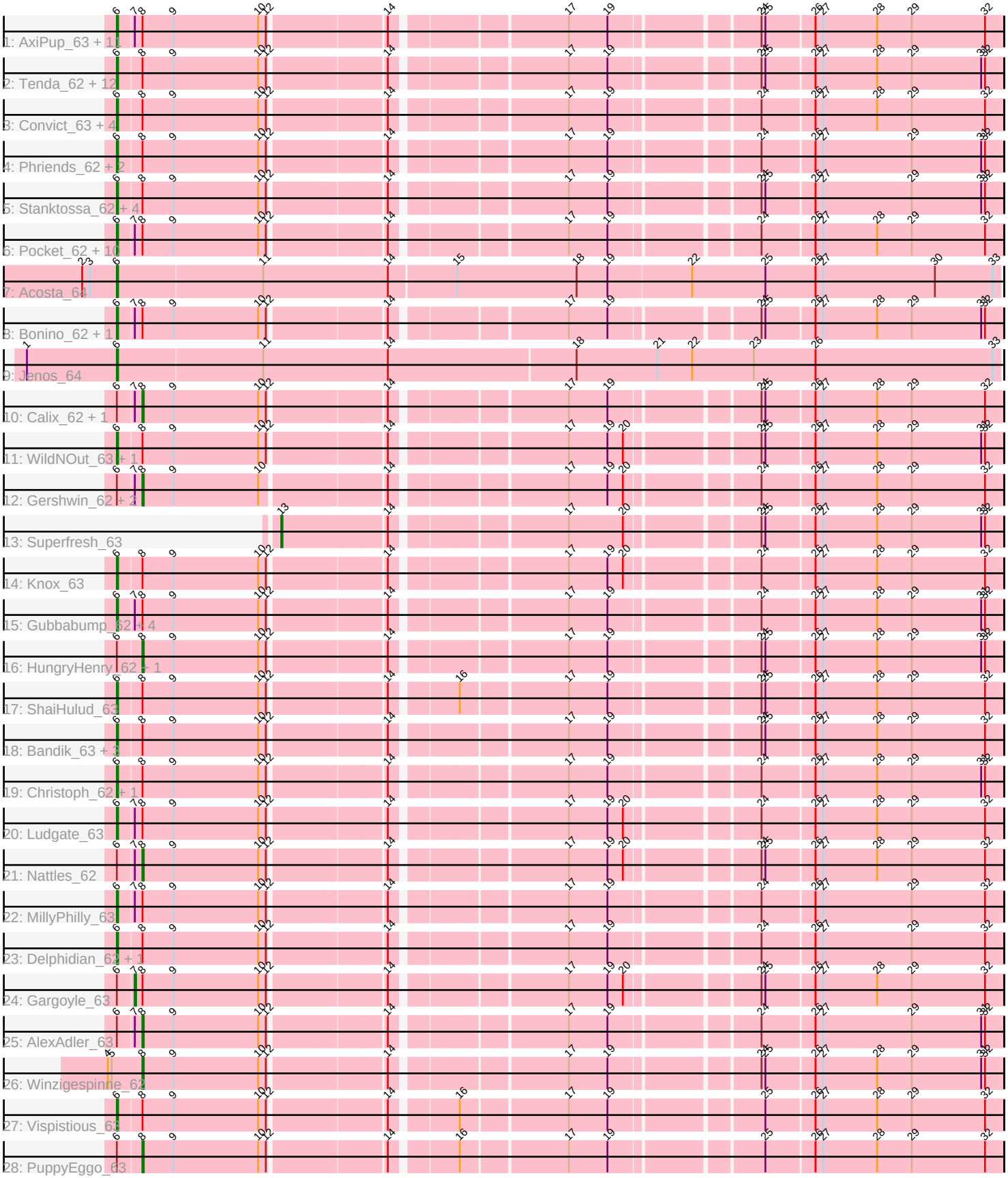
Pham 347505


1: AxiPup_63 + 11
2: Tenda_62 + 12
3: Convict_63 + 4
4: Phriends_62 + 2
5: Stanktossa_62 + 4
6: Pocket_62 + 10
7: Acosta_64
8: Bonino_62 + 1
9: Jenos_64
10: Calix_62 + 1
11: WildNOut_63 + 1
12: Gershwin_62 + 2
13: Superfresh_63
14: Knox_63
15: Gubbabump_62 + 4
16: HungryHenry_62 + 1
17: ShaiHulud_63
18: Bandik_63 + 3
19: Christoph_62 + 1
20: Ludgate_63
21: Nattles_62
22: MillyPhilly_63
23: Delphidian_62 + 1
24: Gargoyle_63
25: AlexAdler_63
26: Winzigespinne_62
27: Vispistious_63
28: PuppyEggo_63

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 347505 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347505 has 86 members, 0 are drafts.

Phages represented in each track:
• Track 1 : AxiPup_63, Pherferi_63, ParleG_63, Erla_62, Martin_64, Thorongil_63, BeautPeep30_63, Phireproof_63, Shee_63, TinSulphur_64, TatarkaPM_63, Chamuel_62
• Track 2 : Tenda_62, Baines_62, RosieMae_62, Greys_63, Strathdee_63, Benjalauren_63, Duocatuli_62, Espinosa_62, HanSolo_62, KannH_62, Aubergine_62, Teagan_63, Papafritta_62
• Track 3 : Convict_63, MaeLinda_63, BonesMcCoy_63, Ioannes_63, AranulaLuti_62
• Track 4 : Phriends_62, SoilGremlin_63, Riyhil_63
• Track 5 : Stanktossa_62, Chako_62, Dothraki_63, Ilzat_62, JasperRussell_62
• Track 6 : Pocket_62, Dave_63, Raptor_63, Kale_62, Renzie_63, Gelo_62, Etta_62, Klimt_63, Robinson_63, Antoinette_63, Thompsone_63
• Track 7 : Acosta_64
• Track 8 : Bonino_62, ManRay_62
• Track 9 : Jenos_64
• Track 10 : Calix_62, Rog141_62
• Track 11 : WildNOut_63, Alyxandracam_63
• Track 12 : Gershwin_62, TeddyBear_62, Asta_62
• Track 13 : Superfresh_63
• Track 14 : Knox_63
• Track 15 : Gubbabump_62, SJay_63, BigRedClifford_63, Garey24_63, Nagem_63
• Track 16 : HungryHenry_62, StingRay_62
• Track 17 : ShaiHulud_63
• Track 18 : Bandik_63, Zada_64, Inventa_63, CoraRita_62
• Track 19 : Christoph_62, Oats_62
• Track 20 : Ludgate_63
• Track 21 : Nattles_62
• Track 22 : MillyPhilly_63
• Track 23 : Delphidian_62, Peep_63
• Track 24 : Gargoyle_63
• Track 25 : AlexAdler_63
• Track 26 : Winzigespinne_62
• Track 27 : Vispistious_63
• Track 28 : PuppyEggo_63

