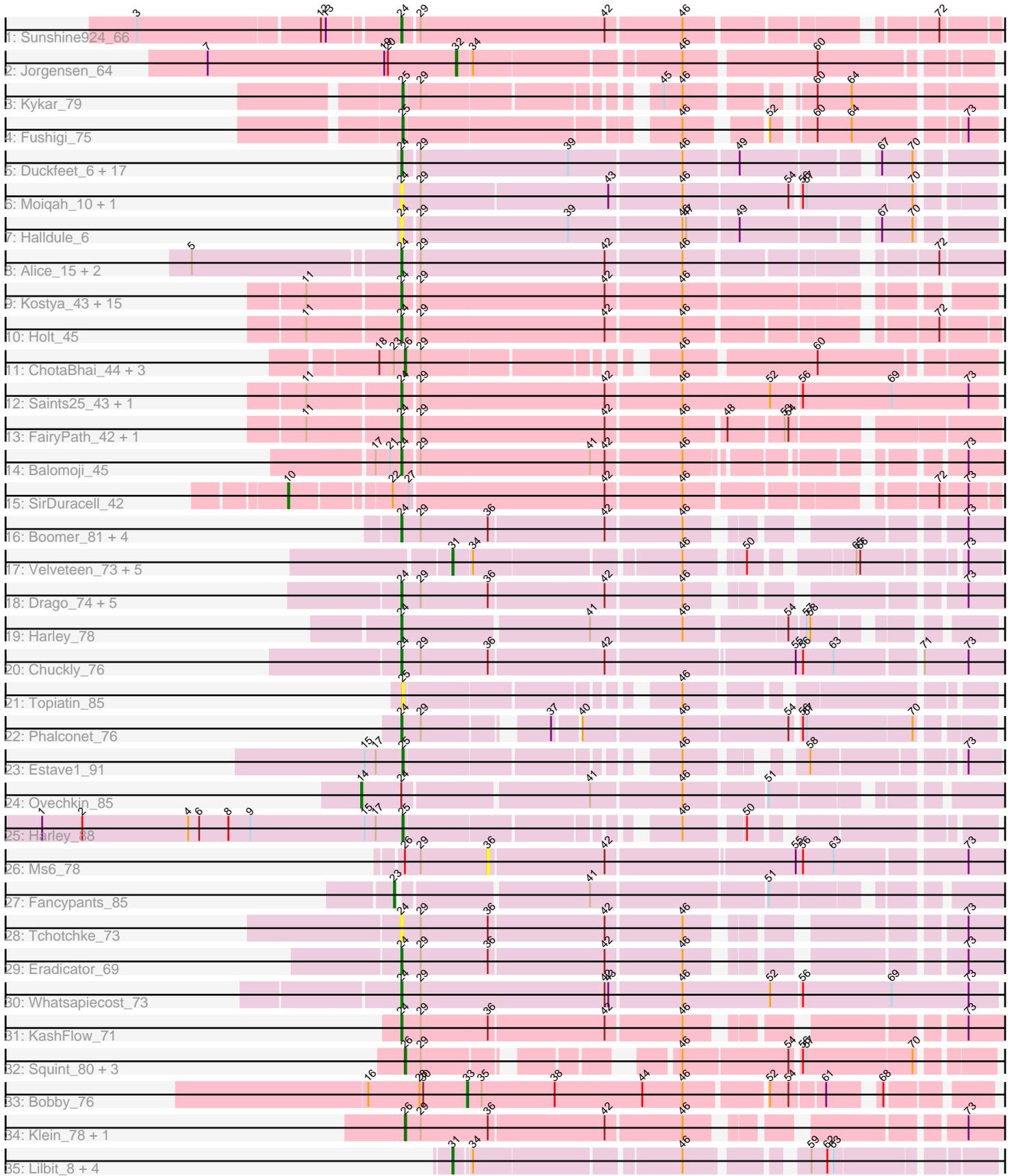# Pham 291021

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 291021 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291021 has 97 members, 14 are drafts.

