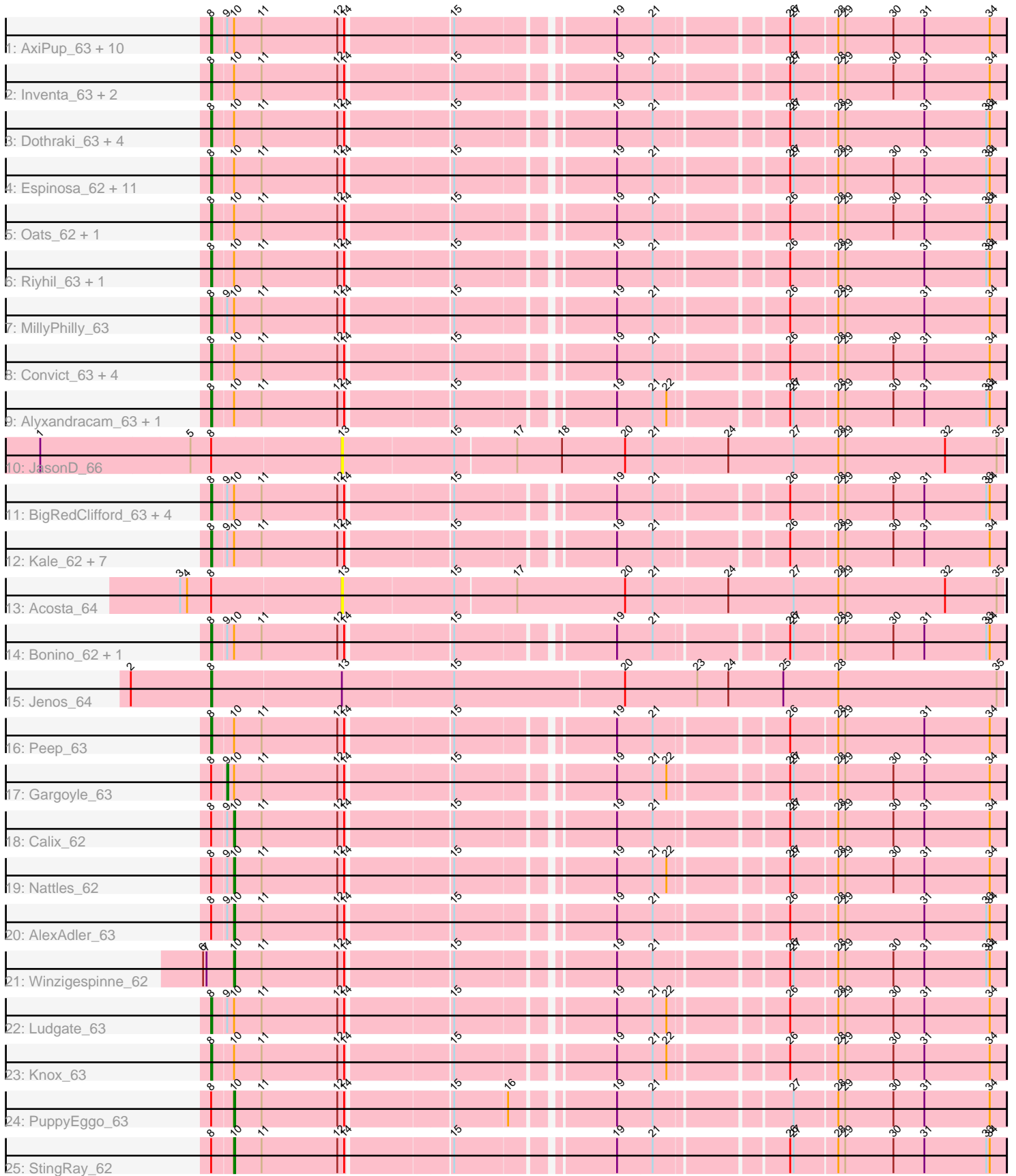


Pham 157833



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 157833 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157833 has 71 members, 2 are drafts.

Phages represented in each track:

- Track 1 : AxiPup_63, Phireproof_63, Martin_64, Pherferi_63, TatarkaPM_63, Chamuel_62, Thorongil_63, ParleG_63, Shee_63, BeautPeep30_63, TinSulphur_64
- Track 2 : Inventa_63, Bandik_63, Zada_64
- Track 3 : Dothraki_63, Stanktossa_62, Chako_62, JasperRussell_62, Ilzat_62
- Track 4 : Espinosa_62, Aubergine_62, Baines_62, Teagan_63, HanSolo_62, Strathdee_63, Greys_63, Papafritta_62, Tenda_62, KannH_62, Benjalauren_63, Duocatuli_62
- Track 5 : Oats_62, Christoph_62
- Track 6 : Riyhil_63, Phriends_62
- Track 7 : MillyPhilly_63
- Track 8 : Convict_63, BonesMcCoy_63, MaeLinda_63, AranulaLuti_62, Ioannes_63
- Track 9 : Alyxandracam_63, WildNOOut_63
- Track 10 : JasonD_66
- Track 11 : BigRedClifford_63, Garey24_63, Nagem_63, SJay_63, Gubbabump_62
- Track 12 : Kale_62, Pocket_62, Robinson_63, Gelo_62, Raptor_63, Etta_62, Klimt_63, Thompsone_63
- Track 13 : Acosta_64
- Track 14 : Bonino_62, ManRay_62
- Track 15 : Jenos_64
- Track 16 : Peep_63
- Track 17 : Gargoyle_63
- Track 18 : Calix_62
- Track 19 : Nattles_62
- Track 20 : AlexAdler_63
- Track 21 : Winzigespinne_62
- Track 22 : Ludgate_63
- Track 23 : Knox_63
- Track 24 : PuppyEggo_63
- Track 25 : StingRay_62

