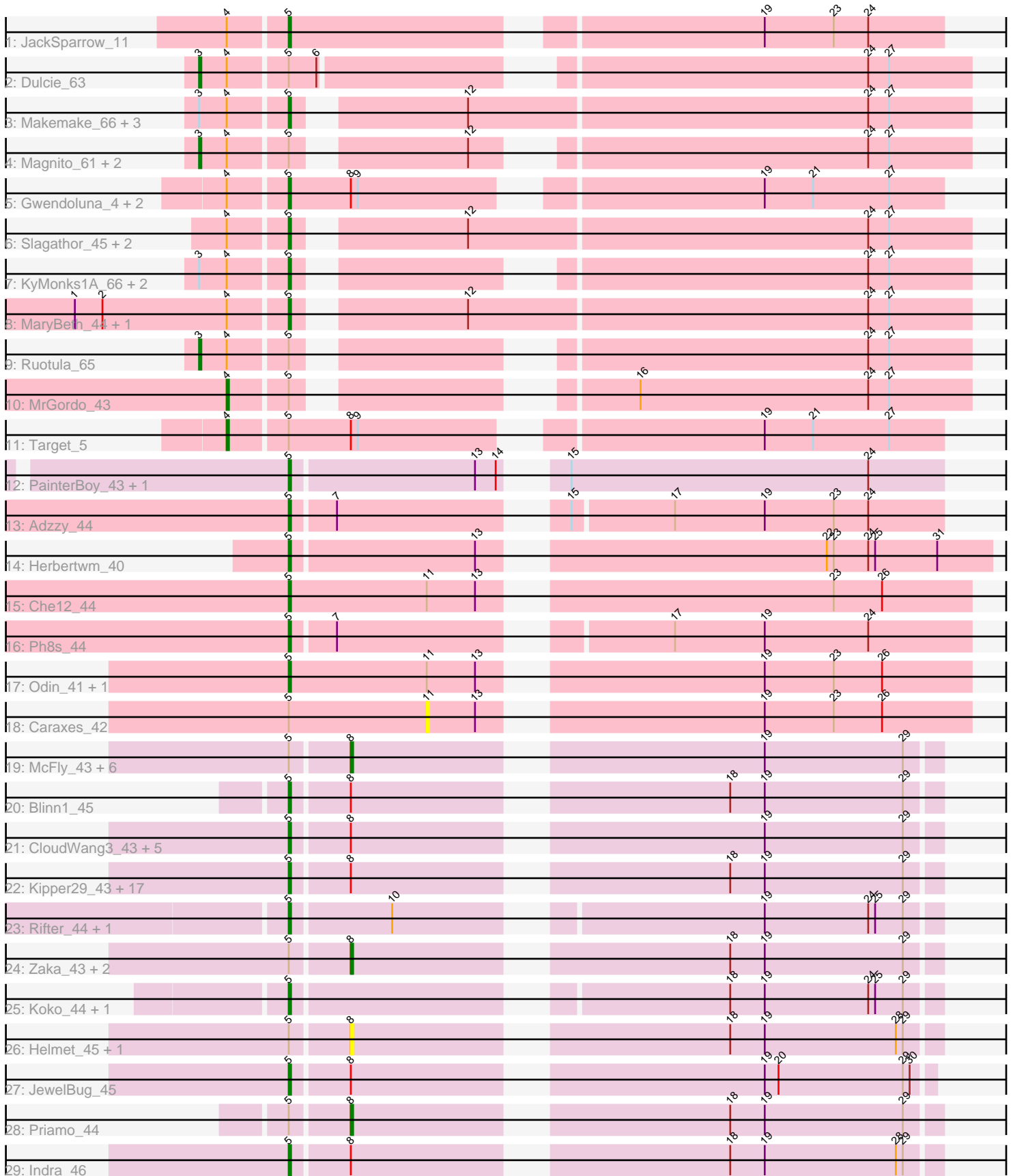


Pham 85500



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 85500 Report

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

Pham number 85500 has 76 members, 11 are drafts.