Phages represented in each track:
• Track 1 : Sunshine924_66
• Track 2 : Jorgensen_64
• Track 3 : Kykar_79
• Track 4 : Fushigi_75
• Track 5 : Duckfeet_6, Ronan_6, CharlieB_5, LRRHood_6, Lethe_6, Koguma_6, Yassified_6, IkeLoa_6, ET08_5, Bigswole_5, Phox_6, Lukilu_6, Blackdragon_5, Cali_6, Sprinklers_6, Grungle_6, BeanWater_5, Shaqnato_6
• Track 6 : Moiqah_10, Moby_10
• Track 7 : Halldule_6
• Track 8 : Alice_15, Flabslab_16, Bezza_13
• Track 9 : Kostya_43, PhatBacter_45, Nimrod_45, Phaux_44, Murica_44, xkcd_46, Palpatine_45, BigBubba_43, HufflyPuff_44, Petra64142_47, FireRed_45, Greep_46, Misfit_44, Terminus_44, Policronamos_45, BugsBunny_43
• Track 10 : Holt_45
• Track 11 : ChotaBhai_44, DoctorDiddles_44, Pat3_42, BaboJay_42
• Track 12 : Saints25_43, Highbury_43
• Track 13 : FairyPath_42, Quallification_43
• Track 14 : Balomoji_45
• Track 15 : SirDuracell_42
• Track 16 : Boomer_81, Llij_73, Rockne_78, PMC_74, Phatniss_74
• Track 17 : Velveteen_73, BigPhil_72, Brookers_73, Sarma624_77, Coco12_75, Cerasum_72
• Track 18 : Drago_74, DirtMcgirt_76, UncleRicky_76, Lucia_77, Enby_78, Lorde_77
• Track 19 : Harley_78
• Track 20 : Chuckly_76
• Track 21 : Topiatin_85
• Track 22 : Phalconet_76
• Track 23 : Estave1_91
• Track 24 : Ovechkin_85
• Track 25 : Harley_88
• Track 26 : Ms6_78
• Track 27 : Fancypants_85
• Track 28 : Tchotchke_73
• Track 29 : Eradicator_69
• Track 30 : Whatsapiecost_73
• Track 31 : KashFlow_71
• Track 32 : Squint_80, Porcelain_79, MiaZeal_80, Ariel_79

• Track 33 : Bobby_76
• Track 34 : Klein_78, Wanda_82
• Track 35 : Lilbit_8, Beelzebub_9, Pringar_7, FeliMaine_8, Clarkson_8

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

The start number called the most often in the published annotations is 24, it was called in 53 of the 83 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alice_15, Balomoji_45, BeanWater_5, Bezza_13, BigBubba_43, Bigswole_5, Blackdragon_5, Boomer_81, BugsBunny_43, Cali_6, CharlieB_5, Chuckly_76, DirtMcgirt_76, Drago_74, Duckfeet_6, ET08_5, Enby_78, Eradicator_69, FairyPath_42, FireRed_45, Flabslab_16, Greep_46, Grungle_6, Halldule_6, Harley_78, Highbury_43, Holt_45, HufflyPuff_44, IkeLoa_6, KashFlow_71, Koguma_6, Kostya_43, LRRHood_6, Lethe_6, Llij_73, Lorde_77, Lucia_77, Lukilu_6, Misfit_44, Moby_10, Moiqah_10, Murica_44, Nimrod_45, PMC_74, Palpatine_45, Petra64142_47, Phalconet_76, PhatBacter_45, Phatniss_74, Phaux_44, Phox_6, Policronamos_45, Quallification_43, Rockne_78, Ronan_6, Saints25_43, Shaqnato_6, Sprinklers_6, Sunshine924_66, Tchotchke_73, Terminus_44, UncleRicky_76, Whatsapiecost_73, Yassified_6, xkcd_46,

Genes that have the "Most Annotated" start but do not call it:
• Ovechkin_85,

Genes that do not have the "Most Annotated" start:
• Ariel_79, BaboJay_42, Beelzebub_9, BigPhil_72, Bobby_76, Brookers_73, Cerasum_72, ChotaBhai_44, Clarkson_8, Coco12_75, DoctorDiddles_44, Estave1_91, Fancypants_85, FeliMaine_8, Fushigi_75, Harley_88, Jorgensen_64, Klein_78, Kykar_79, Lilbit_8, MiaZeal_80, Ms6_78, Pat3_42, Porcelain_79, Pringar_7, Sarma624_77, SirDuracell_42, Squint_80, Topiatin_85, Velveteen_73, Wanda_82,

Summary by start number:

Start 10:
• Found in 1 of 97 (1.0%) 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: SirDuracell_42 (E),

Start 14:
• Found in 1 of 97 (1.0%) 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: Ovechkin_85 (F1),

Start 23:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 1 of 83

• Called 20.0% of time when present
• Phage (with cluster) where this start called: Fancypants_85 (F1),

Start 24:
• Found in 66 of 97 (68.0%) of genes in pham
• Manual Annotations of this start: 53 of 83
• Called 98.5% of time when present
• Phage (with cluster) where this start called: Alice_15 (C1), Balomoji_45 (E),
BeanWater_5 (C1), Bezza_13 (C1), BigBubba_43 (E), Bigswole_5 (C1),
Blackdragon_5 (C1), Boomer_81 (F1), BugsBunny_43 (E), Cali_6 (C1), CharlieB_5
(C1), Chuckly_76 (F1), DirtMcgirt_76 (F1), Drago_74 (F1), Duckfeet_6 (C1), ET08_5
(C1), Enby_78 (F1), Eradicator_69 (F1), FairyPath_42 (E), FireRed_45 (E),
Flabslab_16 (C1), Greep_46 (E), Grungle_6 (C1), Halldule_6 (C1), Harley_78 (F1),
Highbury_43 (E), Holt_45 (E), HufflyPuff_44 (E), IkeLoa_6 (C1), KashFlow_71 (J),
Koguma_6 (C1), Kostya_43 (E), LRRHood_6 (C1), Lethe_6 (C1), Llij_73 (F1),
Lorde_77 (F1), Lucia_77 (F1), Lukilu_6 (C1), Misfit_44 (E), Moby_10 (C1), Moiqah_10
(C1), Murica_44 (E), Nimrod_45 (E), PMC_74 (F1), Palpatine_45 (E), Petra64142_47
(E), Phalconet_76 (F1), PhatBacter_45 (E), Phatniss_74 (F1), Phaux_44 (E), Phox_6
(C1), Policronamos_45 (E), Quallification_43 (E), Rockne_78 (F1), Ronan_6 (C1),
Saints25_43 (E), Shaqnato_6 (C1), Sprinklers_6 (C1), Sunshine924_66 (A1),
Tchotchke_73 (F1), Terminus_44 (E), UncleRicky_76 (F1), Whatsapiecost_73 (F1),
Yassified_6 (C1), xkcd_46 (E),