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

The start number called the most often in the published annotations is 8, it was called in 62 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alyxandracam_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, Dothraki_63, Duocatuli_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, Riyhil_63, Robinson_63, SJay_63, Shee_63, Stanktossa_62, Strathdee_63, TatarkaPM_63, Teagan_63, Tenda_62, Thompsone_63, Thorongil_63, TinSulphur_64, WildNOut_63, Zada_64,

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

- Acosta_64, AlexAdler_63, Calix_62, Gargoyle_63, JasonD_66, Nattles_62, PuppyEggo_63, StingRay_62,

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

- Winzigespinne_62,

Summary by start number:

Start 8:

- Found in 70 of 71 (98.6%) of genes in pham
- Manual Annotations of this start: 62 of 69
- Called 88.6% of time when present
- Phage (with cluster) where this start called: Alyxandracam_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), Dothraki_63 (EA1), Duocatuli_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), Riyhil_63 (EA1), Robinson_63 (EA1), SJay_63 (EA1), Shee_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), WildNOut_63 (EA1), Zada_64 (EA1),

Start 9:

- Found in 32 of 71 (45.1%) of genes in pham
- Manual Annotations of this start: 1 of 69
- Called 3.1% of time when present
- Phage (with cluster) where this start called: Gargoyle_63 (EA1),

Start 10:

- Found in 68 of 71 (95.8%) of genes in pham
- Manual Annotations of this start: 6 of 69

- Called 8.8% of time when present
- Phage (with cluster) where this start called: AlexAdler_63 (EA1), Calix_62 (EA1), Nattles_62 (EA1), PuppyEggo_63 (EA1), StingRay_62 (EA1), Winzigespinne_62 (EA1),

Start 13:

- Found in 3 of 71 (4.2%) of genes in pham
- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Acosta_64 (EA1), JasonD_66 (EA1),

Summary by clusters:

There is one cluster represented in this pham: EA1

Info for manual annotations of cluster EA1:

- Start number 8 was manually annotated 62 times for cluster EA1.
- Start number 9 was manually annotated 1 time for cluster EA1.
- Start number 10 was manually annotated 6 times for cluster EA1.

Gene Information:

Gene: Acosta_64 Start: 41180, Stop: 41746, Start Num: 13

Candidate Starts for Acosta_64:

(3, 41042), (4, 41048), (Start: 8 @41069 has 62 MA's), (13, 41180), (15, 41276), (17, 41327), (20, 41420), (21, 41444), (24, 41507), (27, 41564), (28, 41603), (29, 41609), (32, 41696), (35, 41741),

Gene: AlexAdler_63 Start: 41027, Stop: 41650, Start Num: 10

Candidate Starts for AlexAdler_63:

(Start: 8 @41009 has 62 MA's), (Start: 9 @41021 has 1 MA's), (Start: 10 @41027 has 6 MA's), (11, 41051), (12, 41117), (14, 41123), (15, 41207), (19, 41330), (21, 41360), (26, 41465), (28, 41504), (29, 41510), (31, 41579), (33, 41633), (34, 41636),

Gene: Alyxandracam_63 Start: 40945, Stop: 41586, Start Num: 8

Candidate Starts for Alyxandracam_63:

(Start: 8 @40945 has 62 MA's), (Start: 10 @40963 has 6 MA's), (11, 40987), (12, 41053), (14, 41059), (15, 41143), (19, 41266), (21, 41296), (22, 41308), (26, 41401), (27, 41404), (28, 41440), (29, 41446), (30, 41488), (31, 41515), (33, 41569), (34, 41572),

Gene: AranulaLuti_62 Start: 40725, Stop: 41366, Start Num: 8

Candidate Starts for AranulaLuti_62:

(Start: 8 @40725 has 62 MA's), (Start: 10 @40743 has 6 MA's), (11, 40767), (12, 40833), (14, 40839), (15, 40923), (19, 41046), (21, 41076), (26, 41181), (28, 41220), (29, 41226), (30, 41268), (31, 41295), (34, 41352),

Gene: Aubergine_62 Start: 40730, Stop: 41371, Start Num: 8

Candidate Starts for Aubergine_62:

(Start: 8 @40730 has 62 MA's), (Start: 10 @40748 has 6 MA's), (11, 40772), (12, 40838), (14, 40844), (15, 40928), (19, 41051), (21, 41081), (26, 41186), (27, 41189), (28, 41225), (29, 41231), (30, 41273), (31, 41300), (33, 41354), (34, 41357),

Gene: AxiPup_63 Start: 40945, Stop: 41586, Start Num: 8

Candidate Starts for AxiPup_63:

