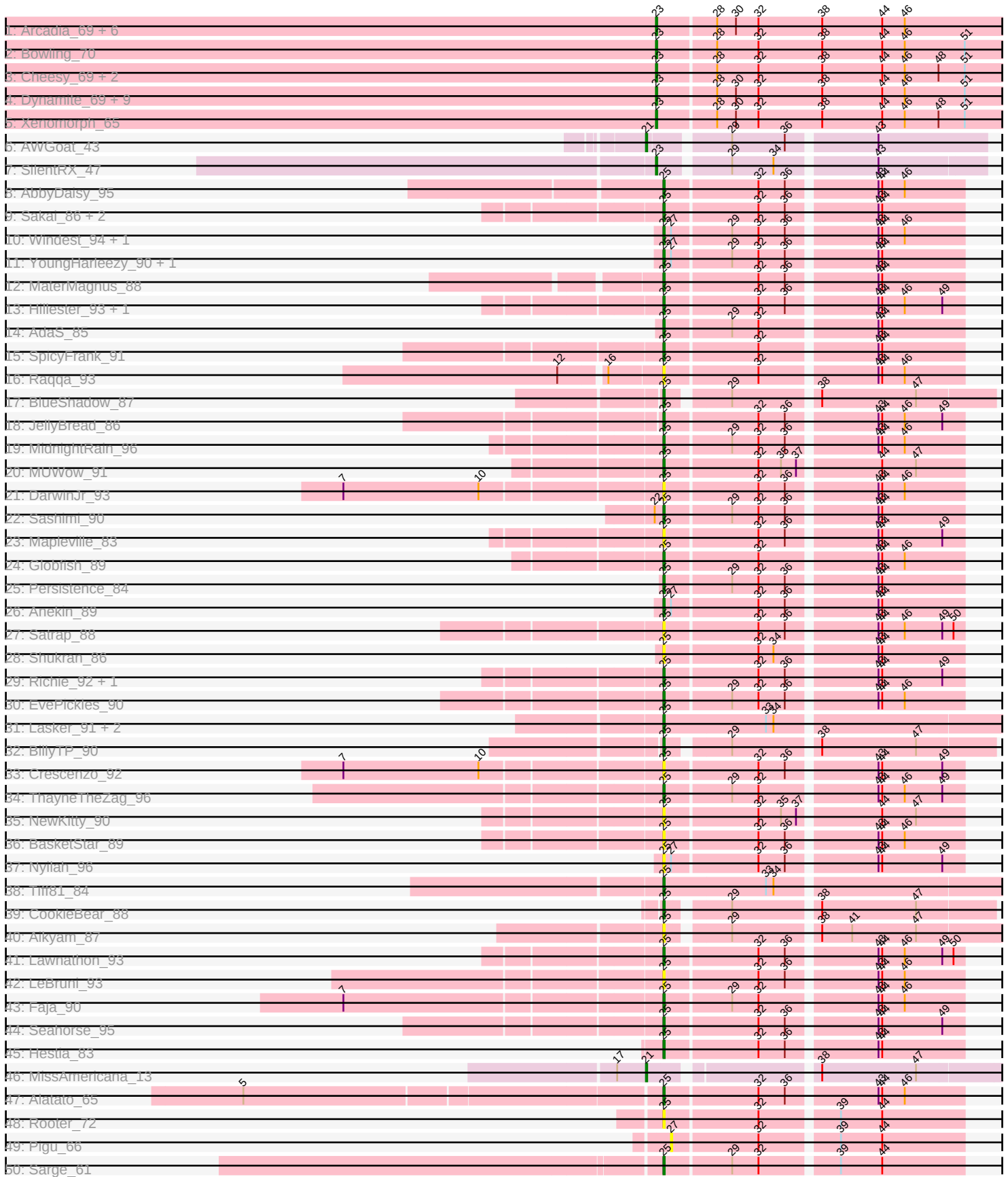