Phages represented in each track:

- Track 1 : JackSparrow_11
- Track 2 : Dulcie_63
- Track 3 : Makemake_66, Sorpresa_58, Tripl3t_66, Sandaddy_59
- Track 4 : Magnito_61, DrFeelGood_59, Lopton_62
- Track 5 : Gwendoluna_4, Perseus_5, Aeneas_5
- Track 6 : Slagathor_45, Rajelicia_44, Arcanine_44
- Track 7 : KyMonks1A_66, Magnar_61, Traft412_65
- Track 8 : MaryBeth_44, MetalQZJ_43
- Track 9 : Ruotula_65
- Track 10 : MrGordo_43
- Track 11 : Target_5
- Track 12 : PainterBoy_43, Lucyedi_43
- Track 13 : Adzzy_44
- Track 14 : Herbertwm_40
- Track 15 : Che12_44
- Track 16 : Ph8s_44
- Track 17 : Odin_41, Superchunk_41
- Track 18 : Caraxes_42
- Track 19 : McFly_43, Artemis2UCLA_43, Kazan_44, EricB_43, Chartreuse_43, DaVinci_43, GreedyLawyer_43
- Track 20 : Blinn1_45
- Track 21 : CloudWang3_43, SmellyB_43, Roksolana_44, Hoot_43, VohminGhazi_43, Candra_43
- Track 22 : Kipper29_43, Tucker_44, Gruunaga_43, Pmask_43, Lilbunny_41, SuperAwesome_43, Gladiator_43, Yokurt_43, Jeffabunny_43, Jordennis_43, Hexamo_43, Zulu_44, ToneTone_40, Newrala_43, Cookiedough_43, Wiks_42, Neeharika16_43, WunderPhul_43
- Track 23 : Rifter_44, Hammer_44
- Track 24 : Zaka_43, Dorothea_42, SuperCallie99_43
- Track 25 : Koko_44, Blue7_45
- Track 26 : Helmet_45, Garak_45
- Track 27 : JewelBug_45
- Track 28 : Priamo_44
- Track 29 : Indra_46

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

The start number called the most often in the published annotations is 5, it was called in 49 of the 65 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adzzy_44, Aeneas_5, Arcanine_44, Blinn1_45, Blue7_45, Candra_43, Che12_44, CloudWang3_43, Cookiedough_43, Gladiator_43, Gruunaga_43, Gwendoluna_4, Hammer_44, Herbertwm_40, Hexamo_43, Hoot_43, Indra_46, JackSparrow_11, Jeffabunny_43, JewelBug_45, Jordennis_43, Kipper29_43, Koko_44, KyMonks1A_66, Lilbunny_41, Lucyedi_43, Magnar_61, Makemake_66, MaryBeth_44, MetalQZJ_43, Neeharika16_43, Newrala_43, Odin_41, PainterBoy_43, Perseus_5, Ph8s_44, Pmask_43, Rajelicia_44, Rifter_44, Roksolana_44, Sandaddy_59, Slagathor_45, SmellyB_43, Sorpresa_58, SuperAwesome_43, Superchunk_41, ToneTone_40, Traft412_65, Tripl3t_66, Tucker_44, VohminGhazi_43, Wiks_42, WunderPhul_43, Yokurt_43, Zulu_44,

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

- Artemis2UCLA_43, Caraxes_42, Chartreuse_43, DaVinci_43, Dorothea_42, DrFeelGood_59, Dulcie_63, EricB_43, Garak_45, GreedyLawyer_43, Helmet_45, Kazan_44, Lopton_62, Magnito_61, McFly_43, MrGordo_43, Priamo_44, Ruotula_65, SuperCallie99_43, Target_5, Zaka_43,

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

-

Summary by start number:

Start 3:

- Found in 12 of 76 (15.8%) of genes in pham
- Manual Annotations of this start: 5 of 65
- Called 41.7% of time when present
- Phage (with cluster) where this start called: DrFeelGood_59 (A1), Dulcie_63 (A1), Lopton_62 (A1), Magnito_61 (A1), Ruotula_65 (A1),

Start 4:

- Found in 23 of 76 (30.3%) of genes in pham
- Manual Annotations of this start: 2 of 65
- Called 8.7% of time when present
- Phage (with cluster) where this start called: MrGordo_43 (A1), Target_5 (A1),

Start 5:

