (34, 12455), (47, 12575), (79, 12968), (81, 12977), (90, 13040), (94, 13064),

Gene: Warda_18 Start: 13922, Stop: 14914, Start Num: 6

Candidate Starts for Warda_18:

(Start: 6 @13922 has 32 MA's), (8, 13937), (17, 14027), (28, 14171), (31, 14219), (33, 14243), (46, 14417), (47, 14429), (51, 14477), (62, 14615), (69, 14717), (77, 14792),

Gene: Yang_18 Start: 14030, Stop: 15025, Start Num: 6

Candidate Starts for Yang_18:

(Start: 6 @14030 has 32 MA's), (12, 14087), (28, 14279), (31, 14327), (33, 14351), (47, 14537), (51, 14585), (57, 14690), (77, 14903),

Gene: YesChef_18 Start: 13977, Stop: 14969, Start Num: 6

Candidate Starts for YesChef_18:

(Start: 6 @13977 has 32 MA's), (8, 13992), (17, 14082), (28, 14226), (31, 14274), (33, 14298), (46, 14472), (47, 14484), (51, 14532), (62, 14670), (69, 14772),

Gene: pZL12_49c Start: 38471, Stop: 37530, Start Num: 6

Candidate Starts for pZL12_49c:

(Start: 6 @38471 has 32 MA's), (8, 38456), (14, 38405), (28, 38228), (30, 38189), (32, 38174), (39, 38099), (47, 38003), (51, 37955), (64, 37820), (68, 37736), (70, 37730), (72, 37691), (90, 37565),