Start 25:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 4 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Estave1_91 (F1), Fushigi_75 (A1),
Harley_88 (F1), Kykar_79 (A1), Topiatin_85 (F1),

Start 26:
• Found in 11 of 97 (11.3%) of genes in pham
• Manual Annotations of this start: 10 of 83
• Called 90.9% of time when present
• Phage (with cluster) where this start called: Ariel_79 (J), BaboJay_42 (E),
ChotaBhai_44 (E), DoctorDiddles_44 (E), Klein_78 (J), MiaZeal_80 (J), Pat3_42 (E),
Porcelain_79 (J), Squint_80 (J), Wanda_82 (J),

Start 31:
• Found in 11 of 97 (11.3%) of genes in pham
• Manual Annotations of this start: 11 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beelzebub_9 (S), BigPhil_72 (F1),
Brookers_73 (F1), Cerasum_72 (F1), Clarkson_8 (S), Coco12_75 (F1), FeliMaine_8
(S), Lilbit_8 (S), Pringar_7 (S), Sarma624_77 (F1), Velveteen_73 (F1),

Start 32:
• Found in 1 of 97 (1.0%) 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: Jorgensen_64 (A1),

Start 33:

• Found in 1 of 97 (1.0%) 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: Bobby_76 (J),

Start 36:
• Found in 18 of 97 (18.6%) of genes in pham
• No Manual Annotations of this start.
• Called 5.6% of time when present
• Phage (with cluster) where this start called: Ms6_78 (F1),

Summary by clusters:

There are 6 clusters represented in this pham: F1, E, J, A1, S, C1,

Info for manual annotations of cluster A1:
•Start number 24 was manually annotated 1 time for cluster A1.
•Start number 25 was manually annotated 2 times for cluster A1.
•Start number 32 was manually annotated 1 time for cluster A1.

Info for manual annotations of cluster C1:
•Start number 24 was manually annotated 18 times for cluster C1.

Info for manual annotations of cluster E:
•Start number 10 was manually annotated 1 time for cluster E.
•Start number 24 was manually annotated 18 times for cluster E.
•Start number 26 was manually annotated 4 times for cluster E.

Info for manual annotations of cluster F1:
•Start number 14 was manually annotated 1 time for cluster F1.
•Start number 23 was manually annotated 1 time for cluster F1.
•Start number 24 was manually annotated 15 times for cluster F1.
•Start number 25 was manually annotated 2 times for cluster F1.
•Start number 31 was manually annotated 6 times for cluster F1.

Info for manual annotations of cluster J:
•Start number 24 was manually annotated 1 time for cluster J.
•Start number 26 was manually annotated 6 times for cluster J.
•Start number 33 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster S:
•Start number 31 was manually annotated 5 times for cluster S.

Gene Information:
Gene: Alice_15 Start: 5418, Stop: 5885, Start Num: 24
Candidate Starts for Alice_15:
(5, 5256), (Start: 24 @5418 has 53 MA's), (29, 5430), (42, 5580), (46, 5640), (72, 5811),

Gene: Ariel_79 Start: 48566, Stop: 48168, Start Num: 26
Candidate Starts for Ariel_79:

(Start: 26 @48566 has 10 MA's), (29, 48554), (46, 48398), (54, 48314), (56, 48308), (57, 48305), (70, 48221),

Gene: BaboJay_42 Start: 35493, Stop: 35068, Start Num: 26
Candidate Starts for BaboJay_42:
(18, 35514), (Start: 23 @35502 has 1 MA's), (Start: 26 @35493 has 10 MA's), (29, 35481), (46, 35307), (60, 35205),

Gene: Balomoji_45 Start: 36485, Stop: 36057, Start Num: 24
Candidate Starts for Balomoji_45:
(17, 36506), (21, 36494), (Start: 24 @36485 has 53 MA's), (29, 36473), (41, 36335), (42, 36323), (46, 36263), (73, 36086),

Gene: BeanWater_5 Start: 2594, Stop: 3034, Start Num: 24
Candidate Starts for BeanWater_5:
(Start: 24 @2594 has 53 MA's), (29, 2606), (39, 2726), (46, 2816), (49, 2858), (67, 2954), (70, 2978),