- Found in 76 of 76 (100.0%) of genes in pham
- Manual Annotations of this start: 49 of 65
- Called 72.4% of time when present
- Phage (with cluster) where this start called: Adzzy_44 (A2), Aeneas_5 (A1), Arcanine_44 (A1), Blinn1_45 (A6), Blue7_45 (A6), Candra_43 (A6), Che12_44 (A2), CloudWang3_43 (A6), Cookiedough_43 (A6), Gladiator_43 (A6), Gruunaga_43 (A6), Gwendoluna_4 (A1), Hammer_44 (A6), Herbertwm_40 (A2), Hexamo_43 (A6), Hoot_43 (A6), Indra_46 (A6), JackSparrow_11 (A1), Jeffabunny_43 (A6), JewelBug_45 (A6), Jordennis_43 (A6), Kipper29_43 (A6), Koko_44 (A6), KyMonks1A_66 (A1), Lilbunny_41 (A6), Lucyedi_43 (A16), Magnar_61 (A1),

Makemake_66 (A1), MaryBeth_44 (A1), MetalQZJ_43 (A1), Neeharika16_43 (A6), Newrala_43 (A6), Odin_41 (A2), PainterBoy_43 (A16), Perseus_5 (A1), Ph8s_44 (A2), Pmask_43 (A6), Rajelicia_44 (A1), Rifter_44 (A6), Roksolana_44 (A6), Sandaddy_59 (A1), Slagathor_45 (A1), SmellyB_43 (A6), Sorpresa_58 (A1), SuperAwesome_43 (A6), Superchunk_41 (A2), ToneTone_40 (A6), Traft412_65 (A1), Tripl3t_66 (A1), Tucker_44 (A6), VohminGhazi_43 (A6), Wiks_42 (A6), WunderPhul_43 (A6), Yokurt_43 (A6), Zulu_44 (A6),

Start 8:

- Found in 44 of 76 (57.9%) of genes in pham
- Manual Annotations of this start: 9 of 65
- Called 29.5% of time when present
- Phage (with cluster) where this start called: Artemis2UCLA_43 (A6), Chartreuse_43 (A6), DaVinci_43 (A6), Dorothea_42 (A6), EricB_43 (A6), Garak_45 (A6), GreedyLawyer_43 (A6), Helmet_45 (A6), Kazan_44 (A6), McFly_43 (A6), Priamo_44 (A6), SuperCallie99_43 (A6), Zaka_43 (A6),

Start 11:

- Found in 4 of 76 (5.3%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Caraxes_42 (A2),

Summary by clusters:

There are 4 clusters represented in this pham: A1, A2, A16, A6,

Info for manual annotations of cluster A1:

- Start number 3 was manually annotated 5 times for cluster A1.
- Start number 4 was manually annotated 2 times for cluster A1.
- Start number 5 was manually annotated 13 times for cluster A1.

Info for manual annotations of cluster A16:

- Start number 5 was manually annotated 2 times for cluster A16.

Info for manual annotations of cluster A2:

- Start number 5 was manually annotated 6 times for cluster A2.

Info for manual annotations of cluster A6:

- Start number 5 was manually annotated 28 times for cluster A6.
- Start number 8 was manually annotated 9 times for cluster A6.

Gene Information:

Gene: Adzzy_44 Start: 28058, Stop: 27801, Start Num: 5

Candidate Starts for Adzzy_44:

(Start: 5 @28058 has 49 MA's), (7, 28040), (15, 27959), (17, 27917), (19, 27878), (23, 27848), (24, 27833),

Gene: Aeneas_5 Start: 2124, Stop: 2384, Start Num: 5

Candidate Starts for Aeneas_5:

(Start: 4 @2100 has 2 MA's), (Start: 5 @2124 has 49 MA's), (Start: 8 @2151 has 9 MA's), (9, 2154), (19, 2307), (21, 2328), (27, 2361),

Gene: Arcanine_44 Start: 32267, Stop: 31989, Start Num: 5

Candidate Starts for Arcanine_44:

(Start: 4 @32291 has 2 MA's), (Start: 5 @32267 has 49 MA's), (12, 32204), (24, 32033), (27, 32024),