(Start: 8 @40945 has 62 MA's), (Start: 9 @40957 has 1 MA's), (Start: 10 @40963 has 6 MA's), (11, 40987), (12, 41053), (14, 41059), (15, 41143), (19, 41266), (21, 41296), (26, 41401), (27, 41404), (28, 41440), (29, 41446), (30, 41488), (31, 41515), (34, 41572),

Gene: Baines_62 Start: 40730, Stop: 41371, Start Num: 8

Candidate Starts for Baines_62:

(Start: 8 @40730 has 62 MA's), (Start: 10 @40748 has 6 MA's), (11, 40772), (12, 40838), (14, 40844), (15, 40928), (19, 41051), (21, 41081), (26, 41186), (27, 41189), (28, 41225), (29, 41231), (30, 41273), (31, 41300), (33, 41354), (34, 41357),

Gene: Bandik_63 Start: 40979, Stop: 41620, Start Num: 8

Candidate Starts for Bandik_63:

(Start: 8 @40979 has 62 MA's), (Start: 10 @40997 has 6 MA's), (11, 41021), (12, 41087), (14, 41093), (15, 41177), (19, 41300), (21, 41330), (26, 41435), (27, 41438), (28, 41474), (29, 41480), (30, 41522), (31, 41549), (34, 41606),

Gene: BeautPeep30_63 Start: 40984, Stop: 41625, Start Num: 8

Candidate Starts for BeautPeep30_63:

(Start: 8 @40984 has 62 MA's), (Start: 9 @40996 has 1 MA's), (Start: 10 @41002 has 6 MA's), (11, 41026), (12, 41092), (14, 41098), (15, 41182), (19, 41305), (21, 41335), (26, 41440), (27, 41443), (28, 41479), (29, 41485), (30, 41527), (31, 41554), (34, 41611),

Gene: Benjalauren_63 Start: 40736, Stop: 41377, Start Num: 8

Candidate Starts for Benjalauren_63:

(Start: 8 @40736 has 62 MA's), (Start: 10 @40754 has 6 MA's), (11, 40778), (12, 40844), (14, 40850), (15, 40934), (19, 41057), (21, 41087), (26, 41192), (27, 41195), (28, 41231), (29, 41237), (30, 41279), (31, 41306), (33, 41360), (34, 41363),

Gene: BigRedClifford_63 Start: 40972, Stop: 41613, Start Num: 8

Candidate Starts for BigRedClifford_63:

(Start: 8 @40972 has 62 MA's), (Start: 9 @40984 has 1 MA's), (Start: 10 @40990 has 6 MA's), (11, 41014), (12, 41080), (14, 41086), (15, 41170), (19, 41293), (21, 41323), (26, 41428), (28, 41467), (29, 41473), (30, 41515), (31, 41542), (33, 41596), (34, 41599),

Gene: BonesMcCoy_63 Start: 40972, Stop: 41613, Start Num: 8

Candidate Starts for BonesMcCoy_63:

(Start: 8 @40972 has 62 MA's), (Start: 10 @40990 has 6 MA's), (11, 41014), (12, 41080), (14, 41086), (15, 41170), (19, 41293), (21, 41323), (26, 41428), (28, 41467), (29, 41473), (30, 41515), (31, 41542), (34, 41599),

Gene: Bonino_62 Start: 40709, Stop: 41350, Start Num: 8

Candidate Starts for Bonino_62:

(Start: 8 @40709 has 62 MA's), (Start: 9 @40721 has 1 MA's), (Start: 10 @40727 has 6 MA's), (11, 40751), (12, 40817), (14, 40823), (15, 40907), (19, 41030), (21, 41060), (26, 41165), (27, 41168), (28, 41204), (29, 41210), (30, 41252), (31, 41279), (33, 41333), (34, 41336),

Gene: Calix_62 Start: 40734, Stop: 41357, Start Num: 10

Candidate Starts for Calix_62:

(Start: 8 @40716 has 62 MA's), (Start: 9 @40728 has 1 MA's), (Start: 10 @40734 has 6 MA's), (11, 40758), (12, 40824), (14, 40830), (15, 40914), (19, 41037), (21, 41067), (26, 41172), (27, 41175), (28, 41211), (29, 41217), (30, 41259), (31, 41286), (34, 41343),

Gene: Chako_62 Start: 40725, Stop: 41366, Start Num: 8

Candidate Starts for Chako_62:

(Start: 8 @40725 has 62 MA's), (Start: 10 @40743 has 6 MA's), (11, 40767), (12, 40833), (14, 40839), (15, 40923), (19, 41046), (21, 41076), (26, 41181), (27, 41184), (28, 41220), (29, 41226), (31, 41295), (33, 41349), (34, 41352),

Gene: Chamuel_62 Start: 40743, Stop: 41384, Start Num: 8

Candidate Starts for Chamuel_62:

(Start: 8 @40743 has 62 MA's), (Start: 9 @40755 has 1 MA's), (Start: 10 @40761 has 6 MA's), (11, 40785), (12, 40851), (14, 40857), (15, 40941), (19, 41064), (21, 41094), (26, 41199), (27, 41202), (28, 41238), (29, 41244), (30, 41286), (31, 41313), (34, 41370),

