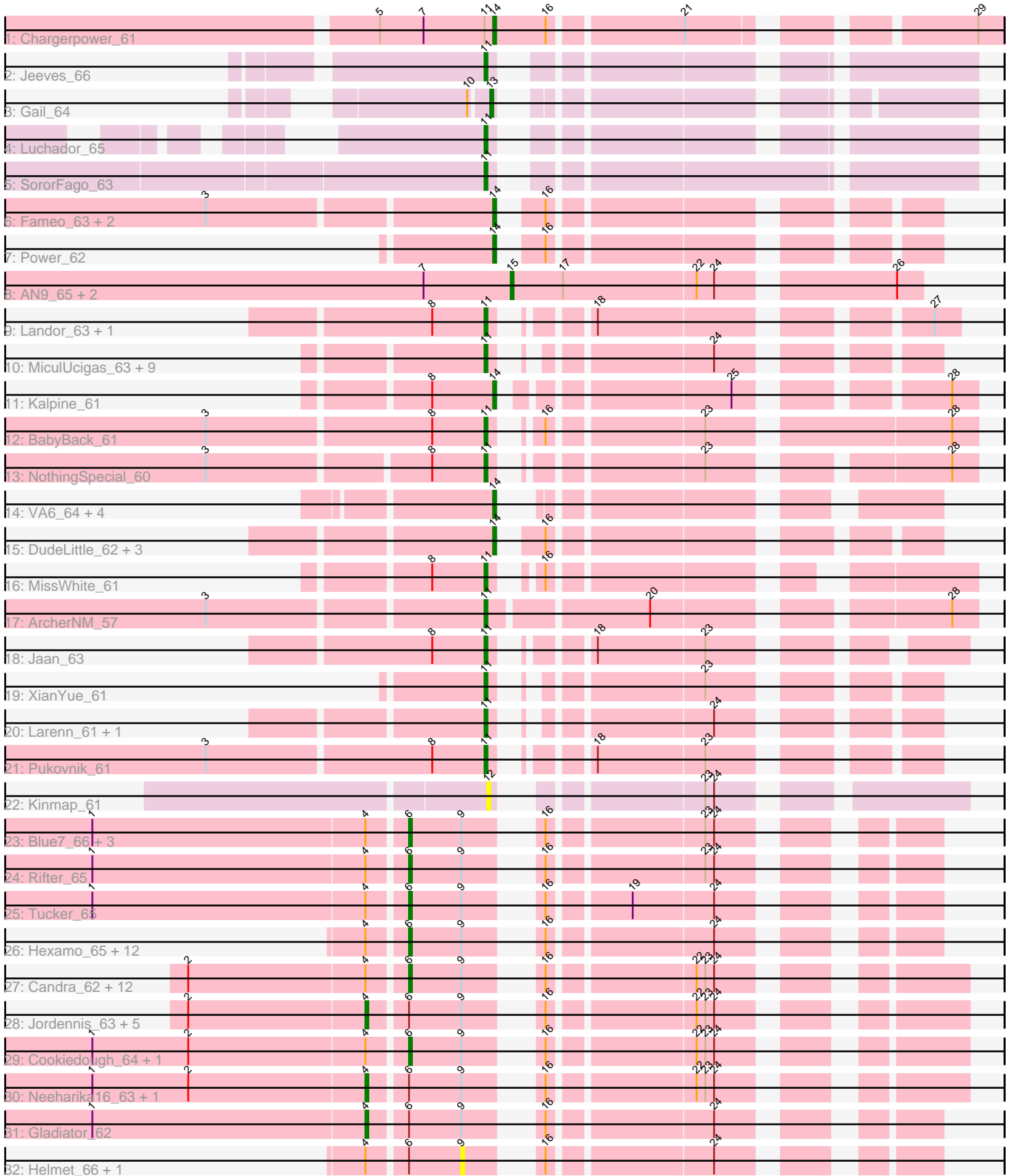


Pham 196455



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 196455 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196455 has 89 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Chargerpower_61
- Track 2 : Jeeves_66
- Track 3 : Gail_64
- Track 4 : Luchador_65
- Track 5 : SororFago_63
- Track 6 : Fameo_63, QueenB2_62, Heffalump_62
- Track 7 : Power_62
- Track 8 : AN9_65, VC3_65, ANI8_65
- Track 9 : Landor_63, IronMan_62
- Track 10 : MiculUcigas_63, Centaur_64, Flare16_63, WideWale_64, Piro94_63, NaSiaTalie_63, Updawg_64, HarryHoudini_64, Baehexic_62, Equemioh13_63
- Track 11 : Kalpine_61
- Track 12 : BabyBack_61
- Track 13 : NothingSpecial_60
- Track 14 : VA6_64, First_0065, Benvolio_60, Echild_63, AN3_66
- Track 15 : DudeLittle_62, Dalmatian_64, Anselm_64, Retro23_64
- Track 16 : MissWhite_61
- Track 17 : ArcherNM_57
- Track 18 : Jaan_63
- Track 19 : XianYue_61
- Track 20 : Larenn_61, Malec_62
- Track 21 : Pukovnik_61
- Track 22 : Kinmap_61
- Track 23 : Blue7_66, Hammer_65, Gruunaga_65, Roksolana_66
- Track 24 : Rifter_65
- Track 25 : Tucker_65
- Track 26 : Hexamo_65, Jeffabunny_65, ToneTone_62, Lilbunny_64, Zaka_65, Artemis2UCLA_65, Koko_67, Yokurt_64, WunderPhul_65, Zulu_66, Wiks_64, Indra_68, CloudWang3_66
- Track 27 : Candra_62, SuperAwesome_64, Isiphiwo_62, VohminGhazi_64, DaVinci_62, Kazan_65, SmellyB_64, Newrala_64, EricB_63, Kipper29_64, Hoot_59, JewelBug_64, BABullseye_57
- Track 28 : Jordennis_63, Blinn1_67, Priamo_66, SuperCallie99_61, Chartreuse_61, Dorothea_64
- Track 29 : Cookiedough_64, McFly_64
- Track 30 : Neeharika16_63, Pmask_63
- Track 31 : Gladiator_62

- Track 32 : Helmet_66, Garak_66

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 33 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Artemis2UCLA_65, BABullseye_57, Blue7_66, Candra_62, CloudWang3_66, Cookiedough_64, DaVinci_62, EricB_63, Gruunaga_65, Hammer_65, Hexamo_65, Hoot_59, Indra_68, Isiphiwo_62, Jeffabunny_65, JewelBug_64, Kazan_65, Kipper29_64, Koko_67, Lilbunny_64, McFly_64, Newrala_64, Rifter_65, Roksolana_66, SmellyB_64, SuperAwesome_64, ToneTone_62, Tucker_65, VohminGhazi_64, Wiks_64, WunderPhul_65, Yokurt_64, Zaka_65, Zulu_66,