Gene: Beelzebub_9 Start: 2804, Stop: 3181, Start Num: 31
Candidate Starts for Beelzebub_9:
(Start: 31 @2804 has 11 MA's), (34, 2816), (46, 2972), (59, 3050), (62, 3062), (63, 3065),

Gene: Bezza_13 Start: 5418, Stop: 5885, Start Num: 24
Candidate Starts for Bezza_13:
(5, 5256), (Start: 24 @5418 has 53 MA's), (29, 5430), (42, 5580), (46, 5640), (72, 5811),

Gene: BigBubba_43 Start: 35101, Stop: 34667, Start Num: 24
Candidate Starts for BigBubba_43:
(11, 35173), (Start: 24 @35101 has 53 MA's), (29, 35089), (42, 34939), (46, 34879),

Gene: BigPhil_72 Start: 44249, Stop: 44626, Start Num: 31
Candidate Starts for BigPhil_72:
(Start: 31 @44249 has 11 MA's), (34, 44264), (46, 44420), (50, 44462), (65, 44528), (66, 44531), (73, 44600),

Gene: Bigswole_5 Start: 1613, Stop: 2053, Start Num: 24
Candidate Starts for Bigswole_5:
(Start: 24 @1613 has 53 MA's), (29, 1625), (39, 1745), (46, 1835), (49, 1877), (67, 1973), (70, 1997),

Gene: Blackdragon_5 Start: 1616, Stop: 2056, Start Num: 24
Candidate Starts for Blackdragon_5:
(Start: 24 @1616 has 53 MA's), (29, 1628), (39, 1748), (46, 1838), (49, 1880), (67, 1976), (70, 2000),

Gene: Bobby_76 Start: 51549, Stop: 51166, Start Num: 33
Candidate Starts for Bobby_76:
(16, 51630), (28, 51588), (30, 51585), (Start: 33 @51549 has 1 MA's), (35, 51537), (38, 51477), (44, 51405), (46, 51372), (52, 51312), (54, 51297), (61, 51273), (68, 51240),

Gene: Boomer_81 Start: 48708, Stop: 49136, Start Num: 24
Candidate Starts for Boomer_81:
(Start: 24 @48708 has 53 MA's), (29, 48723), (36, 48777), (42, 48870), (46, 48930), (73, 49107),

Gene: Brookers_73 Start: 47200, Stop: 47577, Start Num: 31
Candidate Starts for Brookers_73:

(Start: 31 @47200 has 11 MA's), (34, 47215), (46, 47371), (50, 47413), (65, 47479), (66, 47482), (73, 47551),

Gene: BugsBunny_43 Start: 35586, Stop: 35152, Start Num: 24
Candidate Starts for BugsBunny_43:
(11, 35658), (Start: 24 @35586 has 53 MA's), (29, 35574), (42, 35424), (46, 35364),

Gene: Cali_6 Start: 2751, Stop: 3191, Start Num: 24
Candidate Starts for Cali_6:
(Start: 24 @2751 has 53 MA's), (29, 2763), (39, 2883), (46, 2973), (49, 3015), (67, 3111), (70, 3135),

Gene: Cerasum_72 Start: 44267, Stop: 44644, Start Num: 31
Candidate Starts for Cerasum_72:
(Start: 31 @44267 has 11 MA's), (34, 44282), (46, 44438), (50, 44480), (65, 44546), (66, 44549), (73, 44618),

Gene: CharlieB_5 Start: 1612, Stop: 2052, Start Num: 24
Candidate Starts for CharlieB_5:
(Start: 24 @1612 has 53 MA's), (29, 1624), (39, 1744), (46, 1834), (49, 1876), (67, 1972), (70, 1996),

Gene: ChotaBhai_44 Start: 35156, Stop: 34737, Start Num: 26
Candidate Starts for ChotaBhai_44:
(18, 35177), (Start: 23 @35165 has 1 MA's), (Start: 26 @35156 has 10 MA's), (29, 35144), (46, 34970), (60, 34868),

Gene: Chuckly_76 Start: 45511, Stop: 45978, Start Num: 24
Candidate Starts for Chuckly_76:
(Start: 24 @45511 has 53 MA's), (29, 45526), (36, 45580), (42, 45673), (55, 45820), (56, 45826), (63, 45850), (71, 45913), (73, 45949),

Gene: Clarkson_8 Start: 2580, Stop: 2957, Start Num: 31
Candidate Starts for Clarkson_8:
(Start: 31 @2580 has 11 MA's), (34, 2592), (46, 2748), (59, 2826), (62, 2838), (63, 2841),

Gene: Coco12_75 Start: 48324, Stop: 48701, Start Num: 31
Candidate Starts for Coco12_75:
(Start: 31 @48324 has 11 MA's), (34, 48339), (46, 48495), (50, 48537), (65, 48603), (66, 48606), (73, 48675),

Gene: DirtMcgirt_76 Start: 45318, Stop: 45746, Start Num: 24
Candidate Starts for DirtMcgirt_76:
(Start: 24 @45318 has 53 MA's), (29, 45333), (36, 45387), (42, 45480), (46, 45540), (73, 45717),