Gene: Artemis2UCLA_43 Start: 27221, Stop: 26988, Start Num: 8

Candidate Starts for Artemis2UCLA_43:

(Start: 5 @27245 has 49 MA's), (Start: 8 @27221 has 9 MA's), (19, 27062), (29, 27002),

Gene: Blinn1_45 Start: 27814, Stop: 27557, Start Num: 5

Candidate Starts for Blinn1_45:

(Start: 5 @27814 has 49 MA's), (Start: 8 @27790 has 9 MA's), (18, 27646), (19, 27631), (29, 27571),

Gene: Blue7_45 Start: 27705, Stop: 27451, Start Num: 5

Candidate Starts for Blue7_45:

(Start: 5 @27705 has 49 MA's), (18, 27540), (19, 27525), (24, 27480), (25, 27477), (29, 27465),

Gene: Candra_43 Start: 27584, Stop: 27327, Start Num: 5

Candidate Starts for Candra_43:

(Start: 5 @27584 has 49 MA's), (Start: 8 @27560 has 9 MA's), (19, 27401), (29, 27341),

Gene: Caraxes_42 Start: 27727, Stop: 27512, Start Num: 11

Candidate Starts for Caraxes_42:

(Start: 5 @27787 has 49 MA's), (11, 27727), (13, 27706), (19, 27601), (23, 27571), (26, 27550),

Gene: Chartreuse_43 Start: 27471, Stop: 27238, Start Num: 8

Candidate Starts for Chartreuse_43:

(Start: 5 @27495 has 49 MA's), (Start: 8 @27471 has 9 MA's), (19, 27312), (29, 27252),

Gene: Che12_44 Start: 28255, Stop: 27980, Start Num: 5

Candidate Starts for Che12_44:

(Start: 5 @28255 has 49 MA's), (11, 28195), (13, 28174), (23, 28039), (26, 28018),

Gene: CloudWang3_43 Start: 27345, Stop: 27088, Start Num: 5

Candidate Starts for CloudWang3_43:

(Start: 5 @27345 has 49 MA's), (Start: 8 @27321 has 9 MA's), (19, 27162), (29, 27102),

Gene: Cookiedough_43 Start: 27560, Stop: 27303, Start Num: 5

Candidate Starts for Cookiedough_43:

(Start: 5 @27560 has 49 MA's), (Start: 8 @27536 has 9 MA's), (18, 27392), (19, 27377), (29, 27317),

Gene: DaVinci_43 Start: 27525, Stop: 27292, Start Num: 8

Candidate Starts for DaVinci_43:

(Start: 5 @27549 has 49 MA's), (Start: 8 @27525 has 9 MA's), (19, 27366), (29, 27306),

Gene: Dorothea_42 Start: 27543, Stop: 27310, Start Num: 8

Candidate Starts for Dorothea_42:

(Start: 5 @27567 has 49 MA's), (Start: 8 @27543 has 9 MA's), (18, 27399), (19, 27384), (29, 27324),

Gene: DrFeelGood_59 Start: 40324, Stop: 40034, Start Num: 3

Candidate Starts for DrFeelGood_59:

(Start: 3 @40324 has 5 MA's), (Start: 4 @40312 has 2 MA's), (Start: 5 @40288 has 49 MA's), (12, 40225), (24, 40078), (27, 40069),

Gene: Dulcie_63 Start: 42970, Stop: 42668, Start Num: 3

Candidate Starts for Dulcie_63:

(Start: 3 @42970 has 5 MA's), (Start: 4 @42958 has 2 MA's), (Start: 5 @42934 has 49 MA's), (6, 42922), (24, 42712), (27, 42703),

Gene: EricB_43 Start: 27517, Stop: 27284, Start Num: 8

Candidate Starts for EricB_43:

(Start: 5 @27541 has 49 MA's), (Start: 8 @27517 has 9 MA's), (19, 27358), (29, 27298),

Gene: Garak_45 Start: 27688, Stop: 27455, Start Num: 8

Candidate Starts for Garak_45:

(Start: 5 @27712 has 49 MA's), (Start: 8 @27688 has 9 MA's), (18, 27544), (19, 27529), (28, 27472), (29, 27469),