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

- Blinn1_67, Chartreuse_61, Dorothea_64, Garak_66, Gladiator_62, Helmet_66, Jordennis_63, Neeharika16_63, Pmask_63, Priamo_66, SuperCallie99_61,

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

- AN3_66, AN9_65, ANI8_65, Anselm_64, ArcherNM_57, BabyBack_61, Baehexic_62, Benvolio_60, Centaur_64, Chargerpower_61, Dalmatian_64, DudeLittle_62, Echid_63, Equemioh13_63, Fameo_63, First_0065, Flare16_63, Gail_64, HarryHoudini_64, Heffalump_62, IronMan_62, Jaan_63, Jeeves_66, Kalpine_61, Kinmap_61, Landor_63, Larenn_61, Luchador_65, Malec_62, MiculUcigas_63, MissWhite_61, NaSiaTalie_63, NothingSpecial_60, Piro94_63, Power_62, Pukovnik_61, QueenB2_62, Retro23_64, SororFago_63, Updawg_64, VA6_64, VC3_65, WideWale_64, XianYue_61,

Summary by start number:

Start 4:

- Found in 45 of 89 (50.6%) of genes in pham
- Manual Annotations of this start: 8 of 83
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Blinn1_67 (A6), Chartreuse_61 (A6), Dorothea_64 (A6), Gladiator_62 (A6), Jordennis_63 (A6), Neeharika16_63 (A6), Pmask_63 (A6), Priamo_66 (A6), SuperCallie99_61 (A6),

Start 6:

- Found in 45 of 89 (50.6%) of genes in pham
- Manual Annotations of this start: 33 of 83
- Called 75.6% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA_65 (A6), BABullseye_57 (A6), Blue7_66 (A6), Candra_62 (A6), CloudWang3_66 (A6), Cookiedough_64 (A6), DaVinci_62 (A6), EricB_63 (A6), Gruunaga_65 (A6), Hammer_65 (A6), Hexamo_65 (A6), Hoot_59 (A6), Indra_68 (A6), Isiphiwo_62 (A6), Jeffabunny_65 (A6), JewelBug_64 (A6), Kazan_65 (A6), Kipper29_64 (A6), Koko_67 (A6), Lilbunny_64 (A6), McFly_64 (A6), Newrala_64 (A6), Rifter_65 (A6), Roksolana_66 (A6), SmellyB_64 (A6), SuperAwesome_64 (A6), ToneTone_62 (A6), Tucker_65 (A6),