Gene: DoctorDiddles_44 Start: 35192, Stop: 34773, Start Num: 26
Candidate Starts for DoctorDiddles_44:
(18, 35213), (Start: 23 @35201 has 1 MA's), (Start: 26 @35192 has 10 MA's), (29, 35180), (46, 35006), (60, 34904),

Gene: Drago_74 Start: 45321, Stop: 45749, Start Num: 24
Candidate Starts for Drago_74:
(Start: 24 @45321 has 53 MA's), (29, 45336), (36, 45390), (42, 45483), (46, 45543), (73, 45720),

Gene: Duckfeet_6 Start: 1749, Stop: 2189, Start Num: 24

Candidate Starts for Duckfeet_6:
(Start: 24 @1749 has 53 MA's), (29, 1761), (39, 1881), (46, 1971), (49, 2013), (67, 2109), (70, 2133),

Gene: ET08_5 Start: 2600, Stop: 3040, Start Num: 24
Candidate Starts for ET08_5:
(Start: 24 @2600 has 53 MA's), (29, 2612), (39, 2732), (46, 2822), (49, 2864), (67, 2960), (70, 2984),

Gene: Enby_78 Start: 45597, Stop: 46025, Start Num: 24
Candidate Starts for Enby_78:
(Start: 24 @45597 has 53 MA's), (29, 45612), (36, 45666), (42, 45759), (46, 45819), (73, 45996),

Gene: Eradicator_69 Start: 46041, Stop: 46469, Start Num: 24
Candidate Starts for Eradicator_69:
(Start: 24 @46041 has 53 MA's), (29, 46056), (36, 46110), (42, 46203), (46, 46263), (73, 46440),

Gene: Estave1_91 Start: 53006, Stop: 53392, Start Num: 25
Candidate Starts for Estave1_91:
(15, 52976), (17, 52985), (Start: 25 @53006 has 4 MA's), (46, 53192), (58, 53258), (73, 53366),

Gene: FairyPath_42 Start: 35650, Stop: 35204, Start Num: 24
Candidate Starts for FairyPath_42:
(11, 35722), (Start: 24 @35650 has 53 MA's), (29, 35638), (42, 35488), (46, 35428), (48, 35398), (53, 35359), (54, 35356),

Gene: Fancypants_85 Start: 50404, Stop: 50835, Start Num: 23
Candidate Starts for Fancypants_85:
(Start: 23 @50404 has 1 MA's), (41, 50548), (51, 50683),

Gene: FeliMaine_8 Start: 2581, Stop: 2958, Start Num: 31
Candidate Starts for FeliMaine_8:
(Start: 31 @2581 has 11 MA's), (34, 2593), (46, 2749), (59, 2827), (62, 2839), (63, 2842),

Gene: FireRed_45 Start: 36025, Stop: 35591, Start Num: 24
Candidate Starts for FireRed_45:
(11, 36097), (Start: 24 @36025 has 53 MA's), (29, 36013), (42, 35863), (46, 35803),

Gene: Flabslab_16 Start: 5015, Stop: 5452, Start Num: 24
Candidate Starts for Flabslab_16:
(5, 4853), (Start: 24 @5015 has 53 MA's), (29, 5027), (42, 5177), (46, 5237), (72, 5408),

Gene: Fushigi_75 Start: 45357, Stop: 44953, Start Num: 25
Candidate Starts for Fushigi_75:
(Start: 25 @45357 has 4 MA's), (46, 45159), (52, 45108), (60, 45084), (64, 45057), (73, 44976),

Gene: Greep_46 Start: 36317, Stop: 35883, Start Num: 24
Candidate Starts for Greep_46:
(11, 36389), (Start: 24 @36317 has 53 MA's), (29, 36305), (42, 36155), (46, 36095),

Gene: Grungle_6 Start: 1770, Stop: 2210, Start Num: 24
Candidate Starts for Grungle_6:
(Start: 24 @1770 has 53 MA's), (29, 1782), (39, 1902), (46, 1992), (49, 2034), (67, 2130), (70, 2154),

Gene: Halldule_6 Start: 1766, Stop: 2206, Start Num: 24

Candidate Starts for Halldule_6:
(Start: 24 @1766 has 53 MA's), (29, 1778), (39, 1898), (46, 1988), (47, 1991), (49, 2030), (67, 2126), (70, 2150),

Gene: Harley_78 Start: 47547, Stop: 47975, Start Num: 24
Candidate Starts for Harley_78:
(Start: 24 @47547 has 53 MA's), (41, 47694), (46, 47766), (54, 47844), (57, 47856), (58, 47859),

Gene: Harley_88 Start: 50437, Stop: 50829, Start Num: 25
Candidate Starts for Harley_88:
(1, 50143), (2, 50176), (4, 50263), (6, 50272), (8, 50296), (9, 50314), (15, 50407), (17, 50416), (Start: 25 @50437 has 4 MA's), (46, 50623), (50, 50665),

Gene: Highbury_43 Start: 34897, Stop: 34421, Start Num: 24
Candidate Starts for Highbury_43:
(11, 34969), (Start: 24 @34897 has 53 MA's), (29, 34885), (42, 34735), (46, 34675), (52, 34603), (56, 34579), (69, 34507), (73, 34444),