Gene: Gladiator_43 Start: 27549, Stop: 27292, Start Num: 5

Candidate Starts for Gladiator_43:

(Start: 5 @27549 has 49 MA's), (Start: 8 @27525 has 9 MA's), (18, 27381), (19, 27366), (29, 27306),

Gene: GreedyLawyer_43 Start: 27524, Stop: 27291, Start Num: 8

Candidate Starts for GreedyLawyer_43:

(Start: 5 @27548 has 49 MA's), (Start: 8 @27524 has 9 MA's), (19, 27365), (29, 27305),

Gene: Gruunaga_43 Start: 27548, Stop: 27291, Start Num: 5

Candidate Starts for Gruunaga_43:

(Start: 5 @27548 has 49 MA's), (Start: 8 @27524 has 9 MA's), (18, 27380), (19, 27365), (29, 27305),

Gene: Gwendoluna_4 Start: 2095, Stop: 2355, Start Num: 5

Candidate Starts for Gwendoluna_4:

(Start: 4 @2071 has 2 MA's), (Start: 5 @2095 has 49 MA's), (Start: 8 @2122 has 9 MA's), (9, 2125), (19, 2278), (21, 2299), (27, 2332),

Gene: Hammer_44 Start: 27515, Stop: 27261, Start Num: 5

Candidate Starts for Hammer_44:

(Start: 5 @27515 has 49 MA's), (10, 27473), (19, 27335), (24, 27290), (25, 27287), (29, 27275),

Gene: Helmet_45 Start: 27688, Stop: 27455, Start Num: 8

Candidate Starts for Helmet_45:

(Start: 5 @27712 has 49 MA's), (Start: 8 @27688 has 9 MA's), (18, 27544), (19, 27529), (28, 27472), (29, 27469),

Gene: Herbertwm_40 Start: 28276, Stop: 27995, Start Num: 5

Candidate Starts for Herbertwm_40:

(Start: 5 @28276 has 49 MA's), (13, 28198), (22, 28066), (23, 28063), (24, 28048), (25, 28045), (31, 28018),

Gene: Hexamo_43 Start: 27333, Stop: 27043, Start Num: 5

Candidate Starts for Hexamo_43:

(Start: 5 @27333 has 49 MA's), (Start: 8 @27309 has 9 MA's), (18, 27165), (19, 27150), (29, 27090),

Gene: Hoot_43 Start: 27526, Stop: 27269, Start Num: 5

Candidate Starts for Hoot_43:

(Start: 5 @27526 has 49 MA's), (Start: 8 @27502 has 9 MA's), (19, 27343), (29, 27283),

Gene: Indra_46 Start: 27713, Stop: 27456, Start Num: 5

Candidate Starts for Indra_46:

(Start: 5 @27713 has 49 MA's), (Start: 8 @27689 has 9 MA's), (18, 27545), (19, 27530), (28, 27473), (29, 27470),

Gene: JackSparrow_11 Start: 7003, Stop: 7266, Start Num: 5

Candidate Starts for JackSparrow_11:

(Start: 4 @6979 has 2 MA's), (Start: 5 @7003 has 49 MA's), (19, 7189), (23, 7219), (24, 7234),

Gene: Jeffabunny_43 Start: 27369, Stop: 27112, Start Num: 5

Candidate Starts for Jeffabunny_43:

(Start: 5 @27369 has 49 MA's), (Start: 8 @27345 has 9 MA's), (18, 27201), (19, 27186), (29, 27126),

Gene: JewelBug_45 Start: 27717, Stop: 27463, Start Num: 5

Candidate Starts for JewelBug_45:

(Start: 5 @27717 has 49 MA's), (Start: 8 @27693 has 9 MA's), (19, 27534), (20, 27528), (29, 27474), (30, 27471),

Gene: Jordennis_43 Start: 27556, Stop: 27299, Start Num: 5

Candidate Starts for Jordennis_43:

(Start: 5 @27556 has 49 MA's), (Start: 8 @27532 has 9 MA's), (18, 27388), (19, 27373), (29, 27313),

Gene: Kazan_44 Start: 27530, Stop: 27297, Start Num: 8

Candidate Starts for Kazan_44:

(Start: 5 @27554 has 49 MA's), (Start: 8 @27530 has 9 MA's), (19, 27371), (29, 27311),