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 73 of the 86 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acosta_64, Alyxandracam_63, Antoinette_63, AranulaLuti_62, Aubergine_62, AxiPup_63, Baines_62, Bandik_63, BeautPeep30_63, Benjalauren_63, BigRedClifford_63, BonesMcCoy_63, Bonino_62, Chako_62, Chamuel_62, Christoph_62, Convict_63, CoraRita_62, Dave_63, Delphidian_62, Dothraki_63, Duocatuli_62, Erla_62, Espinosa_62, Etta_62, Garey24_63, Gelo_62, Greys_63, Gubbabump_62, HanSolo_62, Ilzat_62, Inventa_63, Ioannes_63, JasperRussell_62, Jenos_64, Kale_62, KannH_62, Klimt_63, Knox_63, Ludgate_63, MaeLinda_63, ManRay_62, Martin_64, MillyPhilly_63, Nagem_63, Oats_62, Papafritta_62, ParleG_63, Peep_63, Pherferi_63, Phireproof_63, Phriends_62, Pocket_62, Raptor_63, Renzie_63, Riyhil_63, Robinson_63, RosieMae_62, SJay_63, ShaiHulud_63, Shee_63, SoilGremlin_63, Stanktossa_62, Strathdee_63, TatarkaPM_63, Teagan_63, Tenda_62, Thompsone_63, Thorongil_63, TinSulphur_64, Vispistious_63, WildNOut_63, Zada_64,

Genes that have the "Most Annotated" start but do not call it:
• AlexAdler_63, Asta_62, Calix_62, Gargoyle_63, Gershwin_62, HungryHenry_62, Nattles_62, PuppyEggo_63, Rog141_62, StingRay_62, TeddyBear_62,

Genes that do not have the "Most Annotated" start:
• Superfresh_63, Winzigespinne_62,

Summary by start number:

Start 6:
• Found in 84 of 86 (97.7%) of genes in pham
• Manual Annotations of this start: 73 of 86
• Called 86.9% of time when present
• Phage (with cluster) where this start called: Acosta_64 (EA1), Alyxandracam_63 (EA1), Antoinette_63 (EA1), AranulaLuti_62 (EA1), Aubergine_62 (EA1), AxiPup_63 (EA1), Baines_62 (EA1), Bandik_63 (EA1), BeautPeep30_63 (EA1), Benjalauren_63 (EA1), BigRedClifford_63 (EA1), BonesMcCoy_63 (EA1), Bonino_62 (EA1), Chako_62 (EA1), Chamuel_62 (EA1), Christoph_62 (EA1), Convict_63 (EA1), CoraRita_62 (EA1), Dave_63 (EA1), Delphidian_62 (EA1), Dothraki_63 (EA1), Duocatuli_62 (EA1), Erla_62 (EA1), Espinosa_62 (EA1), Etta_62 (EA1), Garey24_63 (EA1), Gelo_62 (EA1), Greys_63 (EA1), Gubbabump_62 (EA1), HanSolo_62 (EA1), Ilzat_62 (EA1), Inventa_63 (EA1), Ioannes_63 (EA1), JasperRussell_62 (EA1), Jenos_64 (EA1), Kale_62 (EA1), KannH_62 (EA1), Klimt_63 (EA1), Knox_63 (EA1), Ludgate_63 (EA1), MaeLinda_63 (EA1), ManRay_62 (EA1), Martin_64 (EA1), MillyPhilly_63 (EA1), Nagem_63 (EA1), Oats_62 (EA1), Papafritta_62 (EA1), ParleG_63 (EA1), Peep_63 (EA1), Pherferi_63 (EA1), Phireproof_63 (EA1), Phriends_62 (EA1), Pocket_62 (EA1), Raptor_63 (EA1), Renzie_63 (EA1), Riyhil_63 (EA1), Robinson_63 (EA1), RosieMae_62 (EA1), SJay_63 (EA1), ShaiHulud_63 (EA1), Shee_63 (EA1), SoilGremlin_63 (EA1), Stanktossa_62 (EA1), Strathdee_63 (EA1), TatarkaPM_63 (EA1), Teagan_63 (EA1), Tenda_62 (EA1), Thompsone_63 (EA1), Thorongil_63 (EA1), TinSulphur_64 (EA1), Vispistious_63 (EA1), WildNOut_63 (EA1), Zada_64 (EA1),

Start 7:

• Found in 40 of 86 (46.5%) of genes in pham
• Manual Annotations of this start: 1 of 86
• Called 2.5% of time when present
• Phage (with cluster) where this start called: Gargoyle_63 (EA1),

Start 8:
• Found in 83 of 86 (96.5%) of genes in pham
• Manual Annotations of this start: 11 of 86
• Called 13.3% of time when present
• Phage (with cluster) where this start called: AlexAdler_63 (EA1), Asta_62 (EA1), Calix_62 (EA1), Gershwin_62 (EA1), HungryHenry_62 (EA1), Nattles_62 (EA1), PuppyEggo_63 (EA1), Rog141_62 (EA1), StingRay_62 (EA1), TeddyBear_62 (EA1), Winzigespinne_62 (EA1),

Start 13:
• Found in 1 of 86 (1.2%) of genes in pham
• Manual Annotations of this start: 1 of 86
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Superfresh_63 (EA1),

Summary by clusters:

There is one cluster represented in this pham: EA1

Info for manual annotations of cluster EA1:
•Start number 6 was manually annotated 73 times for cluster EA1.
•Start number 7 was manually annotated 1 time for cluster EA1.
•Start number 8 was manually annotated 11 times for cluster EA1.
•Start number 13 was manually annotated 1 time for cluster EA1.