VohminGhazi_64 (A6), Wiks_64 (A6), WunderPhul_65 (A6), Yokurt_64 (A6), Zaka_65 (A6), Zulu_66 (A6),

Start 9:

- Found in 45 of 89 (50.6%) of genes in pham
- No Manual Annotations of this start.
- Called 4.4% of time when present
- Phage (with cluster) where this start called: Garak_66 (A6), Helmet_66 (A6),

Start 11:

- Found in 25 of 89 (28.1%) of genes in pham
- Manual Annotations of this start: 24 of 83
- Called 96.0% of time when present
- Phage (with cluster) where this start called: ArcherNM_57 (A2), BabyBack_61 (A2), Baehexic_62 (A2), Centaur_64 (A2), Equemioh13_63 (A2), Flare16_63 (A2), HarryHoudini_64 (A2), IronMan_62 (A2), Jaan_63 (A2), Jeeves_66 (A14), Landor_63 (A2), Larenn_61 (A2), Luchador_65 (A14), Malec_62 (A2), MiculUcigas_63 (A2), MissWhite_61 (A2), NaSiaTalie_63 (A2), NothingSpecial_60 (A2), Piro94_63 (A2), Pukovnik_61 (A2), SororFago_63 (A14), Updawg_64 (A2), WideWale_64 (A2), XianYue_61 (A2),

Start 12:

- Found in 1 of 89 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kinmap_61 (A21),

Start 13:

- Found in 1 of 89 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gail_64 (A14),

Start 14:

- Found in 15 of 89 (16.9%) of genes in pham
- Manual Annotations of this start: 14 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN3_66 (A2), Anselm_64 (A2), Benvolio_60 (A2), Chargerpower_61 (A), Dalmatian_64 (A2), DudeLittle_62 (A2), Echild_63 (A2), Fameo_63 (A2), First_0065 (A2), Heffalump_62 (A2), Kalpine_61 (A2), Power_62 (A2), QueenB2_62 (A2), Retro23_64 (A2), VA6_64 (A2),

Start 15:

- Found in 3 of 89 (3.4%) of genes in pham
- Manual Annotations of this start: 3 of 83
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AN9_65 (A2), ANI8_65 (A2), VC3_65 (A2),

Summary by clusters:

There are 5 clusters represented in this pham: A, A14, A2, A21, A6,

Info for manual annotations of cluster A:

- Start number 14 was manually annotated 1 time for cluster A.

Info for manual annotations of cluster A14:

- Start number 11 was manually annotated 3 times for cluster A14.
- Start number 13 was manually annotated 1 time for cluster A14.

Info for manual annotations of cluster A2:

- Start number 11 was manually annotated 21 times for cluster A2.
- Start number 14 was manually annotated 13 times for cluster A2.
- Start number 15 was manually annotated 3 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 4 was manually annotated 8 times for cluster A6.
- Start number 6 was manually annotated 33 times for cluster A6.

Gene Information:

Gene: AN3_66 Start: 39069, Stop: 38956, Start Num: 14

Candidate Starts for AN3_66:

(Start: 14 @39069 has 14 MA's),

Gene: AN9_65 Start: 40106, Stop: 39975, Start Num: 15

Candidate Starts for AN9_65:

(7, 40136), (Start: 15 @40106 has 3 MA's), (17, 40088), (22, 40043), (24, 40037), (26, 39983),

Gene: ANI8_65 Start: 40106, Stop: 39975, Start Num: 15

Candidate Starts for ANI8_65:

(7, 40136), (Start: 15 @40106 has 3 MA's), (17, 40088), (22, 40043), (24, 40037), (26, 39983),

Gene: Anselm_64 Start: 40239, Stop: 40120, Start Num: 14

Candidate Starts for Anselm_64:

(Start: 14 @40239 has 14 MA's), (16, 40230),

Gene: ArcherNM_57 Start: 39573, Stop: 39427, Start Num: 11

Candidate Starts for ArcherNM_57:

(3, 39663), (Start: 11 @39573 has 24 MA's), (20, 39522), (28, 39435),

Gene: Artemis2UCLA_65 Start: 38809, Stop: 38669, Start Num: 6

Candidate Starts for Artemis2UCLA_65:

(Start: 4 @38821 has 8 MA's), (Start: 6 @38809 has 33 MA's), (9, 38791), (16, 38776), (24, 38725),

Gene: BABullseye_57 Start: 36364, Stop: 36215, Start Num: 6

Candidate Starts for BABullseye_57:

(2, 36436), (Start: 4 @36376 has 8 MA's), (Start: 6 @36364 has 33 MA's), (9, 36346), (16, 36331), (22, 36286), (23, 36283), (24, 36280),

Gene: BabyBack_61 Start: 40331, Stop: 40191, Start Num: 11

Candidate Starts for BabyBack_61:

(3, 40424), (8, 40349), (Start: 11 @40331 has 24 MA's), (16, 40322), (23, 40274), (28, 40199),

Gene: Baehexic_62 Start: 39801, Stop: 39685, Start Num: 11

Candidate Starts for Baehexic_62:

(Start: 11 @39801 has 24 MA's), (24, 39744),

Gene: Benvolio_60 Start: 39343, Stop: 39227, Start Num: 14

Candidate Starts for Benvolio_60:

(Start: 14 @39343 has 14 MA's),

Gene: Blinn1_67 Start: 38905, Stop: 38744, Start Num: 4

Candidate Starts for Blinn1_67:

(2, 38965), (Start: 4 @38905 has 8 MA's), (Start: 6 @38893 has 33 MA's), (9, 38875), (16, 38860), (22, 38815), (23, 38812), (24, 38809),

Gene: Blue7_66 Start: 38903, Stop: 38763, Start Num: 6

Candidate Starts for Blue7_66:

(1, 39008), (Start: 4 @38915 has 8 MA's), (Start: 6 @38903 has 33 MA's), (9, 38885), (16, 38870), (23, 38822), (24, 38819),

Gene: Candra_62 Start: 38728, Stop: 38579, Start Num: 6

Candidate Starts for Candra_62:

(2, 38800), (Start: 4 @38740 has 8 MA's), (Start: 6 @38728 has 33 MA's), (9, 38710), (16, 38695), (22, 38650), (23, 38647), (24, 38644),

Gene: Centaur_64 Start: 40015, Stop: 39899, Start Num: 11

Candidate Starts for Centaur_64:

(Start: 11 @40015 has 24 MA's), (24, 39958),

Gene: Chargerpower_61 Start: 38578, Stop: 38429, Start Num: 14

Candidate Starts for Chargerpower_61:

(5, 38617), (7, 38602), (Start: 11 @38581 has 24 MA's), (Start: 14 @38578 has 14 MA's), (16, 38560), (21, 38518), (29, 38437),

Gene: Chartreuse_61 Start: 38091, Stop: 37930, Start Num: 4

Candidate Starts for Chartreuse_61:

(2, 38151), (Start: 4 @38091 has 8 MA's), (Start: 6 @38079 has 33 MA's), (9, 38061), (16, 38046), (22, 38001), (23, 37998), (24, 37995),

Gene: CloudWang3_66 Start: 39321, Stop: 39181, Start Num: 6

Candidate Starts for CloudWang3_66:

(Start: 4 @39333 has 8 MA's), (Start: 6 @39321 has 33 MA's), (9, 39303), (16, 39288), (24, 39237),

Gene: Cookiedough_64 Start: 38707, Stop: 38558, Start Num: 6

Candidate Starts for Cookiedough_64:

(1, 38812), (2, 38779), (Start: 4 @38719 has 8 MA's), (Start: 6 @38707 has 33 MA's), (9, 38689), (16, 38674), (22, 38629), (23, 38626), (24, 38623),

Gene: DaVinci_62 Start: 38133, Stop: 37984, Start Num: 6

Candidate Starts for DaVinci_62:

(2, 38205), (Start: 4 @38145 has 8 MA's), (Start: 6 @38133 has 33 MA's), (9, 38115), (16, 38100), (22, 38055), (23, 38052), (24, 38049),

Gene: Dalmatian_64 Start: 40212, Stop: 40093, Start Num: 14

Candidate Starts for Dalmatian_64:
(Start: 14 @40212 has 14 MA's), (16, 40203),

Gene: Dorothea_64 Start: 38717, Stop: 38556, Start Num: 4
Candidate Starts for Dorothea_64:
(2, 38777), (Start: 4 @38717 has 8 MA's), (Start: 6 @38705 has 33 MA's), (9, 38687), (16, 38672),
(22, 38627), (23, 38624), (24, 38621),