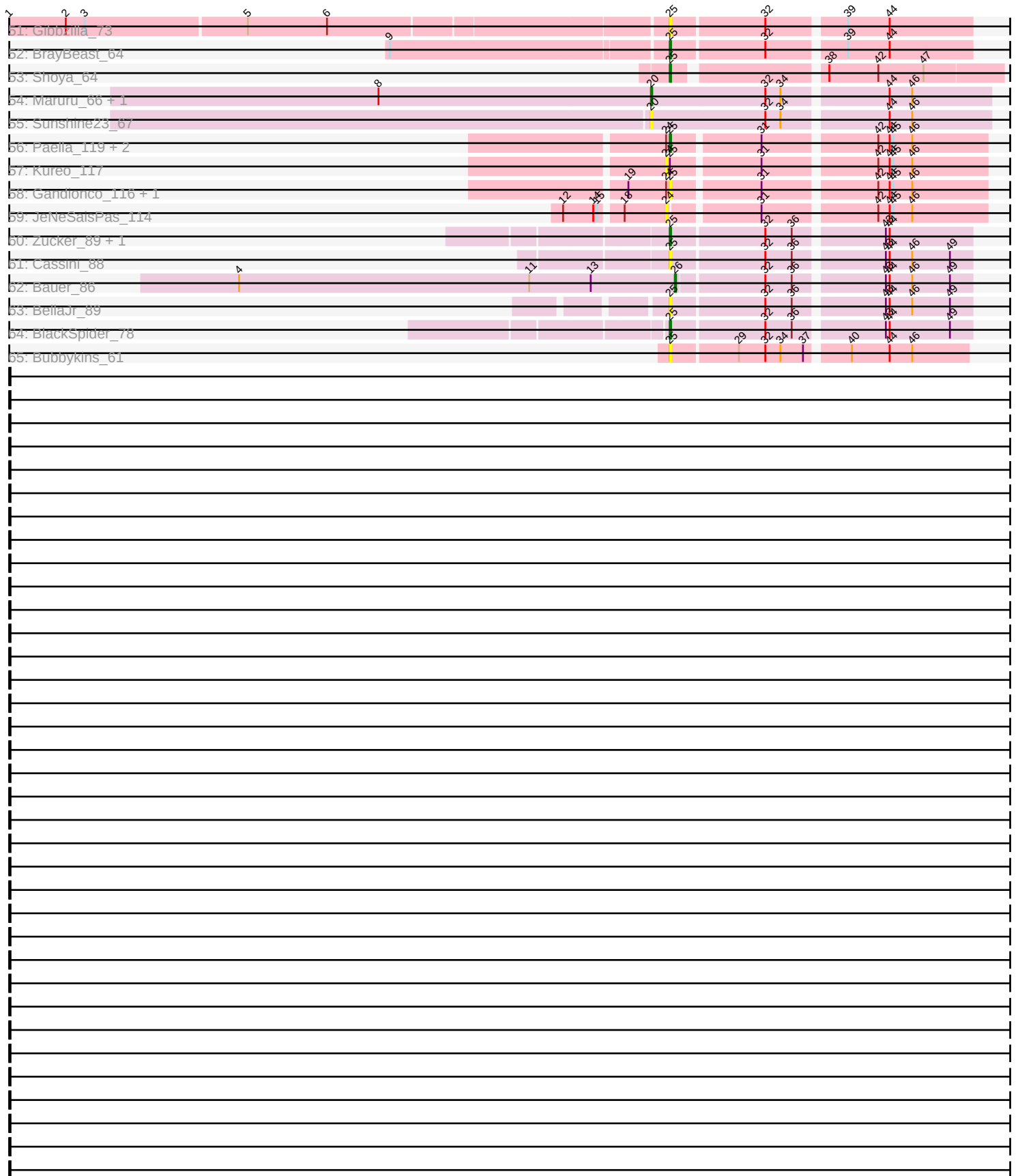