Gene: Holt_45 Start: 35325, Stop: 34888, Start Num: 24
Candidate Starts for Holt_45:
(11, 35397), (Start: 24 @35325 has 53 MA's), (29, 35313), (42, 35163), (46, 35103), (72, 34932),

Gene: HufflyPuff_44 Start: 35981, Stop: 35547, Start Num: 24
Candidate Starts for HufflyPuff_44:
(11, 36053), (Start: 24 @35981 has 53 MA's), (29, 35969), (42, 35819), (46, 35759),

Gene: IkeLoa_6 Start: 2612, Stop: 3052, Start Num: 24
Candidate Starts for IkeLoa_6:
(Start: 24 @2612 has 53 MA's), (29, 2624), (39, 2744), (46, 2834), (49, 2876), (67, 2972), (70, 2996),

Gene: Jorgensen_64 Start: 41112, Stop: 40717, Start Num: 32
Candidate Starts for Jorgensen_64:
(7, 41313), (19, 41169), (20, 41166), (Start: 32 @41112 has 1 MA's), (34, 41100), (46, 40944), (60, 40842),

Gene: KashFlow_71 Start: 46755, Stop: 46327, Start Num: 24
Candidate Starts for KashFlow_71:
(Start: 24 @46755 has 53 MA's), (29, 46740), (36, 46686), (42, 46593), (46, 46533), (73, 46356),

Gene: Klein_78 Start: 51350, Stop: 50925, Start Num: 26
Candidate Starts for Klein_78:
(Start: 26 @51350 has 10 MA's), (29, 51338), (36, 51284), (42, 51191), (46, 51131), (73, 50954),

Gene: Koguma_6 Start: 1766, Stop: 2206, Start Num: 24
Candidate Starts for Koguma_6:
(Start: 24 @1766 has 53 MA's), (29, 1778), (39, 1898), (46, 1988), (49, 2030), (67, 2126), (70, 2150),

Gene: Kostya_43 Start: 35472, Stop: 35038, Start Num: 24
Candidate Starts for Kostya_43:
(11, 35544), (Start: 24 @35472 has 53 MA's), (29, 35460), (42, 35310), (46, 35250),

Gene: Kykar_79 Start: 47679, Stop: 47278, Start Num: 25
Candidate Starts for Kykar_79:

(Start: 25 @47679 has 4 MA's), (29, 47667), (45, 47508), (46, 47493), (60, 47412), (64, 47385),

Gene: LRRHood_6 Start: 2751, Stop: 3191, Start Num: 24
Candidate Starts for LRRHood_6:
(Start: 24 @2751 has 53 MA's), (29, 2763), (39, 2883), (46, 2973), (49, 3015), (67, 3111), (70, 3135),

Gene: Lethe_6 Start: 1613, Stop: 2053, Start Num: 24
Candidate Starts for Lethe_6:
(Start: 24 @1613 has 53 MA's), (29, 1625), (39, 1745), (46, 1835), (49, 1877), (67, 1973), (70, 1997),

Gene: Lilbit_8 Start: 2581, Stop: 2958, Start Num: 31
Candidate Starts for Lilbit_8:
(Start: 31 @2581 has 11 MA's), (34, 2593), (46, 2749), (59, 2827), (62, 2839), (63, 2842),

Gene: Llij_73 Start: 45475, Stop: 45903, Start Num: 24
Candidate Starts for Llij_73:
(Start: 24 @45475 has 53 MA's), (29, 45490), (36, 45544), (42, 45637), (46, 45697), (73, 45874),

Gene: Lorde_77 Start: 44762, Stop: 45190, Start Num: 24
Candidate Starts for Lorde_77:
(Start: 24 @44762 has 53 MA's), (29, 44777), (36, 44831), (42, 44924), (46, 44984), (73, 45161),

Gene: Lucia_77 Start: 45610, Stop: 46038, Start Num: 24
Candidate Starts for Lucia_77:
(Start: 24 @45610 has 53 MA's), (29, 45625), (36, 45679), (42, 45772), (46, 45832), (73, 46009),

Gene: Lukilu_6 Start: 2765, Stop: 3205, Start Num: 24
Candidate Starts for Lukilu_6:
(Start: 24 @2765 has 53 MA's), (29, 2777), (39, 2897), (46, 2987), (49, 3029), (67, 3125), (70, 3149),

Gene: MiaZeal_80 Start: 49238, Stop: 48840, Start Num: 26
Candidate Starts for MiaZeal_80:
(Start: 26 @49238 has 10 MA's), (29, 49226), (46, 49070), (54, 48986), (56, 48980), (57, 48977), (70, 48893),

Gene: Misfit_44 Start: 36046, Stop: 35612, Start Num: 24
Candidate Starts for Misfit_44:
(11, 36118), (Start: 24 @36046 has 53 MA's), (29, 36034), (42, 35884), (46, 35824),