Gene Information:

Gene: Acosta_64 Start: 41069, Stop: 41746, Start Num: 6
Candidate Starts for Acosta_64:
(2, 41042), (3, 41048), (Start: 6 @41069 has 73 MA's), (11, 41180), (14, 41276), (15, 41327), (18, 41420), (19, 41444), (22, 41507), (25, 41564), (26, 41603), (27, 41609), (30, 41696), (33, 41741),

Gene: AlexAdler_63 Start: 41027, Stop: 41650, Start Num: 8
Candidate Starts for AlexAdler_63:
(Start: 6 @41009 has 73 MA's), (Start: 7 @41021 has 1 MA's), (Start: 8 @41027 has 11 MA's), (9, 41051), (10, 41117), (12, 41123), (14, 41207), (17, 41330), (19, 41360), (24, 41465), (26, 41504), (27, 41510), (29, 41579), (31, 41633), (32, 41636),

Gene: Alyxandracam_63 Start: 40945, Stop: 41586, Start Num: 6
Candidate Starts for Alyxandracam_63:
(Start: 6 @40945 has 73 MA's), (Start: 8 @40963 has 11 MA's), (9, 40987), (10, 41053), (12, 41059), (14, 41143), (17, 41266), (19, 41296), (20, 41308), (24, 41401), (25, 41404), (26, 41440), (27, 41446), (28, 41488), (29, 41515), (31, 41569), (32, 41572),

Gene: Antoinette_63 Start: 41033, Stop: 41674, Start Num: 6
Candidate Starts for Antoinette_63:

(Start: 6 @41033 has 73 MA's), (Start: 7 @41045 has 1 MA's), (Start: 8 @41051 has 11 MA's), (9, 41075), (10, 41141), (12, 41147), (14, 41231), (17, 41354), (19, 41384), (24, 41489), (26, 41528), (27, 41534), (28, 41576), (29, 41603), (32, 41660),

Gene: AranulaLuti_62 Start: 40725, Stop: 41366, Start Num: 6
Candidate Starts for AranulaLuti_62:
(Start: 6 @40725 has 73 MA's), (Start: 8 @40743 has 11 MA's), (9, 40767), (10, 40833), (12, 40839), (14, 40923), (17, 41046), (19, 41076), (24, 41181), (26, 41220), (27, 41226), (28, 41268), (29, 41295), (32, 41352),

Gene: Asta_62 Start: 40748, Stop: 41371, Start Num: 8
Candidate Starts for Asta_62:
(Start: 6 @40730 has 73 MA's), (Start: 7 @40742 has 1 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (14, 40928), (17, 41051), (19, 41081), (20, 41093), (24, 41186), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (32, 41357),

Gene: Aubergine_62 Start: 40730, Stop: 41371, Start Num: 6
Candidate Starts for Aubergine_62:
(Start: 6 @40730 has 73 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (12, 40844), (14, 40928), (17, 41051), (19, 41081), (24, 41186), (25, 41189), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (31, 41354), (32, 41357),

Gene: AxiPup_63 Start: 40945, Stop: 41586, Start Num: 6
Candidate Starts for AxiPup_63:
(Start: 6 @40945 has 73 MA's), (Start: 7 @40957 has 1 MA's), (Start: 8 @40963 has 11 MA's), (9, 40987), (10, 41053), (12, 41059), (14, 41143), (17, 41266), (19, 41296), (24, 41401), (25, 41404), (26, 41440), (27, 41446), (28, 41488), (29, 41515), (32, 41572),

Gene: Baines_62 Start: 40730, Stop: 41371, Start Num: 6
Candidate Starts for Baines_62:
(Start: 6 @40730 has 73 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (12, 40844), (14, 40928), (17, 41051), (19, 41081), (24, 41186), (25, 41189), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (31, 41354), (32, 41357),

Gene: Bandik_63 Start: 40979, Stop: 41620, Start Num: 6
Candidate Starts for Bandik_63:
(Start: 6 @40979 has 73 MA's), (Start: 8 @40997 has 11 MA's), (9, 41021), (10, 41087), (12, 41093), (14, 41177), (17, 41300), (19, 41330), (24, 41435), (25, 41438), (26, 41474), (27, 41480), (28, 41522), (29, 41549), (32, 41606),

Gene: BeautPeep30_63 Start: 40984, Stop: 41625, Start Num: 6
Candidate Starts for BeautPeep30_63:
(Start: 6 @40984 has 73 MA's), (Start: 7 @40996 has 1 MA's), (Start: 8 @41002 has 11 MA's), (9, 41026), (10, 41092), (12, 41098), (14, 41182), (17, 41305), (19, 41335), (24, 41440), (25, 41443), (26, 41479), (27, 41485), (28, 41527), (29, 41554), (32, 41611),

Gene: Benjalauren_63 Start: 40736, Stop: 41377, Start Num: 6
Candidate Starts for Benjalauren_63:
(Start: 6 @40736 has 73 MA's), (Start: 8 @40754 has 11 MA's), (9, 40778), (10, 40844), (12, 40850), (14, 40934), (17, 41057), (19, 41087), (24, 41192), (25, 41195), (26, 41231), (27, 41237), (28, 41279), (29, 41306), (31, 41360), (32, 41363),

Gene: BigRedClifford_63 Start: 40972, Stop: 41613, Start Num: 6

Candidate Starts for BigRedClifford_63:
(Start: 6 @40972 has 73 MA's), (Start: 7 @40984 has 1 MA's), (Start: 8 @40990 has 11 MA's), (9, 41014), (10, 41080), (12, 41086), (14, 41170), (17, 41293), (19, 41323), (24, 41428), (26, 41467), (27, 41473), (28, 41515), (29, 41542), (31, 41596), (32, 41599),

Gene: BonesMcCoy_63 Start: 40972, Stop: 41613, Start Num: 6
Candidate Starts for BonesMcCoy_63:
(Start: 6 @40972 has 73 MA's), (Start: 8 @40990 has 11 MA's), (9, 41014), (10, 41080), (12, 41086), (14, 41170), (17, 41293), (19, 41323), (24, 41428), (26, 41467), (27, 41473), (28, 41515), (29, 41542), (32, 41599),

Gene: Bonino_62 Start: 40709, Stop: 41350, Start Num: 6
Candidate Starts for Bonino_62:
(Start: 6 @40709 has 73 MA's), (Start: 7 @40721 has 1 MA's), (Start: 8 @40727 has 11 MA's), (9, 40751), (10, 40817), (12, 40823), (14, 40907), (17, 41030), (19, 41060), (24, 41165), (25, 41168), (26, 41204), (27, 41210), (28, 41252), (29, 41279), (31, 41333), (32, 41336),

Gene: Calix_62 Start: 40734, Stop: 41357, Start Num: 8
Candidate Starts for Calix_62:
(Start: 6 @40716 has 73 MA's), (Start: 7 @40728 has 1 MA's), (Start: 8 @40734 has 11 MA's), (9, 40758), (10, 40824), (12, 40830), (14, 40914), (17, 41037), (19, 41067), (24, 41172), (25, 41175), (26, 41211), (27, 41217), (28, 41259), (29, 41286), (32, 41343),