Gene: Christoph_62 Start: 40729, Stop: 41370, Start Num: 8

Candidate Starts for Christoph_62:

(Start: 8 @40729 has 62 MA's), (Start: 10 @40747 has 6 MA's), (11, 40771), (12, 40837), (14, 40843), (15, 40927), (19, 41050), (21, 41080), (26, 41185), (28, 41224), (29, 41230), (30, 41272), (31, 41299), (33, 41353), (34, 41356),

Gene: Convict_63 Start: 40973, Stop: 41614, Start Num: 8

Candidate Starts for Convict_63:

(Start: 8 @40973 has 62 MA's), (Start: 10 @40991 has 6 MA's), (11, 41015), (12, 41081), (14, 41087), (15, 41171), (19, 41294), (21, 41324), (26, 41429), (28, 41468), (29, 41474), (30, 41516), (31, 41543), (34, 41600),

Gene: Dothraki_63 Start: 40982, Stop: 41623, Start Num: 8

Candidate Starts for Dothraki_63:

(Start: 8 @40982 has 62 MA's), (Start: 10 @41000 has 6 MA's), (11, 41024), (12, 41090), (14, 41096), (15, 41180), (19, 41303), (21, 41333), (26, 41438), (27, 41441), (28, 41477), (29, 41483), (31, 41552), (33, 41606), (34, 41609),

Gene: Duocatuli_62 Start: 40726, Stop: 41367, Start Num: 8

Candidate Starts for Duocatuli_62:

(Start: 8 @40726 has 62 MA's), (Start: 10 @40744 has 6 MA's), (11, 40768), (12, 40834), (14, 40840), (15, 40924), (19, 41047), (21, 41077), (26, 41182), (27, 41185), (28, 41221), (29, 41227), (30, 41269), (31, 41296), (33, 41350), (34, 41353),

Gene: Espinosa_62 Start: 40728, Stop: 41369, Start Num: 8

Candidate Starts for Espinosa_62:

(Start: 8 @40728 has 62 MA's), (Start: 10 @40746 has 6 MA's), (11, 40770), (12, 40836), (14, 40842), (15, 40926), (19, 41049), (21, 41079), (26, 41184), (27, 41187), (28, 41223), (29, 41229), (30, 41271), (31, 41298), (33, 41352), (34, 41355),

Gene: Etta_62 Start: 40717, Stop: 41358, Start Num: 8

Candidate Starts for Etta_62:

(Start: 8 @40717 has 62 MA's), (Start: 9 @40729 has 1 MA's), (Start: 10 @40735 has 6 MA's), (11, 40759), (12, 40825), (14, 40831), (15, 40915), (19, 41038), (21, 41068), (26, 41173), (28, 41212), (29, 41218), (30, 41260), (31, 41287), (34, 41344),

Gene: Garey24_63 Start: 40697, Stop: 41338, Start Num: 8

Candidate Starts for Garey24_63:

(Start: 8 @40697 has 62 MA's), (Start: 9 @40709 has 1 MA's), (Start: 10 @40715 has 6 MA's), (11, 40739), (12, 40805), (14, 40811), (15, 40895), (19, 41018), (21, 41048), (26, 41153), (28, 41192), (29,

41198), (30, 41240), (31, 41267), (33, 41321), (34, 41324),

Gene: Gargoyle_63 Start: 40990, Stop: 41619, Start Num: 9

Candidate Starts for Gargoyle_63:

(Start: 8 @40978 has 62 MA's), (Start: 9 @40990 has 1 MA's), (Start: 10 @40996 has 6 MA's), (11, 41020), (12, 41086), (14, 41092), (15, 41176), (19, 41299), (21, 41329), (22, 41341), (26, 41434), (27, 41437), (28, 41473), (29, 41479), (30, 41521), (31, 41548), (34, 41605),

Gene: Gelo_62 Start: 40723, Stop: 41364, Start Num: 8

Candidate Starts for Gelo_62:

(Start: 8 @40723 has 62 MA's), (Start: 9 @40735 has 1 MA's), (Start: 10 @40741 has 6 MA's), (11, 40765), (12, 40831), (14, 40837), (15, 40921), (19, 41044), (21, 41074), (26, 41179), (28, 41218), (29, 41224), (30, 41266), (31, 41293), (34, 41350),

Gene: Greys_63 Start: 40972, Stop: 41613, Start Num: 8

Candidate Starts for Greys_63:

(Start: 8 @40972 has 62 MA's), (Start: 10 @40990 has 6 MA's), (11, 41014), (12, 41080), (14, 41086), (15, 41170), (19, 41293), (21, 41323), (26, 41428), (27, 41431), (28, 41467), (29, 41473), (30, 41515), (31, 41542), (33, 41596), (34, 41599),

Gene: Gubbabump_62 Start: 40667, Stop: 41308, Start Num: 8

Candidate Starts for Gubbabump_62:

(Start: 8 @40667 has 62 MA's), (Start: 9 @40679 has 1 MA's), (Start: 10 @40685 has 6 MA's), (11, 40709), (12, 40775), (14, 40781), (15, 40865), (19, 40988), (21, 41018), (26, 41123), (28, 41162), (29, 41168), (30, 41210), (31, 41237), (33, 41291), (34, 41294),