Gene: Moby_10 Start: 2543, Stop: 2995, Start Num: 24
Candidate Starts for Moby_10:
(Start: 24 @2543 has 53 MA's), (29, 2558), (43, 2708), (46, 2765), (54, 2849), (56, 2855), (57, 2858), (70, 2942),

Gene: Moiqah_10 Start: 2543, Stop: 2995, Start Num: 24
Candidate Starts for Moiqah_10:
(Start: 24 @2543 has 53 MA's), (29, 2558), (43, 2708), (46, 2765), (54, 2849), (56, 2855), (57, 2858), (70, 2942),

Gene: Ms6_78 Start: 44647, Stop: 45045, Start Num: 36
Candidate Starts for Ms6_78:
(Start: 26 @44581 has 10 MA's), (29, 44593), (36, 44647), (42, 44740), (55, 44887), (56, 44893), (63, 44917), (73, 45016),

Gene: Murica_44 Start: 35981, Stop: 35547, Start Num: 24
Candidate Starts for Murica_44:
(11, 36053), (Start: 24 @35981 has 53 MA's), (29, 35969), (42, 35819), (46, 35759),

Gene: Nimrod_45 Start: 36239, Stop: 35805, Start Num: 24
Candidate Starts for Nimrod_45:
(11, 36311), (Start: 24 @36239 has 53 MA's), (29, 36227), (42, 36077), (46, 36017),

Gene: Ovechkin_85 Start: 49845, Stop: 50309, Start Num: 14
Candidate Starts for Ovechkin_85:
(Start: 14 @49845 has 1 MA's), (Start: 24 @49878 has 53 MA's), (41, 50022), (46, 50094), (51, 50157),

Gene: PMC_74 Start: 46932, Stop: 47360, Start Num: 24
Candidate Starts for PMC_74:
(Start: 24 @46932 has 53 MA's), (29, 46947), (36, 47001), (42, 47094), (46, 47154), (73, 47331),

Gene: Palpatine_45 Start: 36011, Stop: 35577, Start Num: 24
Candidate Starts for Palpatine_45:
(11, 36083), (Start: 24 @36011 has 53 MA's), (29, 35999), (42, 35849), (46, 35789),

Gene: Pat3_42 Start: 34357, Stop: 33938, Start Num: 26
Candidate Starts for Pat3_42:
(18, 34378), (Start: 23 @34366 has 1 MA's), (Start: 26 @34357 has 10 MA's), (29, 34345), (46, 34171),
(60, 34069),

Gene: Petra64142_47 Start: 36475, Stop: 36041, Start Num: 24
Candidate Starts for Petra64142_47:
(11, 36547), (Start: 24 @36475 has 53 MA's), (29, 36463), (42, 36313), (46, 36253),

Gene: Phalconet_76 Start: 47337, Stop: 47762, Start Num: 24
Candidate Starts for Phalconet_76:
(Start: 24 @47337 has 53 MA's), (29, 47352), (37, 47436), (40, 47454), (46, 47532), (54, 47616), (56,
47622), (57, 47625), (70, 47709),

Gene: PhatBacter_45 Start: 36025, Stop: 35591, Start Num: 24
Candidate Starts for PhatBacter_45:
(11, 36097), (Start: 24 @36025 has 53 MA's), (29, 36013), (42, 35863), (46, 35803),

Gene: Phatniss_74 Start: 46570, Stop: 46998, Start Num: 24
Candidate Starts for Phatniss_74:
(Start: 24 @46570 has 53 MA's), (29, 46585), (36, 46639), (42, 46732), (46, 46792), (73, 46969),

Gene: Phaux_44 Start: 36023, Stop: 35589, Start Num: 24
Candidate Starts for Phaux_44:
(11, 36095), (Start: 24 @36023 has 53 MA's), (29, 36011), (42, 35861), (46, 35801),

Gene: Phox_6 Start: 2748, Stop: 3188, Start Num: 24
Candidate Starts for Phox_6:
(Start: 24 @2748 has 53 MA's), (29, 2760), (39, 2880), (46, 2970), (49, 3012), (67, 3108), (70, 3132),

Gene: Policronamos_45 Start: 36023, Stop: 35589, Start Num: 24
Candidate Starts for Policronamos_45:

(11, 36095), (Start: 24 @36023 has 53 MA's), (29, 36011), (42, 35861), (46, 35801),

Gene: Porcelain_79 Start: 49238, Stop: 48840, Start Num: 26
Candidate Starts for Porcelain_79:
(Start: 26 @49238 has 10 MA's), (29, 49226), (46, 49070), (54, 48986), (56, 48980), (57, 48977), (70, 48893),

Gene: Pringar_7 Start: 2135, Stop: 2512, Start Num: 31
Candidate Starts for Pringar_7:
(Start: 31 @2135 has 11 MA's), (34, 2147), (46, 2303), (59, 2381), (62, 2393), (63, 2396),

Gene: Quallification_43 Start: 35661, Stop: 35215, Start Num: 24
Candidate Starts for Quallification_43:
(11, 35733), (Start: 24 @35661 has 53 MA's), (29, 35649), (42, 35499), (46, 35439), (48, 35409), (53, 35370), (54, 35367),