Gene: Chako_62 Start: 40725, Stop: 41366, Start Num: 6
Candidate Starts for Chako_62:
(Start: 6 @40725 has 73 MA's), (Start: 8 @40743 has 11 MA's), (9, 40767), (10, 40833), (12, 40839), (14, 40923), (17, 41046), (19, 41076), (24, 41181), (25, 41184), (26, 41220), (27, 41226), (29, 41295), (31, 41349), (32, 41352),

Gene: Chamuel_62 Start: 40743, Stop: 41384, Start Num: 6
Candidate Starts for Chamuel_62:
(Start: 6 @40743 has 73 MA's), (Start: 7 @40755 has 1 MA's), (Start: 8 @40761 has 11 MA's), (9, 40785), (10, 40851), (12, 40857), (14, 40941), (17, 41064), (19, 41094), (24, 41199), (25, 41202), (26, 41238), (27, 41244), (28, 41286), (29, 41313), (32, 41370),

Gene: Christoph_62 Start: 40729, Stop: 41370, Start Num: 6
Candidate Starts for Christoph_62:
(Start: 6 @40729 has 73 MA's), (Start: 8 @40747 has 11 MA's), (9, 40771), (10, 40837), (12, 40843), (14, 40927), (17, 41050), (19, 41080), (24, 41185), (26, 41224), (27, 41230), (28, 41272), (29, 41299), (31, 41353), (32, 41356),

Gene: Convict_63 Start: 40973, Stop: 41614, Start Num: 6
Candidate Starts for Convict_63:
(Start: 6 @40973 has 73 MA's), (Start: 8 @40991 has 11 MA's), (9, 41015), (10, 41081), (12, 41087), (14, 41171), (17, 41294), (19, 41324), (24, 41429), (26, 41468), (27, 41474), (28, 41516), (29, 41543), (32, 41600),

Gene: CoraRita_62 Start: 40698, Stop: 41339, Start Num: 6
Candidate Starts for CoraRita_62:
(Start: 6 @40698 has 73 MA's), (Start: 8 @40716 has 11 MA's), (9, 40740), (10, 40806), (12, 40812), (14, 40896), (17, 41019), (19, 41049), (24, 41154), (25, 41157), (26, 41193), (27, 41199), (28, 41241), (29, 41268), (32, 41325),

Gene: Dave_63 Start: 41033, Stop: 41674, Start Num: 6
Candidate Starts for Dave_63:
(Start: 6 @41033 has 73 MA's), (Start: 7 @41045 has 1 MA's), (Start: 8 @41051 has 11 MA's), (9, 41075), (10, 41141), (12, 41147), (14, 41231), (17, 41354), (19, 41384), (24, 41489), (26, 41528), (27, 41534), (28, 41576), (29, 41603), (32, 41660),

Gene: Delphidian_62 Start: 40770, Stop: 41411, Start Num: 6
Candidate Starts for Delphidian_62:
(Start: 6 @40770 has 73 MA's), (Start: 8 @40788 has 11 MA's), (9, 40812), (10, 40878), (12, 40884), (14, 40968), (17, 41091), (19, 41121), (24, 41226), (26, 41265), (27, 41271), (29, 41340), (32, 41397),

Gene: Dothraki_63 Start: 40982, Stop: 41623, Start Num: 6
Candidate Starts for Dothraki_63:
(Start: 6 @40982 has 73 MA's), (Start: 8 @41000 has 11 MA's), (9, 41024), (10, 41090), (12, 41096), (14, 41180), (17, 41303), (19, 41333), (24, 41438), (25, 41441), (26, 41477), (27, 41483), (29, 41552), (31, 41606), (32, 41609),

Gene: Duocatuli_62 Start: 40726, Stop: 41367, Start Num: 6
Candidate Starts for Duocatuli_62:
(Start: 6 @40726 has 73 MA's), (Start: 8 @40744 has 11 MA's), (9, 40768), (10, 40834), (12, 40840), (14, 40924), (17, 41047), (19, 41077), (24, 41182), (25, 41185), (26, 41221), (27, 41227), (28, 41269), (29, 41296), (31, 41350), (32, 41353),

Gene: Erla_62 Start: 40713, Stop: 41354, Start Num: 6
Candidate Starts for Erla_62:
(Start: 6 @40713 has 73 MA's), (Start: 7 @40725 has 1 MA's), (Start: 8 @40731 has 11 MA's), (9, 40755), (10, 40821), (12, 40827), (14, 40911), (17, 41034), (19, 41064), (24, 41169), (25, 41172), (26, 41208), (27, 41214), (28, 41256), (29, 41283), (32, 41340),

Gene: Espinosa_62 Start: 40728, Stop: 41369, Start Num: 6
Candidate Starts for Espinosa_62:
(Start: 6 @40728 has 73 MA's), (Start: 8 @40746 has 11 MA's), (9, 40770), (10, 40836), (12, 40842), (14, 40926), (17, 41049), (19, 41079), (24, 41184), (25, 41187), (26, 41223), (27, 41229), (28, 41271), (29, 41298), (31, 41352), (32, 41355),

Gene: Etta_62 Start: 40717, Stop: 41358, Start Num: 6
Candidate Starts for Etta_62:
(Start: 6 @40717 has 73 MA's), (Start: 7 @40729 has 1 MA's), (Start: 8 @40735 has 11 MA's), (9, 40759), (10, 40825), (12, 40831), (14, 40915), (17, 41038), (19, 41068), (24, 41173), (26, 41212), (27, 41218), (28, 41260), (29, 41287), (32, 41344),

Gene: Garey24_63 Start: 40697, Stop: 41338, Start Num: 6
Candidate Starts for Garey24_63:
(Start: 6 @40697 has 73 MA's), (Start: 7 @40709 has 1 MA's), (Start: 8 @40715 has 11 MA's), (9, 40739), (10, 40805), (12, 40811), (14, 40895), (17, 41018), (19, 41048), (24, 41153), (26, 41192), (27, 41198), (28, 41240), (29, 41267), (31, 41321), (32, 41324),

Gene: Gargoyle_63 Start: 40990, Stop: 41619, Start Num: 7
Candidate Starts for Gargoyle_63:
(Start: 6 @40978 has 73 MA's), (Start: 7 @40990 has 1 MA's), (Start: 8 @40996 has 11 MA's), (9, 41020), (10, 41086), (12, 41092), (14, 41176), (17, 41299), (19, 41329), (20, 41341), (24, 41434), (25, 41437), (26, 41473), (27, 41479), (28, 41521), (29, 41548), (32, 41605),