Gene: Kipper29_43 Start: 27567, Stop: 27310, Start Num: 5

Candidate Starts for Kipper29_43:

(Start: 5 @27567 has 49 MA's), (Start: 8 @27543 has 9 MA's), (18, 27399), (19, 27384), (29, 27324),

Gene: Koko_44 Start: 28054, Stop: 27800, Start Num: 5

Candidate Starts for Koko_44:

(Start: 5 @28054 has 49 MA's), (18, 27889), (19, 27874), (24, 27829), (25, 27826), (29, 27814),

Gene: KyMonks1A_66 Start: 41412, Stop: 41158, Start Num: 5

Candidate Starts for KyMonks1A_66:

(Start: 3 @41448 has 5 MA's), (Start: 4 @41436 has 2 MA's), (Start: 5 @41412 has 49 MA's), (24, 41202), (27, 41193),

Gene: Lilbunny_41 Start: 27343, Stop: 27086, Start Num: 5

Candidate Starts for Lilbunny_41:

(Start: 5 @27343 has 49 MA's), (Start: 8 @27319 has 9 MA's), (18, 27175), (19, 27160), (29, 27100),

Gene: Lopton_62 Start: 43102, Stop: 42812, Start Num: 3

Candidate Starts for Lopton_62:

(Start: 3 @43102 has 5 MA's), (Start: 4 @43090 has 2 MA's), (Start: 5 @43066 has 49 MA's), (12, 43003), (24, 42856), (27, 42847),

Gene: Lucyedi_43 Start: 28903, Stop: 28643, Start Num: 5

Candidate Starts for Lucyedi_43:

(Start: 5 @28903 has 49 MA's), (13, 28825), (14, 28816), (15, 28804), (24, 28675),

Gene: Magnar_61 Start: 41285, Stop: 41031, Start Num: 5

Candidate Starts for Magnar_61:

(Start: 3 @41321 has 5 MA's), (Start: 4 @41309 has 2 MA's), (Start: 5 @41285 has 49 MA's), (24, 41075), (27, 41066),

Gene: Magnito_61 Start: 41185, Stop: 40895, Start Num: 3

Candidate Starts for Magnito_61:

(Start: 3 @41185 has 5 MA's), (Start: 4 @41173 has 2 MA's), (Start: 5 @41149 has 49 MA's), (12, 41086), (24, 40939), (27, 40930),

Gene: Makemake_66 Start: 43056, Stop: 42778, Start Num: 5

Candidate Starts for Makemake_66:

(Start: 3 @43092 has 5 MA's), (Start: 4 @43080 has 2 MA's), (Start: 5 @43056 has 49 MA's), (12, 42993), (24, 42822), (27, 42813),

Gene: MaryBeth_44 Start: 32849, Stop: 32571, Start Num: 5

Candidate Starts for MaryBeth_44:

(1, 32939), (2, 32927), (Start: 4 @32873 has 2 MA's), (Start: 5 @32849 has 49 MA's), (12, 32786), (24, 32615), (27, 32606),

Gene: McFly_43 Start: 27524, Stop: 27291, Start Num: 8

Candidate Starts for McFly_43:

(Start: 5 @27548 has 49 MA's), (Start: 8 @27524 has 9 MA's), (19, 27365), (29, 27305),

Gene: MetalQZJ_43 Start: 32849, Stop: 32571, Start Num: 5

Candidate Starts for MetalQZJ_43:

(1, 32939), (2, 32927), (Start: 4 @32873 has 2 MA's), (Start: 5 @32849 has 49 MA's), (12, 32786), (24, 32615), (27, 32606),

Gene: MrGordo_43 Start: 32193, Stop: 31915, Start Num: 4

Candidate Starts for MrGordo_43:

(Start: 4 @32193 has 2 MA's), (Start: 5 @32169 has 49 MA's), (16, 32058), (24, 31959), (27, 31950),

Gene: Neeharika16_43 Start: 27559, Stop: 27302, Start Num: 5

Candidate Starts for Neeharika16_43:

(Start: 5 @27559 has 49 MA's), (Start: 8 @27535 has 9 MA's), (18, 27391), (19, 27376), (29, 27316),