Pham 274057



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 274057 Report

This analysis was run 02/07/26 on database version 634.

Pham number 274057 has 95 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Arcadia_69, Kardesai_69, Nason_69, Elsa_69, Mooshroom_70, KeaneyLin_65, GoCrazy_66
- Track 2 : Bowling_70
- Track 3 : Cheesy_69, Tribby_72, Correa_67
- Track 4 : Dynamite_69, YoshiYama_70, JEGGS_68, NapoleonB_70, Heisenberger_68, Circum_70, Benllo_69, Mudcat_65, BenitoAntonio_67, Hankly_68
- Track 5 : Xenomorph_65
- Track 6 : AWGoat_43
- Track 7 : SilentRX_47
- Track 8 : AbbyDaisy_95
- Track 9 : Sakai_86, Auxilium_87, Gorpy_87
- Track 10 : Windest_94, Isolde_90
- Track 11 : YoungHarleezy_90, Bhageatrice_93
- Track 12 : MaterMagnus_88
- Track 13 : Hillester_93, RadFad_94
- Track 14 : AdaS_85
- Track 15 : SpicyFrank_91
- Track 16 : Raqqa_93
- Track 17 : BlueShadow_87
- Track 18 : JellyBread_86
- Track 19 : MidnightRain_96
- Track 20 : MUWow_91
- Track 21 : DarwinJr_93
- Track 22 : Sashimi_90
- Track 23 : Mapleville_83
- Track 24 : Globfish_89
- Track 25 : Persistence_84
- Track 26 : Anekin_89
- Track 27 : Satrap_88
- Track 28 : Shukran_86
- Track 29 : Richie_92, BenchScraper_89
- Track 30 : EvePickles_90
- Track 31 : Lasker_91, Vopal_90, Raphaella_89
- Track 32 : BillyTP_90
- Track 33 : Crescenzo_92
- Track 34 : ThayneTheZag_96
- Track 35 : NewKitty_90

- Track 36 : BasketStar_89
- Track 37 : Nyilah_96
- Track 38 : Tiff81_84
- Track 39 : CookieBear_88
- Track 40 : Aikyam_87
- Track 41 : Lawnathon_93
- Track 42 : LeBruni_93
- Track 43 : Faja_90
- Track 44 : Seahorse_95
- Track 45 : Hestia_83
- Track 46 : MissAmericana_13
- Track 47 : Alatato_65
- Track 48 : Rooter_72
- Track 49 : Pigu_66
- Track 50 : Sarge_61
- Track 51 : Gibbzilla_73
- Track 52 : BrayBeast_64
- Track 53 : Shoya_64
- Track 54 : Maruru_66, Sonali_66
- Track 55 : Sunshine23_67
- Track 56 : Paella_119, Qui_119, Elver_119
- Track 57 : Kureo_117
- Track 58 : Gandionco_116, Marianna39_117
- Track 59 : JeNeSaisPas_114
- Track 60 : Zucker_89, Phrank15_95
- Track 61 : Cassini_88
- Track 62 : Bauer_86
- Track 63 : BellaJr_89
- Track 64 : BlackSpider_78
- Track 65 : Bubbykins_61

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

The start number called the most often in the published annotations is 25, it was called in 43 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AbbyDaisy_95, AdaS_85, Aikyam_87, Alatato_65, Anekin_89, Auxilium_87, BasketStar_89, BellaJr_89, BenchScraper_89, Bhageatrice_93, BillyTP_90, BlackSpider_78, BlueShadow_87, BrayBeast_64, Bubbykins_61, Cassini_88, CookieBear_88, Crescenzo_92, DarwinJr_93, Elver_119, EvePickles_90, Faja_90, Gandionco_116, Gibbzilla_73, Globfish_89, Gorpy_87, Hestia_83, Hillester_93, Isolde_90, JellyBread_86, Lasker_91, Lawnathon_93, LeBruni_93, MUWow_91, Mapleville_83, Marianna39_117, MaterMagnus_88, MidnightRain_96, NewKitty_90, Nyilah_96, Paella_119, Persistence_84, Phrank15_95, Qui_119, RadFad_94, Raphaella_89, Raqqa_93, Richie_92, Rooter_72, Sakai_86, Sarge_61, Sashimi_90, Satrap_88, Seahorse_95, Shoya_64, Shukran_86, SpicyFrank_91, ThayneTheZag_96, Tiff81_84, Vopal_90, Windest_94, YoungHarleezy_90, Zucker_89,

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

- Kureo_117,

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

- AWGoat_43, Arcadia_69, Bauer_86, BenitoAntonio_67, Benllo_69, Bowling_70, Cheesy_69, Circum_70, Correa_67, Dynamite_69, Elsa_69, GoCrazy_66, Hankly_68, Heisenberger_68, JEGGS_68, JeNeSaisPas_114, Kardesai_69, KeaneyLin_65, Maruru_66, MissAmericana_13, Mooshroom_70, Mudcat_65, NapoleonB_70, Nason_69, Pigu_66, SilentRX_47, Sonali_66, Sunshine23_67, Tribby_72, Xenomorph_65, YoshiYama_70,

Summary by start number:

Start 20:

- Found in 3 of 95 (3.2%) of genes in pham
- Manual Annotations of this start: 2 of 69
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Maruru_66 (FG), Sonali_66 (FG), Sunshine23_67 (FG),

Start 21:

- Found in 2 of 95 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 69
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_43 (AP4), MissAmericana_13 (EM2),

Start 23:

- Found in 23 of 95 (24.2%) of genes in pham
- Manual Annotations of this start: 21 of 69
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arcadia_69 (AM), BenitoAntonio_67 (AM), Benllo_69 (AM), Bowling_70 (AM), Cheesy_69 (AM), Circum_70 (AM), Correa_67 (AM), Dynamite_69 (AM), Elsa_69 (AM), GoCrazy_66 (AM), Hankly_68 (AM), Heisenberger_68 (AM), JEGGS_68 (AM), Kardesai_69 (AM), KeaneyLin_65 (AM), Mooshroom_70 (AM), Mudcat_65 (AM), NapoleonB_70 (AM), Nason_69 (AM), SilentRX_47 (AP4), Tribby_72 (AM), Xenomorph_65 (AM), YoshiYama_70 (AM),

Start 24:

- Found in 7 of 95 (7.4%) of genes in pham
- No Manual Annotations of this start.
- Called 28.6% of time when present
- Phage (with cluster) where this start called: JeNeSaisPas_114 (FK), Kureo_117 (FK),

Start 25:

- Found in 64 of 95 (67.4%) of genes in pham
- Manual Annotations of this start: 43 of 69
- Called 98.4% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_95 (AY), AdaS_85 (AY), Aikyam_87 (AY), Alatato_65 (FB), Anekin_89 (AY), Auxilium_87 (AY), BasketStar_89 (AY), BellaJr_89 (FN), BenchScraper_89 (AY), Bhageatrice_93 (AY), BillyTP_90 (AY), BlackSpider_78 (FN), BlueShadow_87 (AY), BrayBeast_64 (FB), Bubbykins_61

(UNK), Cassini_88 (FN), CookieBear_88 (AY), Crescenzo_92 (AY), DarwinJr_93 (AY), Elver_119 (FK), EvePickles_90 (AY), Faja_90 (AY), Gandionco_116 (FK), Gibbzilla_73 (FB), Globfish_89 (AY), Gorpy_87 (AY), Hestia_83 (AY), Hillester_93 (AY), Isolde_90 (AY), JellyBread_86 (AY), Lasker_91 (AY), Lawnathon_93 (AY), LeBruni_93 (AY), MUWow_91 (AY), Mapleville_83 (AY), Marianna39_117 (FK), MaterMagnus_88 (AY), MidnightRain_96 (AY), NewKitty_90 (AY), Nyilah_96 (AY), Paella_119 (FK), Persistence_84 (AY), Phrank15_95 (AY), Qui_119 (FK), RadFad_94 (AY), Raphaella_89 (AY), Raqqa_93 (AY), Richie_92 (AY), Rooter_72 (FB), Sakai_86 (AY), Sarge_61 (FB), Sashimi_90 (AY), Satrap_88 (AY), Seahorse_95 (AY), Shoya_64 (FB), Shukran_86 (AY), SpicyFrank_91 (AY), ThayneTheZag_96 (AY), Tiff81_84 (AY), Vopal_90 (AY), Windest_94 (AY), YoungHarleezy_90 (AY), Zucker_89 (FN),

Start 26:

- Found in 1 of 95 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 69
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bauer_86 (FN),

Start 27:

- Found in 7 of 95 (7.4%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Pigu_66 (FB),

Summary by clusters:

There are 9 clusters represented in this pham: FK, EM2, AM, AP4, FB, FG, AY, UNK, FN,

Info for manual annotations of cluster AM:

- Start number 23 was manually annotated 20 times for cluster AM.

Info for manual annotations of cluster AP4:

- Start number 21 was manually annotated 1 time for cluster AP4.
- Start number 23 was manually annotated 1 time for cluster AP4.

Info for manual annotations of cluster AY:

- Start number 25 was manually annotated 34 times for cluster AY.

Info for manual annotations of cluster EM2:

- Start number 21 was manually annotated 1 time for cluster EM2.

Info for manual annotations of cluster FB:

- Start number 25 was manually annotated 4 times for cluster FB.

Info for manual annotations of cluster FG:

- Start number 20 was manually annotated 2 times for cluster FG.

Info for manual annotations of cluster FK:

- Start number 25 was manually annotated 3 times for cluster FK.

Info for manual annotations of cluster FN:

- Start number 25 was manually annotated 2 times for cluster FN.
- Start number 26 was manually annotated 1 time for cluster FN.