Gene: Gelo_62 Start: 40723, Stop: 41364, Start Num: 6
Candidate Starts for Gelo_62:
(Start: 6 @40723 has 73 MA's), (Start: 7 @40735 has 1 MA's), (Start: 8 @40741 has 11 MA's), (9, 40765), (10, 40831), (12, 40837), (14, 40921), (17, 41044), (19, 41074), (24, 41179), (26, 41218), (27, 41224), (28, 41266), (29, 41293), (32, 41350),

Gene: Gershwin_62 Start: 40748, Stop: 41371, Start Num: 8
Candidate Starts for Gershwin_62:
(Start: 6 @40730 has 73 MA's), (Start: 7 @40742 has 1 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (14, 40928), (17, 41051), (19, 41081), (20, 41093), (24, 41186), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (32, 41357),

Gene: Greys_63 Start: 40972, Stop: 41613, Start Num: 6
Candidate Starts for Greys_63:
(Start: 6 @40972 has 73 MA's), (Start: 8 @40990 has 11 MA's), (9, 41014), (10, 41080), (12, 41086), (14, 41170), (17, 41293), (19, 41323), (24, 41428), (25, 41431), (26, 41467), (27, 41473), (28, 41515), (29, 41542), (31, 41596), (32, 41599),

Gene: Gubbabump_62 Start: 40667, Stop: 41308, Start Num: 6
Candidate Starts for Gubbabump_62:
(Start: 6 @40667 has 73 MA's), (Start: 7 @40679 has 1 MA's), (Start: 8 @40685 has 11 MA's), (9, 40709), (10, 40775), (12, 40781), (14, 40865), (17, 40988), (19, 41018), (24, 41123), (26, 41162), (27, 41168), (28, 41210), (29, 41237), (31, 41291), (32, 41294),

Gene: HanSolo_62 Start: 40678, Stop: 41319, Start Num: 6
Candidate Starts for HanSolo_62:
(Start: 6 @40678 has 73 MA's), (Start: 8 @40696 has 11 MA's), (9, 40720), (10, 40786), (12, 40792), (14, 40876), (17, 40999), (19, 41029), (24, 41134), (25, 41137), (26, 41173), (27, 41179), (28, 41221), (29, 41248), (31, 41302), (32, 41305),

Gene: HungryHenry_62 Start: 40709, Stop: 41332, Start Num: 8
Candidate Starts for HungryHenry_62:
(Start: 6 @40691 has 73 MA's), (Start: 8 @40709 has 11 MA's), (9, 40733), (10, 40799), (12, 40805), (14, 40889), (17, 41012), (19, 41042), (24, 41147), (25, 41150), (26, 41186), (27, 41192), (28, 41234), (29, 41261), (31, 41315), (32, 41318),

Gene: Ilzat_62 Start: 40700, Stop: 41341, Start Num: 6
Candidate Starts for Ilzat_62:
(Start: 6 @40700 has 73 MA's), (Start: 8 @40718 has 11 MA's), (9, 40742), (10, 40808), (12, 40814), (14, 40898), (17, 41021), (19, 41051), (24, 41156), (25, 41159), (26, 41195), (27, 41201), (29, 41270), (31, 41324), (32, 41327),

Gene: Inventa_63 Start: 40977, Stop: 41618, Start Num: 6
Candidate Starts for Inventa_63:
(Start: 6 @40977 has 73 MA's), (Start: 8 @40995 has 11 MA's), (9, 41019), (10, 41085), (12, 41091), (14, 41175), (17, 41298), (19, 41328), (24, 41433), (25, 41436), (26, 41472), (27, 41478), (28, 41520), (29, 41547), (32, 41604),

Gene: Ioannes_63 Start: 41054, Stop: 41695, Start Num: 6
Candidate Starts for Ioannes_63:
(Start: 6 @41054 has 73 MA's), (Start: 8 @41072 has 11 MA's), (9, 41096), (10, 41162), (12, 41168), (14, 41252), (17, 41375), (19, 41405), (24, 41510), (26, 41549), (27, 41555), (28, 41597), (29, 41624), (32, 41681),

Gene: JasperRussell_62 Start: 40725, Stop: 41366, Start Num: 6
Candidate Starts for JasperRussell_62:
(Start: 6 @40725 has 73 MA's), (Start: 8 @40743 has 11 MA's), (9, 40767), (10, 40833), (12, 40839), (14, 40923), (17, 41046), (19, 41076), (24, 41181), (25, 41184), (26, 41220), (27, 41226), (29, 41295), (31, 41349), (32, 41352),

Gene: Jenos_64 Start: 41567, Stop: 42247, Start Num: 6
Candidate Starts for Jenos_64:
(1, 41498), (Start: 6 @41567 has 73 MA's), (11, 41678), (14, 41774), (18, 41918), (21, 41981), (22, 42008), (23, 42056), (26, 42104), (33, 42242),

Gene: Kale_62 Start: 40733, Stop: 41374, Start Num: 6
Candidate Starts for Kale_62:
(Start: 6 @40733 has 73 MA's), (Start: 7 @40745 has 1 MA's), (Start: 8 @40751 has 11 MA's), (9, 40775), (10, 40841), (12, 40847), (14, 40931), (17, 41054), (19, 41084), (24, 41189), (26, 41228), (27, 41234), (28, 41276), (29, 41303), (32, 41360),

Gene: KannH_62 Start: 40726, Stop: 41367, Start Num: 6
Candidate Starts for KannH_62:
(Start: 6 @40726 has 73 MA's), (Start: 8 @40744 has 11 MA's), (9, 40768), (10, 40834), (12, 40840), (14, 40924), (17, 41047), (19, 41077), (24, 41182), (25, 41185), (26, 41221), (27, 41227), (28, 41269), (29, 41296), (31, 41350), (32, 41353),

Gene: Klimt_63 Start: 40748, Stop: 41389, Start Num: 6
Candidate Starts for Klimt_63:
(Start: 6 @40748 has 73 MA's), (Start: 7 @40760 has 1 MA's), (Start: 8 @40766 has 11 MA's), (9, 40790), (10, 40856), (12, 40862), (14, 40946), (17, 41069), (19, 41099), (24, 41204), (26, 41243), (27, 41249), (28, 41291), (29, 41318), (32, 41375),