Gene: Newrala_43 Start: 27559, Stop: 27302, Start Num: 5

Candidate Starts for Newrala_43:

(Start: 5 @27559 has 49 MA's), (Start: 8 @27535 has 9 MA's), (18, 27391), (19, 27376), (29, 27316),

Gene: Odin_41 Start: 27960, Stop: 27685, Start Num: 5

Candidate Starts for Odin_41:

(Start: 5 @27960 has 49 MA's), (11, 27900), (13, 27879), (19, 27774), (23, 27744), (26, 27723),

Gene: PainterBoy_43 Start: 28839, Stop: 28579, Start Num: 5

Candidate Starts for PainterBoy_43:

(Start: 5 @28839 has 49 MA's), (13, 28761), (14, 28752), (15, 28740), (24, 28611),

Gene: Perseus_5 Start: 2124, Stop: 2384, Start Num: 5

Candidate Starts for Perseus_5:

(Start: 4 @2100 has 2 MA's), (Start: 5 @2124 has 49 MA's), (Start: 8 @2151 has 9 MA's), (9, 2154), (19, 2307), (21, 2328), (27, 2361),

Gene: Ph8s_44 Start: 28493, Stop: 28224, Start Num: 5

Candidate Starts for Ph8s_44:

(Start: 5 @28493 has 49 MA's), (7, 28475), (17, 28352), (19, 28313), (24, 28268),

Gene: Pmask_43 Start: 27560, Stop: 27303, Start Num: 5

Candidate Starts for Pmask_43:

(Start: 5 @27560 has 49 MA's), (Start: 8 @27536 has 9 MA's), (18, 27392), (19, 27377), (29, 27317),

Gene: Priamo_44 Start: 27585, Stop: 27352, Start Num: 8

Candidate Starts for Priamo_44:

(Start: 5 @27609 has 49 MA's), (Start: 8 @27585 has 9 MA's), (18, 27441), (19, 27426), (29, 27366),

Gene: Rajelicia_44 Start: 32929, Stop: 32651, Start Num: 5

Candidate Starts for Rajelicia_44:

(Start: 4 @32953 has 2 MA's), (Start: 5 @32929 has 49 MA's), (12, 32866), (24, 32695), (27, 32686),

Gene: Rifter_44 Start: 27478, Stop: 27224, Start Num: 5

Candidate Starts for Rifter_44:

(Start: 5 @27478 has 49 MA's), (10, 27436), (19, 27298), (24, 27253), (25, 27250), (29, 27238),

Gene: Roksolana_44 Start: 27596, Stop: 27339, Start Num: 5

Candidate Starts for Roksolana_44:

(Start: 5 @27596 has 49 MA's), (Start: 8 @27572 has 9 MA's), (19, 27413), (29, 27353),

Gene: Ruotula_65 Start: 43242, Stop: 42952, Start Num: 3

Candidate Starts for Ruotula_65:

(Start: 3 @43242 has 5 MA's), (Start: 4 @43230 has 2 MA's), (Start: 5 @43206 has 49 MA's), (24, 42996), (27, 42987),

Gene: Sandaddy_59 Start: 40953, Stop: 40699, Start Num: 5

Candidate Starts for Sandaddy_59:

(Start: 3 @40989 has 5 MA's), (Start: 4 @40977 has 2 MA's), (Start: 5 @40953 has 49 MA's), (12, 40890), (24, 40743), (27, 40734),

Gene: Slagathor_45 Start: 32854, Stop: 32576, Start Num: 5

Candidate Starts for Slagathor_45:

(Start: 4 @32878 has 2 MA's), (Start: 5 @32854 has 49 MA's), (12, 32791), (24, 32620), (27, 32611),

Gene: SmellyB_43 Start: 27548, Stop: 27291, Start Num: 5

Candidate Starts for SmellyB_43:

(Start: 5 @27548 has 49 MA's), (Start: 8 @27524 has 9 MA's), (19, 27365), (29, 27305),

Gene: Sorpresa_58 Start: 40955, Stop: 40701, Start Num: 5

Candidate Starts for Sorpresa_58:

(Start: 3 @40991 has 5 MA's), (Start: 4 @40979 has 2 MA's), (Start: 5 @40955 has 49 MA's), (12, 40892), (24, 40745), (27, 40736),

Gene: SuperAwesome_43 Start: 27559, Stop: 27302, Start Num: 5

Candidate Starts for SuperAwesome_43:

(Start: 5 @27559 has 49 MA's), (Start: 8 @27535 has 9 MA's), (18, 27391), (19, 27376), (29, 27316),

Gene: SuperCallie99_43 Start: 27534, Stop: 27301, Start Num: 8
Candidate Starts for SuperCallie99_43:
(Start: 5 @27558 has 49 MA's), (Start: 8 @27534 has 9 MA's), (18, 27390), (19, 27375), (29, 27315),

Gene: Superchunk_41 Start: 27787, Stop: 27512, Start Num: 5
Candidate Starts for Superchunk_41:
(Start: 5 @27787 has 49 MA's), (11, 27727), (13, 27706), (19, 27601), (23, 27571), (26, 27550),

Gene: Target_5 Start: 2236, Stop: 2520, Start Num: 4
Candidate Starts for Target_5:
(Start: 4 @2236 has 2 MA's), (Start: 5 @2260 has 49 MA's), (Start: 8 @2287 has 9 MA's), (9, 2290),
(19, 2443), (21, 2464), (27, 2497),

Gene: ToneTone_40 Start: 27275, Stop: 27018, Start Num: 5
Candidate Starts for ToneTone_40:
(Start: 5 @27275 has 49 MA's), (Start: 8 @27251 has 9 MA's), (18, 27107), (19, 27092), (29, 27032),

Gene: Traft412_65 Start: 41997, Stop: 41743, Start Num: 5
Candidate Starts for Traft412_65:
(Start: 3 @42033 has 5 MA's), (Start: 4 @42021 has 2 MA's), (Start: 5 @41997 has 49 MA's), (24,
41787), (27, 41778),

Gene: Tripl3t_66 Start: 43905, Stop: 43651, Start Num: 5
Candidate Starts for Tripl3t_66:
(Start: 3 @43941 has 5 MA's), (Start: 4 @43929 has 2 MA's), (Start: 5 @43905 has 49 MA's), (12,
43842), (24, 43695), (27, 43686),

Gene: Tucker_44 Start: 27713, Stop: 27456, Start Num: 5
Candidate Starts for Tucker_44:
(Start: 5 @27713 has 49 MA's), (Start: 8 @27689 has 9 MA's), (18, 27545), (19, 27530), (29, 27470),

Gene: VohminGhazi_43 Start: 27549, Stop: 27292, Start Num: 5
Candidate Starts for VohminGhazi_43:
(Start: 5 @27549 has 49 MA's), (Start: 8 @27525 has 9 MA's), (19, 27366), (29, 27306),

Gene: Wiks_42 Start: 27343, Stop: 27086, Start Num: 5
Candidate Starts for Wiks_42:
(Start: 5 @27343 has 49 MA's), (Start: 8 @27319 has 9 MA's), (18, 27175), (19, 27160), (29, 27100),

Gene: WunderPhul_43 Start: 27341, Stop: 27084, Start Num: 5
Candidate Starts for WunderPhul_43:
(Start: 5 @27341 has 49 MA's), (Start: 8 @27317 has 9 MA's), (18, 27173), (19, 27158), (29, 27098),

Gene: Yokurt_43 Start: 27343, Stop: 27086, Start Num: 5
Candidate Starts for Yokurt_43:
(Start: 5 @27343 has 49 MA's), (Start: 8 @27319 has 9 MA's), (18, 27175), (19, 27160), (29, 27100),

Gene: Zaka_43 Start: 27319, Stop: 27086, Start Num: 8
Candidate Starts for Zaka_43:
(Start: 5 @27343 has 49 MA's), (Start: 8 @27319 has 9 MA's), (18, 27175), (19, 27160), (29, 27100),

Gene: Zulu_44 Start: 27694, Stop: 27437, Start Num: 5

Candidate Starts for Zulu_44:

(Start: 5 @27694 has 49 MA's), (Start: 8 @27670 has 9 MA's), (18, 27526), (19, 27511), (29, 27451),