Gene: HanSolo_62 Start: 40678, Stop: 41319, Start Num: 8

Candidate Starts for HanSolo_62:

(Start: 8 @40678 has 62 MA's), (Start: 10 @40696 has 6 MA's), (11, 40720), (12, 40786), (14, 40792), (15, 40876), (19, 40999), (21, 41029), (26, 41134), (27, 41137), (28, 41173), (29, 41179), (30, 41221), (31, 41248), (33, 41302), (34, 41305),

Gene: Ilzat_62 Start: 40700, Stop: 41341, Start Num: 8

Candidate Starts for Ilzat_62:

(Start: 8 @40700 has 62 MA's), (Start: 10 @40718 has 6 MA's), (11, 40742), (12, 40808), (14, 40814), (15, 40898), (19, 41021), (21, 41051), (26, 41156), (27, 41159), (28, 41195), (29, 41201), (31, 41270), (33, 41324), (34, 41327),

Gene: Inventa_63 Start: 40977, Stop: 41618, Start Num: 8

Candidate Starts for Inventa_63:

(Start: 8 @40977 has 62 MA's), (Start: 10 @40995 has 6 MA's), (11, 41019), (12, 41085), (14, 41091), (15, 41175), (19, 41298), (21, 41328), (26, 41433), (27, 41436), (28, 41472), (29, 41478), (30, 41520), (31, 41547), (34, 41604),

Gene: loannes_63 Start: 41054, Stop: 41695, Start Num: 8

Candidate Starts for loannes_63:

(Start: 8 @41054 has 62 MA's), (Start: 10 @41072 has 6 MA's), (11, 41096), (12, 41162), (14, 41168), (15, 41252), (19, 41375), (21, 41405), (26, 41510), (28, 41549), (29, 41555), (30, 41597), (31, 41624), (34, 41681),

Gene: JasonD_66 Start: 41391, Stop: 41957, Start Num: 13

Candidate Starts for JasonD_66:

(1, 41133), (5, 41262), (Start: 8 @41280 has 62 MA's), (13, 41391), (15, 41487), (17, 41538), (18, 41577), (20, 41631), (21, 41655), (24, 41718), (27, 41775), (28, 41814), (29, 41820), (32, 41907), (35, 41952),

Gene: JasperRussell_62 Start: 40725, Stop: 41366, Start Num: 8

Candidate Starts for JasperRussell_62:

(Start: 8 @40725 has 62 MA's), (Start: 10 @40743 has 6 MA's), (11, 40767), (12, 40833), (14, 40839), (15, 40923), (19, 41046), (21, 41076), (26, 41181), (27, 41184), (28, 41220), (29, 41226), (31, 41295), (33, 41349), (34, 41352),

Gene: Jenos_64 Start: 41567, Stop: 42247, Start Num: 8

Candidate Starts for Jenos_64:

(2, 41498), (Start: 8 @41567 has 62 MA's), (13, 41678), (15, 41774), (20, 41918), (23, 41981), (24, 42008), (25, 42056), (28, 42104), (35, 42242),

Gene: Kale_62 Start: 40733, Stop: 41374, Start Num: 8

Candidate Starts for Kale_62:

(Start: 8 @40733 has 62 MA's), (Start: 9 @40745 has 1 MA's), (Start: 10 @40751 has 6 MA's), (11, 40775), (12, 40841), (14, 40847), (15, 40931), (19, 41054), (21, 41084), (26, 41189), (28, 41228), (29, 41234), (30, 41276), (31, 41303), (34, 41360),

Gene: KannH_62 Start: 40726, Stop: 41367, Start Num: 8

Candidate Starts for KannH_62:

(Start: 8 @40726 has 62 MA's), (Start: 10 @40744 has 6 MA's), (11, 40768), (12, 40834), (14, 40840), (15, 40924), (19, 41047), (21, 41077), (26, 41182), (27, 41185), (28, 41221), (29, 41227), (30, 41269), (31, 41296), (33, 41350), (34, 41353),

Gene: Klimt_63 Start: 40748, Stop: 41389, Start Num: 8

Candidate Starts for Klimt_63:

(Start: 8 @40748 has 62 MA's), (Start: 9 @40760 has 1 MA's), (Start: 10 @40766 has 6 MA's), (11, 40790), (12, 40856), (14, 40862), (15, 40946), (19, 41069), (21, 41099), (26, 41204), (28, 41243), (29, 41249), (30, 41291), (31, 41318), (34, 41375),

Gene: Knox_63 Start: 40972, Stop: 41613, Start Num: 8

Candidate Starts for Knox_63:

(Start: 8 @40972 has 62 MA's), (Start: 10 @40990 has 6 MA's), (11, 41014), (12, 41080), (14, 41086), (15, 41170), (19, 41293), (21, 41323), (22, 41335), (26, 41428), (28, 41467), (29, 41473), (30, 41515), (31, 41542), (34, 41599),

Gene: Ludgate_63 Start: 40974, Stop: 41615, Start Num: 8

Candidate Starts for Ludgate_63:

(Start: 8 @40974 has 62 MA's), (Start: 9 @40986 has 1 MA's), (Start: 10 @40992 has 6 MA's), (11, 41016), (12, 41082), (14, 41088), (15, 41172), (19, 41295), (21, 41325), (22, 41337), (26, 41430), (28, 41469), (29, 41475), (30, 41517), (31, 41544), (34, 41601),

Gene: MaeLinda_63 Start: 40984, Stop: 41625, Start Num: 8

Candidate Starts for MaeLinda_63:

(Start: 8 @40984 has 62 MA's), (Start: 10 @41002 has 6 MA's), (11, 41026), (12, 41092), (14, 41098), (15, 41182), (19, 41305), (21, 41335), (26, 41440), (28, 41479), (29, 41485), (30, 41527), (31, 41554), (34, 41611),

Gene: ManRay_62 Start: 40730, Stop: 41371, Start Num: 8

Candidate Starts for ManRay_62:

(Start: 8 @40730 has 62 MA's), (Start: 9 @40742 has 1 MA's), (Start: 10 @40748 has 6 MA's), (11, 40772), (12, 40838), (14, 40844), (15, 40928), (19, 41051), (21, 41081), (26, 41186), (27, 41189), (28, 41225), (29, 41231), (30, 41273), (31, 41300), (33, 41354), (34, 41357),

Gene: Martin_64 Start: 40987, Stop: 41628, Start Num: 8

Candidate Starts for Martin_64:

(Start: 8 @40987 has 62 MA's), (Start: 9 @40999 has 1 MA's), (Start: 10 @41005 has 6 MA's), (11, 41029), (12, 41095), (14, 41101), (15, 41185), (19, 41308), (21, 41338), (26, 41443), (27, 41446), (28, 41482), (29, 41488), (30, 41530), (31, 41557), (34, 41614),

Gene: MillyPhilly_63 Start: 40975, Stop: 41616, Start Num: 8

Candidate Starts for MillyPhilly_63:

(Start: 8 @40975 has 62 MA's), (Start: 9 @40987 has 1 MA's), (Start: 10 @40993 has 6 MA's), (11, 41017), (12, 41083), (14, 41089), (15, 41173), (19, 41296), (21, 41326), (26, 41431), (28, 41470), (29, 41476), (31, 41545), (34, 41602),

Gene: Nagem_63 Start: 41021, Stop: 41662, Start Num: 8

Candidate Starts for Nagem_63:

(Start: 8 @41021 has 62 MA's), (Start: 9 @41033 has 1 MA's), (Start: 10 @41039 has 6 MA's), (11, 41063), (12, 41129), (14, 41135), (15, 41219), (19, 41342), (21, 41372), (26, 41477), (28, 41516), (29, 41522), (30, 41564), (31, 41591), (33, 41645), (34, 41648),

Gene: Nattles_62 Start: 40736, Stop: 41359, Start Num: 10

Candidate Starts for Nattles_62:

(Start: 8 @40718 has 62 MA's), (Start: 9 @40730 has 1 MA's), (Start: 10 @40736 has 6 MA's), (11, 40760), (12, 40826), (14, 40832), (15, 40916), (19, 41039), (21, 41069), (22, 41081), (26, 41174), (27, 41177), (28, 41213), (29, 41219), (30, 41261), (31, 41288), (34, 41345),

Gene: Oats_62 Start: 40730, Stop: 41371, Start Num: 8

Candidate Starts for Oats_62:

(Start: 8 @40730 has 62 MA's), (Start: 10 @40748 has 6 MA's), (11, 40772), (12, 40838), (14, 40844), (15, 40928), (19, 41051), (21, 41081), (26, 41186), (28, 41225), (29, 41231), (30, 41273), (31, 41300), (33, 41354), (34, 41357),

Gene: Papafritta_62 Start: 40735, Stop: 41376, Start Num: 8

Candidate Starts for Papafritta_62:

(Start: 8 @40735 has 62 MA's), (Start: 10 @40753 has 6 MA's), (11, 40777), (12, 40843), (14, 40849), (15, 40933), (19, 41056), (21, 41086), (26, 41191), (27, 41194), (28, 41230), (29, 41236), (30, 41278), (31, 41305), (33, 41359), (34, 41362),

Gene: ParleG_63 Start: 40985, Stop: 41626, Start Num: 8

Candidate Starts for ParleG_63:

(Start: 8 @40985 has 62 MA's), (Start: 9 @40997 has 1 MA's), (Start: 10 @41003 has 6 MA's), (11, 41027), (12, 41093), (14, 41099), (15, 41183), (19, 41306), (21, 41336), (26, 41441), (27, 41444), (28, 41480), (29, 41486), (30, 41528), (31, 41555), (34, 41612),

Gene: Peep_63 Start: 41031, Stop: 41672, Start Num: 8

Candidate Starts for Peep_63:

(Start: 8 @41031 has 62 MA's), (Start: 10 @41049 has 6 MA's), (11, 41073), (12, 41139), (14, 41145), (15, 41229), (19, 41352), (21, 41382), (26, 41487), (28, 41526), (29, 41532), (31, 41601), (34, 41658),

Gene: Pherferi_63 Start: 40978, Stop: 41619, Start Num: 8

Candidate Starts for Pherferi_63:

(Start: 8 @40978 has 62 MA's), (Start: 9 @40990 has 1 MA's), (Start: 10 @40996 has 6 MA's), (11, 41020), (12, 41086), (14, 41092), (15, 41176), (19, 41299), (21, 41329), (26, 41434), (27, 41437), (28, 41473), (29, 41479), (30, 41521), (31, 41548), (34, 41605),

Gene: Phireproof_63 Start: 40984, Stop: 41625, Start Num: 8

Candidate Starts for Phireproof_63:

(Start: 8 @40984 has 62 MA's), (Start: 9 @40996 has 1 MA's), (Start: 10 @41002 has 6 MA's), (11, 41026), (12, 41092), (14, 41098), (15, 41182), (19, 41305), (21, 41335), (26, 41440), (27, 41443), (28, 41479), (29, 41485), (30, 41527), (31, 41554), (34, 41611),

Gene: Phriends_62 Start: 40779, Stop: 41420, Start Num: 8

Candidate Starts for Phriends_62:

(Start: 8 @40779 has 62 MA's), (Start: 10 @40797 has 6 MA's), (11, 40821), (12, 40887), (14, 40893), (15, 40977), (19, 41100), (21, 41130), (26, 41235), (28, 41274), (29, 41280), (31, 41349), (33, 41403), (34, 41406),

Gene: Pocket_62 Start: 40758, Stop: 41399, Start Num: 8

Candidate Starts for Pocket_62:

(Start: 8 @40758 has 62 MA's), (Start: 9 @40770 has 1 MA's), (Start: 10 @40776 has 6 MA's), (11, 40800), (12, 40866), (14, 40872), (15, 40956), (19, 41079), (21, 41109), (26, 41214), (28, 41253), (29, 41259), (30, 41301), (31, 41328), (34, 41385),

Gene: PuppyEggo_63 Start: 40996, Stop: 41619, Start Num: 10

Candidate Starts for PuppyEggo_63:

(Start: 8 @40978 has 62 MA's), (Start: 10 @40996 has 6 MA's), (11, 41020), (12, 41086), (14, 41092), (15, 41176), (16, 41221), (19, 41299), (21, 41329), (27, 41437), (28, 41473), (29, 41479), (30, 41521), (31, 41548), (34, 41605),

Gene: Raptor_63 Start: 40976, Stop: 41617, Start Num: 8

Candidate Starts for Raptor_63:

(Start: 8 @40976 has 62 MA's), (Start: 9 @40988 has 1 MA's), (Start: 10 @40994 has 6 MA's), (11, 41018), (12, 41084), (14, 41090), (15, 41174), (19, 41297), (21, 41327), (26, 41432), (28, 41471), (29, 41477), (30, 41519), (31, 41546), (34, 41603),

Gene: Riyhil_63 Start: 40987, Stop: 41628, Start Num: 8

Candidate Starts for Riyhil_63:

(Start: 8 @40987 has 62 MA's), (Start: 10 @41005 has 6 MA's), (11, 41029), (12, 41095), (14, 41101), (15, 41185), (19, 41308), (21, 41338), (26, 41443), (28, 41482), (29, 41488), (31, 41557), (33, 41611), (34, 41614),

Gene: Robinson_63 Start: 41049, Stop: 41690, Start Num: 8

Candidate Starts for Robinson_63:

(Start: 8 @41049 has 62 MA's), (Start: 9 @41061 has 1 MA's), (Start: 10 @41067 has 6 MA's), (11, 41091), (12, 41157), (14, 41163), (15, 41247), (19, 41370), (21, 41400), (26, 41505), (28, 41544), (29, 41550), (30, 41592), (31, 41619), (34, 41676),

Gene: SJay_63 Start: 41022, Stop: 41663, Start Num: 8

Candidate Starts for SJay_63:

(Start: 8 @41022 has 62 MA's), (Start: 9 @41034 has 1 MA's), (Start: 10 @41040 has 6 MA's), (11, 41064), (12, 41130), (14, 41136), (15, 41220), (19, 41343), (21, 41373), (26, 41478), (28, 41517), (29, 41523), (30, 41565), (31, 41592), (33, 41646), (34, 41649),

Gene: Shee_63 Start: 40974, Stop: 41615, Start Num: 8

Candidate Starts for Shee_63:

(Start: 8 @40974 has 62 MA's), (Start: 9 @40986 has 1 MA's), (Start: 10 @40992 has 6 MA's), (11, 41016), (12, 41082), (14, 41088), (15, 41172), (19, 41295), (21, 41325), (26, 41430), (27, 41433), (28, 41469), (29, 41475), (30, 41517), (31, 41544), (34, 41601),

Gene: Stanktossa_62 Start: 40979, Stop: 41620, Start Num: 8

Candidate Starts for Stanktossa_62:

(Start: 8 @40979 has 62 MA's), (Start: 10 @40997 has 6 MA's), (11, 41021), (12, 41087), (14, 41093), (15, 41177), (19, 41300), (21, 41330), (26, 41435), (27, 41438), (28, 41474), (29, 41480), (31, 41549), (33, 41603), (34, 41606),

Gene: StingRay_62 Start: 40790, Stop: 41413, Start Num: 10

Candidate Starts for StingRay_62:

(Start: 8 @40772 has 62 MA's), (Start: 10 @40790 has 6 MA's), (11, 40814), (12, 40880), (14, 40886), (15, 40970), (19, 41093), (21, 41123), (26, 41228), (27, 41231), (28, 41267), (29, 41273), (30, 41315), (31, 41342), (33, 41396), (34, 41399),

Gene: Strathdee_63 Start: 40977, Stop: 41618, Start Num: 8

Candidate Starts for Strathdee_63:

(Start: 8 @40977 has 62 MA's), (Start: 10 @40995 has 6 MA's), (11, 41019), (12, 41085), (14, 41091), (15, 41175), (19, 41298), (21, 41328), (26, 41433), (27, 41436), (28, 41472), (29, 41478), (30, 41520), (31, 41547), (33, 41601), (34, 41604),

Gene: TatarkaPM_63 Start: 40988, Stop: 41629, Start Num: 8

Candidate Starts for TatarkaPM_63:

(Start: 8 @40988 has 62 MA's), (Start: 9 @41000 has 1 MA's), (Start: 10 @41006 has 6 MA's), (11, 41030), (12, 41096), (14, 41102), (15, 41186), (19, 41309), (21, 41339), (26, 41444), (27, 41447), (28, 41483), (29, 41489), (30, 41531), (31, 41558), (34, 41615),

Gene: Teagan_63 Start: 40968, Stop: 41609, Start Num: 8

Candidate Starts for Teagan_63:

(Start: 8 @40968 has 62 MA's), (Start: 10 @40986 has 6 MA's), (11, 41010), (12, 41076), (14, 41082), (15, 41166), (19, 41289), (21, 41319), (26, 41424), (27, 41427), (28, 41463), (29, 41469), (30, 41511), (31, 41538), (33, 41592), (34, 41595),

Gene: Tenda_62 Start: 40728, Stop: 41369, Start Num: 8

Candidate Starts for Tenda_62:

(Start: 8 @40728 has 62 MA's), (Start: 10 @40746 has 6 MA's), (11, 40770), (12, 40836), (14, 40842), (15, 40926), (19, 41049), (21, 41079), (26, 41184), (27, 41187), (28, 41223), (29, 41229), (30, 41271), (31, 41298), (33, 41352), (34, 41355),

Gene: Thompsone_63 Start: 40975, Stop: 41616, Start Num: 8

Candidate Starts for Thompsone_63:

(Start: 8 @40975 has 62 MA's), (Start: 9 @40987 has 1 MA's), (Start: 10 @40993 has 6 MA's), (11, 41017), (12, 41083), (14, 41089), (15, 41173), (19, 41296), (21, 41326), (26, 41431), (28, 41470), (29, 41476), (30, 41518), (31, 41545), (34, 41602),

Gene: Thorongil_63 Start: 40492, Stop: 41133, Start Num: 8

Candidate Starts for Thorongil_63:

(Start: 8 @40492 has 62 MA's), (Start: 9 @40504 has 1 MA's), (Start: 10 @40510 has 6 MA's), (11, 40534), (12, 40600), (14, 40606), (15, 40690), (19, 40813), (21, 40843), (26, 40948), (27, 40951), (28, 40987), (29, 40993), (30, 41035), (31, 41062), (34, 41119),

Gene: TinSulphur_64 Start: 40982, Stop: 41623, Start Num: 8

Candidate Starts for TinSulphur_64:

(Start: 8 @40982 has 62 MA's), (Start: 9 @40994 has 1 MA's), (Start: 10 @41000 has 6 MA's), (11, 41024), (12, 41090), (14, 41096), (15, 41180), (19, 41303), (21, 41333), (26, 41438), (27, 41441), (28, 41477), (29, 41483), (30, 41525), (31, 41552), (34, 41609),

Gene: WildNOut_63 Start: 40971, Stop: 41612, Start Num: 8

Candidate Starts for WildNOut_63:

(Start: 8 @40971 has 62 MA's), (Start: 10 @40989 has 6 MA's), (11, 41013), (12, 41079), (14, 41085), (15, 41169), (19, 41292), (21, 41322), (22, 41334), (26, 41427), (27, 41430), (28, 41466), (29, 41472), (30, 41514), (31, 41541), (33, 41595), (34, 41598),

Gene: Winzigespinne_62 Start: 40736, Stop: 41359, Start Num: 10

Candidate Starts for Winzigespinne_62:

(6, 40709), (7, 40712), (Start: 10 @40736 has 6 MA's), (11, 40760), (12, 40826), (14, 40832), (15, 40916), (19, 41039), (21, 41069), (26, 41174), (27, 41177), (28, 41213), (29, 41219), (30, 41261), (31, 41288), (33, 41342), (34, 41345),

Gene: Zada_64 Start: 40989, Stop: 41630, Start Num: 8

Candidate Starts for Zada_64:

(Start: 8 @40989 has 62 MA's), (Start: 10 @41007 has 6 MA's), (11, 41031), (12, 41097), (14, 41103), (15, 41187), (19, 41310), (21, 41340), (26, 41445), (27, 41448), (28, 41484), (29, 41490), (30, 41532), (31, 41559), (34, 41616),