Gene: Knox_63 Start: 40972, Stop: 41613, Start Num: 6
Candidate Starts for Knox_63:
(Start: 6 @40972 has 73 MA's), (Start: 8 @40990 has 11 MA's), (9, 41014), (10, 41080), (12, 41086), (14, 41170), (17, 41293), (19, 41323), (20, 41335), (24, 41428), (26, 41467), (27, 41473), (28, 41515), (29, 41542), (32, 41599),

Gene: Ludgate_63 Start: 40974, Stop: 41615, Start Num: 6
Candidate Starts for Ludgate_63:
(Start: 6 @40974 has 73 MA's), (Start: 7 @40986 has 1 MA's), (Start: 8 @40992 has 11 MA's), (9, 41016), (10, 41082), (12, 41088), (14, 41172), (17, 41295), (19, 41325), (20, 41337), (24, 41430), (26, 41469), (27, 41475), (28, 41517), (29, 41544), (32, 41601),

Gene: MaeLinda_63 Start: 40984, Stop: 41625, Start Num: 6
Candidate Starts for MaeLinda_63:
(Start: 6 @40984 has 73 MA's), (Start: 8 @41002 has 11 MA's), (9, 41026), (10, 41092), (12, 41098), (14, 41182), (17, 41305), (19, 41335), (24, 41440), (26, 41479), (27, 41485), (28, 41527), (29, 41554), (32, 41611),

Gene: ManRay_62 Start: 40730, Stop: 41371, Start Num: 6
Candidate Starts for ManRay_62:
(Start: 6 @40730 has 73 MA's), (Start: 7 @40742 has 1 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (12, 40844), (14, 40928), (17, 41051), (19, 41081), (24, 41186), (25, 41189), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (31, 41354), (32, 41357),

Gene: Martin_64 Start: 40987, Stop: 41628, Start Num: 6
Candidate Starts for Martin_64:
(Start: 6 @40987 has 73 MA's), (Start: 7 @40999 has 1 MA's), (Start: 8 @41005 has 11 MA's), (9, 41029), (10, 41095), (12, 41101), (14, 41185), (17, 41308), (19, 41338), (24, 41443), (25, 41446), (26, 41482), (27, 41488), (28, 41530), (29, 41557), (32, 41614),

Gene: MillyPhilly_63 Start: 40975, Stop: 41616, Start Num: 6
Candidate Starts for MillyPhilly_63:
(Start: 6 @40975 has 73 MA's), (Start: 7 @40987 has 1 MA's), (Start: 8 @40993 has 11 MA's), (9, 41017), (10, 41083), (12, 41089), (14, 41173), (17, 41296), (19, 41326), (24, 41431), (26, 41470), (27, 41476), (29, 41545), (32, 41602),

Gene: Nagem_63 Start: 41021, Stop: 41662, Start Num: 6
Candidate Starts for Nagem_63:
(Start: 6 @41021 has 73 MA's), (Start: 7 @41033 has 1 MA's), (Start: 8 @41039 has 11 MA's), (9, 41063), (10, 41129), (12, 41135), (14, 41219), (17, 41342), (19, 41372), (24, 41477), (26, 41516), (27, 41522), (28, 41564), (29, 41591), (31, 41645), (32, 41648),

Gene: Nattles_62 Start: 40736, Stop: 41359, Start Num: 8
Candidate Starts for Nattles_62:
(Start: 6 @40718 has 73 MA's), (Start: 7 @40730 has 1 MA's), (Start: 8 @40736 has 11 MA's), (9, 40760), (10, 40826), (12, 40832), (14, 40916), (17, 41039), (19, 41069), (20, 41081), (24, 41174), (25, 41177), (26, 41213), (27, 41219), (28, 41261), (29, 41288), (32, 41345),

Gene: Oats_62 Start: 40730, Stop: 41371, Start Num: 6
Candidate Starts for Oats_62:
(Start: 6 @40730 has 73 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (12, 40844), (14, 40928), (17, 41051), (19, 41081), (24, 41186), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (31, 41354), (32, 41357),

Gene: Papafritta_62 Start: 40735, Stop: 41376, Start Num: 6
Candidate Starts for Papafritta_62:
(Start: 6 @40735 has 73 MA's), (Start: 8 @40753 has 11 MA's), (9, 40777), (10, 40843), (12, 40849), (14, 40933), (17, 41056), (19, 41086), (24, 41191), (25, 41194), (26, 41230), (27, 41236), (28, 41278), (29, 41305), (31, 41359), (32, 41362),

Gene: ParleG_63 Start: 40985, Stop: 41626, Start Num: 6
Candidate Starts for ParleG_63:
(Start: 6 @40985 has 73 MA's), (Start: 7 @40997 has 1 MA's), (Start: 8 @41003 has 11 MA's), (9, 41027), (10, 41093), (12, 41099), (14, 41183), (17, 41306), (19, 41336), (24, 41441), (25, 41444), (26, 41480), (27, 41486), (28, 41528), (29, 41555), (32, 41612),

Gene: Peep_63 Start: 41031, Stop: 41672, Start Num: 6
Candidate Starts for Peep_63:
(Start: 6 @41031 has 73 MA's), (Start: 8 @41049 has 11 MA's), (9, 41073), (10, 41139), (12, 41145), (14, 41229), (17, 41352), (19, 41382), (24, 41487), (26, 41526), (27, 41532), (29, 41601), (32, 41658),

Gene: Pherferi_63 Start: 40978, Stop: 41619, Start Num: 6
Candidate Starts for Pherferi_63:
(Start: 6 @40978 has 73 MA's), (Start: 7 @40990 has 1 MA's), (Start: 8 @40996 has 11 MA's), (9, 41020), (10, 41086), (12, 41092), (14, 41176), (17, 41299), (19, 41329), (24, 41434), (25, 41437), (26, 41473), (27, 41479), (28, 41521), (29, 41548), (32, 41605),

Gene: Phireproof_63 Start: 40984, Stop: 41625, Start Num: 6
Candidate Starts for Phireproof_63:
(Start: 6 @40984 has 73 MA's), (Start: 7 @40996 has 1 MA's), (Start: 8 @41002 has 11 MA's), (9, 41026), (10, 41092), (12, 41098), (14, 41182), (17, 41305), (19, 41335), (24, 41440), (25, 41443), (26, 41479), (27, 41485), (28, 41527), (29, 41554), (32, 41611),