Gene: DudeLittle_62 Start: 39978, Stop: 39859, Start Num: 14
Candidate Starts for DudeLittle_62:
(Start: 14 @39978 has 14 MA's), (16, 39969),

Gene: Echild_63 Start: 39367, Stop: 39251, Start Num: 14
Candidate Starts for Echild_63:
(Start: 14 @39367 has 14 MA's),

Gene: Equemioh13_63 Start: 39920, Stop: 39804, Start Num: 11
Candidate Starts for Equemioh13_63:
(Start: 11 @39920 has 24 MA's), (24, 39863),

Gene: EricB_63 Start: 38685, Stop: 38536, Start Num: 6
Candidate Starts for EricB_63:
(2, 38757), (Start: 4 @38697 has 8 MA's), (Start: 6 @38685 has 33 MA's), (9, 38667), (16, 38652),
(22, 38607), (23, 38604), (24, 38601),

Gene: Fameo_63 Start: 40337, Stop: 40218, Start Num: 14
Candidate Starts for Fameo_63:
(3, 40430), (Start: 14 @40337 has 14 MA's), (16, 40328),

Gene: First_0065 Start: 40254, Stop: 40141, Start Num: 14
Candidate Starts for First_0065:
(Start: 14 @40254 has 14 MA's),

Gene: Flare16_63 Start: 39676, Stop: 39560, Start Num: 11
Candidate Starts for Flare16_63:
(Start: 11 @39676 has 24 MA's), (24, 39619),

Gene: Gail_64 Start: 40781, Stop: 40653, Start Num: 13
Candidate Starts for Gail_64:
(10, 40787), (Start: 13 @40781 has 1 MA's),

Gene: Garak_66 Start: 39158, Stop: 39036, Start Num: 9
Candidate Starts for Garak_66:
(Start: 4 @39188 has 8 MA's), (Start: 6 @39176 has 33 MA's), (9, 39158), (16, 39143), (24, 39092),

Gene: Gladiator_62 Start: 38413, Stop: 38261, Start Num: 4
Candidate Starts for Gladiator_62:
(1, 38506), (Start: 4 @38413 has 8 MA's), (Start: 6 @38401 has 33 MA's), (9, 38383), (16, 38368),
(24, 38317),

Gene: Gruunaga_65 Start: 39100, Stop: 38960, Start Num: 6
Candidate Starts for Gruunaga_65:

(1, 39205), (Start: 4 @39112 has 8 MA's), (Start: 6 @39100 has 33 MA's), (9, 39082), (16, 39067), (23, 39019), (24, 39016),

Gene: Hammer_65 Start: 38707, Stop: 38567, Start Num: 6

Candidate Starts for Hammer_65:

(1, 38812), (Start: 4 @38719 has 8 MA's), (Start: 6 @38707 has 33 MA's), (9, 38689), (16, 38674), (23, 38626), (24, 38623),

Gene: HarryHoudini_64 Start: 40119, Stop: 40003, Start Num: 11

Candidate Starts for HarryHoudini_64:

(Start: 11 @40119 has 24 MA's), (24, 40062),

Gene: Heffalump_62 Start: 40805, Stop: 40686, Start Num: 14

Candidate Starts for Heffalump_62:

(3, 40898), (Start: 14 @40805 has 14 MA's), (16, 40796),

Gene: Helmet_66 Start: 39158, Stop: 39036, Start Num: 9

Candidate Starts for Helmet_66:

(Start: 4 @39188 has 8 MA's), (Start: 6 @39176 has 33 MA's), (9, 39158), (16, 39143), (24, 39092),

Gene: Hexamo_65 Start: 38806, Stop: 38666, Start Num: 6

Candidate Starts for Hexamo_65:

(Start: 4 @38818 has 8 MA's), (Start: 6 @38806 has 33 MA's), (9, 38788), (16, 38773), (24, 38722),

Gene: Hoot_59 Start: 36543, Stop: 36394, Start Num: 6

Candidate Starts for Hoot_59:

(2, 36615), (Start: 4 @36555 has 8 MA's), (Start: 6 @36543 has 33 MA's), (9, 36525), (16, 36510), (22, 36465), (23, 36462), (24, 36459),

Gene: Indra_68 Start: 39177, Stop: 39037, Start Num: 6

Candidate Starts for Indra_68:

(Start: 4 @39189 has 8 MA's), (Start: 6 @39177 has 33 MA's), (9, 39159), (16, 39144), (24, 39093),

Gene: IronMan_62 Start: 40812, Stop: 40687, Start Num: 11

Candidate Starts for IronMan_62:

(8, 40830), (Start: 11 @40812 has 24 MA's), (18, 40791), (27, 40695),

Gene: Isiphiwo_62 Start: 38259, Stop: 38110, Start Num: 6

Candidate Starts for Isiphiwo_62:

(2, 38331), (Start: 4 @38271 has 8 MA's), (Start: 6 @38259 has 33 MA's), (9, 38241), (16, 38226), (22, 38181), (23, 38178), (24, 38175),

Gene: Jaan_63 Start: 40984, Stop: 40859, Start Num: 11

Candidate Starts for Jaan_63:

(8, 41002), (Start: 11 @40984 has 24 MA's), (18, 40963), (23, 40927),

Gene: Jeeves_66 Start: 39766, Stop: 39632, Start Num: 11

Candidate Starts for Jeeves_66:

(Start: 11 @39766 has 24 MA's),

Gene: Jeffabunny_65 Start: 38803, Stop: 38663, Start Num: 6

Candidate Starts for Jeffabunny_65:

(Start: 4 @38815 has 8 MA's), (Start: 6 @38803 has 33 MA's), (9, 38785), (16, 38770), (24, 38719),

Gene: JewelBug_64 Start: 38964, Stop: 38815, Start Num: 6

Candidate Starts for JewelBug_64:

(2, 39036), (Start: 4 @38976 has 8 MA's), (Start: 6 @38964 has 33 MA's), (9, 38946), (16, 38931), (22, 38886), (23, 38883), (24, 38880),

Gene: Jordennis_63 Start: 38457, Stop: 38296, Start Num: 4

Candidate Starts for Jordennis_63:

(2, 38517), (Start: 4 @38457 has 8 MA's), (Start: 6 @38445 has 33 MA's), (9, 38427), (16, 38412), (22, 38367), (23, 38364), (24, 38361),

Gene: Kalpine_61 Start: 40096, Stop: 39965, Start Num: 14

Candidate Starts for Kalpine_61:

(8, 40117), (Start: 14 @40096 has 14 MA's), (25, 40030), (28, 39973),

Gene: Kazan_65 Start: 38698, Stop: 38549, Start Num: 6

Candidate Starts for Kazan_65:

(2, 38770), (Start: 4 @38710 has 8 MA's), (Start: 6 @38698 has 33 MA's), (9, 38680), (16, 38665), (22, 38620), (23, 38617), (24, 38614),

Gene: Kinmap_61 Start: 38456, Stop: 38328, Start Num: 12

Candidate Starts for Kinmap_61:

(12, 38456), (23, 38402), (24, 38399),

Gene: Kipper29_64 Start: 38711, Stop: 38562, Start Num: 6

Candidate Starts for Kipper29_64:

(2, 38783), (Start: 4 @38723 has 8 MA's), (Start: 6 @38711 has 33 MA's), (9, 38693), (16, 38678), (22, 38633), (23, 38630), (24, 38627),

Gene: Koko_67 Start: 39661, Stop: 39521, Start Num: 6

Candidate Starts for Koko_67:

(Start: 4 @39673 has 8 MA's), (Start: 6 @39661 has 33 MA's), (9, 39643), (16, 39628), (24, 39577),

Gene: Landor_63 Start: 40890, Stop: 40765, Start Num: 11

Candidate Starts for Landor_63:

(8, 40908), (Start: 11 @40890 has 24 MA's), (18, 40869), (27, 40773),

Gene: Larenn_61 Start: 39953, Stop: 39837, Start Num: 11

Candidate Starts for Larenn_61:

(Start: 11 @39953 has 24 MA's), (24, 39896),

Gene: Lilbunny_64 Start: 38807, Stop: 38667, Start Num: 6

Candidate Starts for Lilbunny_64:

(Start: 4 @38819 has 8 MA's), (Start: 6 @38807 has 33 MA's), (9, 38789), (16, 38774), (24, 38723),

Gene: Luchador_65 Start: 41349, Stop: 41215, Start Num: 11

Candidate Starts for Luchador_65:

(Start: 11 @41349 has 24 MA's),

Gene: Malec_62 Start: 40520, Stop: 40404, Start Num: 11

Candidate Starts for Malec_62:

(Start: 11 @40520 has 24 MA's), (24, 40463),

Gene: McFly_64 Start: 38692, Stop: 38543, Start Num: 6
Candidate Starts for McFly_64:
(1, 38797), (2, 38764), (Start: 4 @38704 has 8 MA's), (Start: 6 @38692 has 33 MA's), (9, 38674), (16, 38659), (22, 38614), (23, 38611), (24, 38608),

Gene: MiculUcigas_63 Start: 39579, Stop: 39463, Start Num: 11
Candidate Starts for MiculUcigas_63:
(Start: 11 @39579 has 24 MA's), (24, 39522),

Gene: MissWhite_61 Start: 38488, Stop: 38360, Start Num: 11
Candidate Starts for MissWhite_61:
(8, 38506), (Start: 11 @38488 has 24 MA's), (16, 38479),

Gene: NaSiaTalie_63 Start: 39673, Stop: 39557, Start Num: 11
Candidate Starts for NaSiaTalie_63:
(Start: 11 @39673 has 24 MA's), (24, 39616),

Gene: Neeharika16_63 Start: 38164, Stop: 38003, Start Num: 4
Candidate Starts for Neeharika16_63:
(1, 38257), (2, 38224), (Start: 4 @38164 has 8 MA's), (Start: 6 @38152 has 33 MA's), (9, 38134), (16, 38119), (22, 38074), (23, 38071), (24, 38068),

Gene: Newrala_64 Start: 38694, Stop: 38545, Start Num: 6
Candidate Starts for Newrala_64:
(2, 38766), (Start: 4 @38706 has 8 MA's), (Start: 6 @38694 has 33 MA's), (9, 38676), (16, 38661), (22, 38616), (23, 38613), (24, 38610),

Gene: NothingSpecial_60 Start: 40211, Stop: 40077, Start Num: 11
Candidate Starts for NothingSpecial_60:
(3, 40301), (8, 40229), (Start: 11 @40211 has 24 MA's), (23, 40154), (28, 40085),

Gene: Piro94_63 Start: 40026, Stop: 39910, Start Num: 11
Candidate Starts for Piro94_63:
(Start: 11 @40026 has 24 MA's), (24, 39969),

Gene: Pmask_63 Start: 38707, Stop: 38546, Start Num: 4
Candidate Starts for Pmask_63:
(1, 38800), (2, 38767), (Start: 4 @38707 has 8 MA's), (Start: 6 @38695 has 33 MA's), (9, 38677), (16, 38662), (22, 38617), (23, 38614), (24, 38611),

Gene: Power_62 Start: 40040, Stop: 39921, Start Num: 14
Candidate Starts for Power_62:
(Start: 14 @40040 has 14 MA's), (16, 40031),

Gene: Priamo_66 Start: 38523, Stop: 38362, Start Num: 4
Candidate Starts for Priamo_66:
(2, 38583), (Start: 4 @38523 has 8 MA's), (Start: 6 @38511 has 33 MA's), (9, 38493), (16, 38478), (22, 38433), (23, 38430), (24, 38427),

Gene: Pukovnik_61 Start: 40533, Stop: 40414, Start Num: 11
Candidate Starts for Pukovnik_61:
(3, 40626), (8, 40551), (Start: 11 @40533 has 24 MA's), (18, 40512), (23, 40476),

Gene: QueenB2_62 Start: 40018, Stop: 39899, Start Num: 14

Candidate Starts for QueenB2_62:

(3, 40111), (Start: 14 @40018 has 14 MA's), (16, 40009),

Gene: Retro23_64 Start: 40232, Stop: 40113, Start Num: 14

Candidate Starts for Retro23_64:

(Start: 14 @40232 has 14 MA's), (16, 40223),

Gene: Rifter_65 Start: 38303, Stop: 38163, Start Num: 6

Candidate Starts for Rifter_65:

(1, 38408), (Start: 4 @38315 has 8 MA's), (Start: 6 @38303 has 33 MA's), (9, 38285), (16, 38270), (23, 38222), (24, 38219),

Gene: Roksolana_66 Start: 39137, Stop: 38997, Start Num: 6

Candidate Starts for Roksolana_66:

(1, 39242), (Start: 4 @39149 has 8 MA's), (Start: 6 @39137 has 33 MA's), (9, 39119), (16, 39104), (23, 39056), (24, 39053),

Gene: SmellyB_64 Start: 38692, Stop: 38543, Start Num: 6

Candidate Starts for SmellyB_64:

(2, 38764), (Start: 4 @38704 has 8 MA's), (Start: 6 @38692 has 33 MA's), (9, 38674), (16, 38659), (22, 38614), (23, 38611), (24, 38608),

Gene: SororFago_63 Start: 40687, Stop: 40544, Start Num: 11

Candidate Starts for SororFago_63:

(Start: 11 @40687 has 24 MA's),

Gene: SuperAwesome_64 Start: 38697, Stop: 38548, Start Num: 6

Candidate Starts for SuperAwesome_64:

(2, 38769), (Start: 4 @38709 has 8 MA's), (Start: 6 @38697 has 33 MA's), (9, 38679), (16, 38664), (22, 38619), (23, 38616), (24, 38613),

Gene: SuperCallie99_61 Start: 38591, Stop: 38430, Start Num: 4

Candidate Starts for SuperCallie99_61:

(2, 38651), (Start: 4 @38591 has 8 MA's), (Start: 6 @38579 has 33 MA's), (9, 38561), (16, 38546), (22, 38501), (23, 38498), (24, 38495),

Gene: ToneTone_62 Start: 38736, Stop: 38596, Start Num: 6

Candidate Starts for ToneTone_62:

(Start: 4 @38748 has 8 MA's), (Start: 6 @38736 has 33 MA's), (9, 38718), (16, 38703), (24, 38652),

Gene: Tucker_65 Start: 38905, Stop: 38765, Start Num: 6

Candidate Starts for Tucker_65:

(1, 39010), (Start: 4 @38917 has 8 MA's), (Start: 6 @38905 has 33 MA's), (9, 38887), (16, 38872), (19, 38848), (24, 38821),

Gene: Updawg_64 Start: 39920, Stop: 39804, Start Num: 11

Candidate Starts for Updawg_64:

(Start: 11 @39920 has 24 MA's), (24, 39863),

Gene: VA6_64 Start: 40247, Stop: 40134, Start Num: 14

Candidate Starts for VA6_64:

(Start: 14 @40247 has 14 MA's),

Gene: VC3_65 Start: 40106, Stop: 39975, Start Num: 15

Candidate Starts for VC3_65:

(7, 40136), (Start: 15 @40106 has 3 MA's), (17, 40088), (22, 40043), (24, 40037), (26, 39983),

Gene: VohminGhazi_64 Start: 38693, Stop: 38544, Start Num: 6

Candidate Starts for VohminGhazi_64:

(2, 38765), (Start: 4 @38705 has 8 MA's), (Start: 6 @38693 has 33 MA's), (9, 38675), (16, 38660), (22, 38615), (23, 38612), (24, 38609),

Gene: WideWale_64 Start: 39920, Stop: 39804, Start Num: 11

Candidate Starts for WideWale_64:

(Start: 11 @39920 has 24 MA's), (24, 39863),

Gene: Wiks_64 Start: 38807, Stop: 38667, Start Num: 6

Candidate Starts for Wiks_64:

(Start: 4 @38819 has 8 MA's), (Start: 6 @38807 has 33 MA's), (9, 38789), (16, 38774), (24, 38723),

Gene: WunderPhul_65 Start: 38805, Stop: 38665, Start Num: 6

Candidate Starts for WunderPhul_65:

(Start: 4 @38817 has 8 MA's), (Start: 6 @38805 has 33 MA's), (9, 38787), (16, 38772), (24, 38721),

Gene: XianYue_61 Start: 39423, Stop: 39307, Start Num: 11

Candidate Starts for XianYue_61:

(Start: 11 @39423 has 24 MA's), (23, 39369),

Gene: Yokurt_64 Start: 38807, Stop: 38667, Start Num: 6

Candidate Starts for Yokurt_64:

(Start: 4 @38819 has 8 MA's), (Start: 6 @38807 has 33 MA's), (9, 38789), (16, 38774), (24, 38723),

Gene: Zaka_65 Start: 38807, Stop: 38667, Start Num: 6

Candidate Starts for Zaka_65:

(Start: 4 @38819 has 8 MA's), (Start: 6 @38807 has 33 MA's), (9, 38789), (16, 38774), (24, 38723),

Gene: Zulu_66 Start: 39185, Stop: 39045, Start Num: 6

Candidate Starts for Zulu_66:

(Start: 4 @39197 has 8 MA's), (Start: 6 @39185 has 33 MA's), (9, 39167), (16, 39152), (24, 39101),