Gene: Rockne_78 Start: 46944, Stop: 47372, Start Num: 24
Candidate Starts for Rockne_78:
(Start: 24 @46944 has 53 MA's), (29, 46959), (36, 47013), (42, 47106), (46, 47166), (73, 47343),

Gene: Ronan_6 Start: 1749, Stop: 2189, Start Num: 24
Candidate Starts for Ronan_6:
(Start: 24 @1749 has 53 MA's), (29, 1761), (39, 1881), (46, 1971), (49, 2013), (67, 2109), (70, 2133),

Gene: Saints25_43 Start: 34897, Stop: 34421, Start Num: 24
Candidate Starts for Saints25_43:
(11, 34969), (Start: 24 @34897 has 53 MA's), (29, 34885), (42, 34735), (46, 34675), (52, 34603), (56, 34579), (69, 34507), (73, 34444),

Gene: Sarma624_77 Start: 44943, Stop: 45320, Start Num: 31
Candidate Starts for Sarma624_77:
(Start: 31 @44943 has 11 MA's), (34, 44958), (46, 45114), (50, 45156), (65, 45222), (66, 45225), (73, 45294),

Gene: Shaqnato_6 Start: 1766, Stop: 2206, Start Num: 24
Candidate Starts for Shaqnato_6:
(Start: 24 @1766 has 53 MA's), (29, 1778), (39, 1898), (46, 1988), (49, 2030), (67, 2126), (70, 2150),

Gene: SirDuracell_42 Start: 34192, Stop: 33677, Start Num: 10
Candidate Starts for SirDuracell_42:
(Start: 10 @34192 has 1 MA's), (22, 34120), (27, 34108), (42, 33952), (46, 33892), (72, 33721), (73, 33700),

Gene: Sprinklers_6 Start: 1749, Stop: 2189, Start Num: 24
Candidate Starts for Sprinklers_6:
(Start: 24 @1749 has 53 MA's), (29, 1761), (39, 1881), (46, 1971), (49, 2013), (67, 2109), (70, 2133),

Gene: Squint_80 Start: 49357, Stop: 48959, Start Num: 26
Candidate Starts for Squint_80:
(Start: 26 @49357 has 10 MA's), (29, 49345), (46, 49189), (54, 49105), (56, 49099), (57, 49096), (70, 49012),

Gene: Sunshine924_66 Start: 41648, Stop: 41211, Start Num: 24

Candidate Starts for Sunshine924_66:
(3, 41849), (12, 41705), (13, 41702), (Start: 24 @41648 has 53 MA's), (29, 41636), (42, 41486), (46, 41426), (72, 41255),

Gene: Tchotchke_73 Start: 46858, Stop: 47286, Start Num: 24
Candidate Starts for Tchotchke_73:
(Start: 24 @46858 has 53 MA's), (29, 46873), (36, 46927), (42, 47020), (46, 47080), (73, 47257),

Gene: Terminus_44 Start: 36046, Stop: 35612, Start Num: 24
Candidate Starts for Terminus_44:
(11, 36118), (Start: 24 @36046 has 53 MA's), (29, 36034), (42, 35884), (46, 35824),

Gene: Topiatin_85 Start: 49548, Stop: 49946, Start Num: 25
Candidate Starts for Topiatin_85:
(Start: 25 @49548 has 4 MA's), (46, 49734),

Gene: UncleRicky_76 Start: 46818, Stop: 47246, Start Num: 24
Candidate Starts for UncleRicky_76:
(Start: 24 @46818 has 53 MA's), (29, 46833), (36, 46887), (42, 46980), (46, 47040), (73, 47217),

Gene: Velveteen_73 Start: 44943, Stop: 45320, Start Num: 31
Candidate Starts for Velveteen_73:
(Start: 31 @44943 has 11 MA's), (34, 44958), (46, 45114), (50, 45156), (65, 45222), (66, 45225), (73, 45294),

Gene: Wanda_82 Start: 51659, Stop: 51234, Start Num: 26
Candidate Starts for Wanda_82:
(Start: 26 @51659 has 10 MA's), (29, 51647), (36, 51593), (42, 51500), (46, 51440), (73, 51263),

Gene: Whatsapiecost_73 Start: 43853, Stop: 44332, Start Num: 24
Candidate Starts for Whatsapiecost_73:
(Start: 24 @43853 has 53 MA's), (29, 43868), (42, 44018), (43, 44021), (46, 44078), (52, 44150), (56, 44174), (69, 44246), (73, 44309),

Gene: Yassified_6 Start: 1770, Stop: 2210, Start Num: 24
Candidate Starts for Yassified_6:
(Start: 24 @1770 has 53 MA's), (29, 1782), (39, 1902), (46, 1992), (49, 2034), (67, 2130), (70, 2154),

Gene: xkcd_46 Start: 36166, Stop: 35732, Start Num: 24
Candidate Starts for xkcd_46:
(11, 36238), (Start: 24 @36166 has 53 MA's), (29, 36154), (42, 36004), (46, 35944),