Gene: Phriends_62 Start: 40779, Stop: 41420, Start Num: 6
Candidate Starts for Phriends_62:
(Start: 6 @40779 has 73 MA's), (Start: 8 @40797 has 11 MA's), (9, 40821), (10, 40887), (12, 40893), (14, 40977), (17, 41100), (19, 41130), (24, 41235), (26, 41274), (27, 41280), (29, 41349), (31, 41403), (32, 41406),

Gene: Pocket_62 Start: 40758, Stop: 41399, Start Num: 6
Candidate Starts for Pocket_62:
(Start: 6 @40758 has 73 MA's), (Start: 7 @40770 has 1 MA's), (Start: 8 @40776 has 11 MA's), (9, 40800), (10, 40866), (12, 40872), (14, 40956), (17, 41079), (19, 41109), (24, 41214), (26, 41253), (27, 41259), (28, 41301), (29, 41328), (32, 41385),

Gene: PuppyEggo_63 Start: 40996, Stop: 41619, Start Num: 8
Candidate Starts for PuppyEggo_63:
(Start: 6 @40978 has 73 MA's), (Start: 8 @40996 has 11 MA's), (9, 41020), (10, 41086), (12, 41092), (14, 41176), (16, 41221), (17, 41299), (19, 41329), (25, 41437), (26, 41473), (27, 41479), (28, 41521), (29, 41548), (32, 41605),

Gene: Raptor_63 Start: 40976, Stop: 41617, Start Num: 6
Candidate Starts for Raptor_63:
(Start: 6 @40976 has 73 MA's), (Start: 7 @40988 has 1 MA's), (Start: 8 @40994 has 11 MA's), (9, 41018), (10, 41084), (12, 41090), (14, 41174), (17, 41297), (19, 41327), (24, 41432), (26, 41471), (27, 41477), (28, 41519), (29, 41546), (32, 41603),

Gene: Renzie_63 Start: 41033, Stop: 41674, Start Num: 6
Candidate Starts for Renzie_63:
(Start: 6 @41033 has 73 MA's), (Start: 7 @41045 has 1 MA's), (Start: 8 @41051 has 11 MA's), (9, 41075), (10, 41141), (12, 41147), (14, 41231), (17, 41354), (19, 41384), (24, 41489), (26, 41528), (27, 41534), (28, 41576), (29, 41603), (32, 41660),

Gene: Riyhil_63 Start: 40987, Stop: 41628, Start Num: 6
Candidate Starts for Riyhil_63:
(Start: 6 @40987 has 73 MA's), (Start: 8 @41005 has 11 MA's), (9, 41029), (10, 41095), (12, 41101), (14, 41185), (17, 41308), (19, 41338), (24, 41443), (26, 41482), (27, 41488), (29, 41557), (31, 41611), (32, 41614),

Gene: Robinson_63 Start: 41049, Stop: 41690, Start Num: 6
Candidate Starts for Robinson_63:
(Start: 6 @41049 has 73 MA's), (Start: 7 @41061 has 1 MA's), (Start: 8 @41067 has 11 MA's), (9, 41091), (10, 41157), (12, 41163), (14, 41247), (17, 41370), (19, 41400), (24, 41505), (26, 41544), (27, 41550), (28, 41592), (29, 41619), (32, 41676),

Gene: Rog141_62 Start: 40739, Stop: 41362, Start Num: 8
Candidate Starts for Rog141_62:
(Start: 6 @40721 has 73 MA's), (Start: 7 @40733 has 1 MA's), (Start: 8 @40739 has 11 MA's), (9, 40763), (10, 40829), (12, 40835), (14, 40919), (17, 41042), (19, 41072), (24, 41177), (25, 41180), (26,

41216), (27, 41222), (28, 41264), (29, 41291), (32, 41348),

Gene: RosieMae_62 Start: 40782, Stop: 41423, Start Num: 6
Candidate Starts for RosieMae_62:
(Start: 6 @40782 has 73 MA's), (Start: 8 @40800 has 11 MA's), (9, 40824), (10, 40890), (12, 40896), (14, 40980), (17, 41103), (19, 41133), (24, 41238), (25, 41241), (26, 41277), (27, 41283), (28, 41325), (29, 41352), (31, 41406), (32, 41409),

Gene: SJay_63 Start: 41022, Stop: 41663, Start Num: 6
Candidate Starts for SJay_63:
(Start: 6 @41022 has 73 MA's), (Start: 7 @41034 has 1 MA's), (Start: 8 @41040 has 11 MA's), (9, 41064), (10, 41130), (12, 41136), (14, 41220), (17, 41343), (19, 41373), (24, 41478), (26, 41517), (27, 41523), (28, 41565), (29, 41592), (31, 41646), (32, 41649),

Gene: ShaiHulud_63 Start: 40987, Stop: 41628, Start Num: 6
Candidate Starts for ShaiHulud_63:
(Start: 6 @40987 has 73 MA's), (Start: 8 @41005 has 11 MA's), (9, 41029), (10, 41095), (12, 41101), (14, 41185), (16, 41230), (17, 41308), (19, 41338), (24, 41443), (25, 41446), (26, 41482), (27, 41488), (28, 41530), (29, 41557), (32, 41614),

Gene: Shee_63 Start: 40974, Stop: 41615, Start Num: 6
Candidate Starts for Shee_63:
(Start: 6 @40974 has 73 MA's), (Start: 7 @40986 has 1 MA's), (Start: 8 @40992 has 11 MA's), (9, 41016), (10, 41082), (12, 41088), (14, 41172), (17, 41295), (19, 41325), (24, 41430), (25, 41433), (26, 41469), (27, 41475), (28, 41517), (29, 41544), (32, 41601),

Gene: SoilGremlin_63 Start: 40771, Stop: 41412, Start Num: 6
Candidate Starts for SoilGremlin_63:
(Start: 6 @40771 has 73 MA's), (Start: 8 @40789 has 11 MA's), (9, 40813), (10, 40879), (12, 40885), (14, 40969), (17, 41092), (19, 41122), (24, 41227), (26, 41266), (27, 41272), (29, 41341), (31, 41395), (32, 41398),

Gene: Stanktossa_62 Start: 40979, Stop: 41620, Start Num: 6
Candidate Starts for Stanktossa_62:
(Start: 6 @40979 has 73 MA's), (Start: 8 @40997 has 11 MA's), (9, 41021), (10, 41087), (12, 41093), (14, 41177), (17, 41300), (19, 41330), (24, 41435), (25, 41438), (26, 41474), (27, 41480), (29, 41549), (31, 41603), (32, 41606),

Gene: StingRay_62 Start: 40790, Stop: 41413, Start Num: 8
Candidate Starts for StingRay_62:
(Start: 6 @40772 has 73 MA's), (Start: 8 @40790 has 11 MA's), (9, 40814), (10, 40880), (12, 40886), (14, 40970), (17, 41093), (19, 41123), (24, 41228), (25, 41231), (26, 41267), (27, 41273), (28, 41315), (29, 41342), (31, 41396), (32, 41399),

Gene: Strathdee_63 Start: 40977, Stop: 41618, Start Num: 6
Candidate Starts for Strathdee_63:
(Start: 6 @40977 has 73 MA's), (Start: 8 @40995 has 11 MA's), (9, 41019), (10, 41085), (12, 41091), (14, 41175), (17, 41298), (19, 41328), (24, 41433), (25, 41436), (26, 41472), (27, 41478), (28, 41520), (29, 41547), (31, 41601), (32, 41604),

Gene: Superfresh_63 Start: 41155, Stop: 41676, Start Num: 13
Candidate Starts for Superfresh_63:

(Start: 13 @41155 has 1 MA's), (14, 41233), (17, 41356), (20, 41398), (24, 41491), (25, 41494), (26, 41530), (27, 41536), (28, 41578), (29, 41605), (31, 41659), (32, 41662),

Gene: TatarkaPM_63 Start: 40988, Stop: 41629, Start Num: 6
Candidate Starts for TatarkaPM_63:
(Start: 6 @40988 has 73 MA's), (Start: 7 @41000 has 1 MA's), (Start: 8 @41006 has 11 MA's), (9, 41030), (10, 41096), (12, 41102), (14, 41186), (17, 41309), (19, 41339), (24, 41444), (25, 41447), (26, 41483), (27, 41489), (28, 41531), (29, 41558), (32, 41615),

Gene: Teagan_63 Start: 40968, Stop: 41609, Start Num: 6
Candidate Starts for Teagan_63:
(Start: 6 @40968 has 73 MA's), (Start: 8 @40986 has 11 MA's), (9, 41010), (10, 41076), (12, 41082), (14, 41166), (17, 41289), (19, 41319), (24, 41424), (25, 41427), (26, 41463), (27, 41469), (28, 41511), (29, 41538), (31, 41592), (32, 41595),

Gene: TeddyBear_62 Start: 40748, Stop: 41371, Start Num: 8
Candidate Starts for TeddyBear_62:
(Start: 6 @40730 has 73 MA's), (Start: 7 @40742 has 1 MA's), (Start: 8 @40748 has 11 MA's), (9, 40772), (10, 40838), (14, 40928), (17, 41051), (19, 41081), (20, 41093), (24, 41186), (26, 41225), (27, 41231), (28, 41273), (29, 41300), (32, 41357),

Gene: Tenda_62 Start: 40728, Stop: 41369, Start Num: 6
Candidate Starts for Tenda_62:
(Start: 6 @40728 has 73 MA's), (Start: 8 @40746 has 11 MA's), (9, 40770), (10, 40836), (12, 40842), (14, 40926), (17, 41049), (19, 41079), (24, 41184), (25, 41187), (26, 41223), (27, 41229), (28, 41271), (29, 41298), (31, 41352), (32, 41355),

Gene: Thompsone_63 Start: 40975, Stop: 41616, Start Num: 6
Candidate Starts for Thompsone_63:
(Start: 6 @40975 has 73 MA's), (Start: 7 @40987 has 1 MA's), (Start: 8 @40993 has 11 MA's), (9, 41017), (10, 41083), (12, 41089), (14, 41173), (17, 41296), (19, 41326), (24, 41431), (26, 41470), (27, 41476), (28, 41518), (29, 41545), (32, 41602),

Gene: Thorongil_63 Start: 40492, Stop: 41133, Start Num: 6
Candidate Starts for Thorongil_63:
(Start: 6 @40492 has 73 MA's), (Start: 7 @40504 has 1 MA's), (Start: 8 @40510 has 11 MA's), (9, 40534), (10, 40600), (12, 40606), (14, 40690), (17, 40813), (19, 40843), (24, 40948), (25, 40951), (26, 40987), (27, 40993), (28, 41035), (29, 41062), (32, 41119),

Gene: TinSulphur_64 Start: 40982, Stop: 41623, Start Num: 6
Candidate Starts for TinSulphur_64:
(Start: 6 @40982 has 73 MA's), (Start: 7 @40994 has 1 MA's), (Start: 8 @41000 has 11 MA's), (9, 41024), (10, 41090), (12, 41096), (14, 41180), (17, 41303), (19, 41333), (24, 41438), (25, 41441), (26, 41477), (27, 41483), (28, 41525), (29, 41552), (32, 41609),

Gene: Vispistious_63 Start: 40978, Stop: 41619, Start Num: 6
Candidate Starts for Vispistious_63:
(Start: 6 @40978 has 73 MA's), (Start: 8 @40996 has 11 MA's), (9, 41020), (10, 41086), (12, 41092), (14, 41176), (16, 41221), (17, 41299), (19, 41329), (25, 41437), (26, 41473), (27, 41479), (28, 41521), (29, 41548), (32, 41605),

Gene: WildNOut_63 Start: 40971, Stop: 41612, Start Num: 6
Candidate Starts for WildNOut_63:

(Start: 6 @40971 has 73 MA's), (Start: 8 @40989 has 11 MA's), (9, 41013), (10, 41079), (12, 41085), (14, 41169), (17, 41292), (19, 41322), (20, 41334), (24, 41427), (25, 41430), (26, 41466), (27, 41472), (28, 41514), (29, 41541), (31, 41595), (32, 41598),

Gene: Winzigespinne_62 Start: 40736, Stop: 41359, Start Num: 8
Candidate Starts for Winzigespinne_62:
(4, 40709), (5, 40712), (Start: 8 @40736 has 11 MA's), (9, 40760), (10, 40826), (12, 40832), (14, 40916), (17, 41039), (19, 41069), (24, 41174), (25, 41177), (26, 41213), (27, 41219), (28, 41261), (29, 41288), (31, 41342), (32, 41345),

Gene: Zada_64 Start: 40989, Stop: 41630, Start Num: 6
Candidate Starts for Zada_64:
(Start: 6 @40989 has 73 MA's), (Start: 8 @41007 has 11 MA's), (9, 41031), (10, 41097), (12, 41103), (14, 41187), (17, 41310), (19, 41340), (24, 41445), (25, 41448), (26, 41484), (27, 41490), (28, 41532), (29, 41559), (32, 41616),