Gene Information:

Gene: AWGoat_43 Start: 36435, Stop: 36184, Start Num: 21

Candidate Starts for AWGoat_43:

(Start: 21 @36435 has 2 MA's), (29, 36378), (36, 36336), (43, 36270),

Gene: AbbyDaisy_95 Start: 52716, Stop: 52943, Start Num: 25

Candidate Starts for AbbyDaisy_95:

(Start: 25 @52716 has 43 MA's), (32, 52788), (36, 52809), (43, 52875), (44, 52878), (46, 52896),

Gene: AdaS_85 Start: 47194, Stop: 47421, Start Num: 25

Candidate Starts for AdaS_85:

(Start: 25 @47194 has 43 MA's), (29, 47245), (32, 47266), (43, 47353), (44, 47356),

Gene: Aikyam_87 Start: 47697, Stop: 47942, Start Num: 25

Candidate Starts for Aikyam_87:

(Start: 25 @47697 has 43 MA's), (29, 47739), (38, 47802), (41, 47826), (47, 47877),

Gene: Alatato_65 Start: 36428, Stop: 36655, Start Num: 25

Candidate Starts for Alatato_65:

(5, 36107), (Start: 25 @36428 has 43 MA's), (32, 36500), (36, 36521), (43, 36587), (44, 36590), (46, 36608),

Gene: Anekin_89 Start: 49928, Stop: 50155, Start Num: 25

Candidate Starts for Anekin_89:

(Start: 25 @49928 has 43 MA's), (27, 49934), (32, 50000), (36, 50021), (43, 50087), (44, 50090),

Gene: Arcadia_69 Start: 43472, Stop: 43750, Start Num: 23

Candidate Starts for Arcadia_69:

(Start: 23 @43472 has 21 MA's), (28, 43517), (30, 43532), (32, 43550), (38, 43601), (44, 43649), (46, 43667),

Gene: Auxilium_87 Start: 46996, Stop: 47223, Start Num: 25

Candidate Starts for Auxilium_87:

(Start: 25 @46996 has 43 MA's), (32, 47068), (36, 47089), (43, 47155), (44, 47158),

Gene: BasketStar_89 Start: 49542, Stop: 49769, Start Num: 25

Candidate Starts for BasketStar_89:

(Start: 25 @49542 has 43 MA's), (32, 49614), (36, 49635), (43, 49701), (44, 49704), (46, 49722),

Gene: Bauer_86 Start: 46271, Stop: 46492, Start Num: 26

Candidate Starts for Bauer_86:

(4, 45926), (11, 46157), (13, 46205), (Start: 26 @46271 has 1 MA's), (32, 46337), (36, 46358), (43, 46424), (44, 46427), (46, 46445), (49, 46475),

Gene: BellaJr_89 Start: 49728, Stop: 49955, Start Num: 25

Candidate Starts for BellaJr_89:

(Start: 25 @49728 has 43 MA's), (32, 49800), (36, 49821), (43, 49887), (44, 49890), (46, 49908), (49, 49938),

Gene: BenchScraper_89 Start: 47947, Stop: 48174, Start Num: 25

Candidate Starts for BenchScraper_89:

(Start: 25 @47947 has 43 MA's), (32, 48019), (36, 48040), (43, 48106), (44, 48109), (49, 48157),

Gene: BenitoAntonio_67 Start: 42507, Stop: 42785, Start Num: 23

Candidate Starts for BenitoAntonio_67:

(Start: 23 @42507 has 21 MA's), (28, 42552), (30, 42567), (32, 42585), (38, 42636), (44, 42684), (46, 42702), (51, 42750),

Gene: Benllo_69 Start: 43185, Stop: 43463, Start Num: 23

Candidate Starts for Benllo_69:

(Start: 23 @43185 has 21 MA's), (28, 43230), (30, 43245), (32, 43263), (38, 43314), (44, 43362), (46, 43380), (51, 43428),

Gene: Bhageatrice_93 Start: 52222, Stop: 52449, Start Num: 25

Candidate Starts for Bhageatrice_93:

(Start: 25 @52222 has 43 MA's), (27, 52228), (29, 52273), (32, 52294), (36, 52315), (43, 52381), (44, 52384),

Gene: BillyTP_90 Start: 50050, Stop: 50289, Start Num: 25

Candidate Starts for BillyTP_90:

(Start: 25 @50050 has 43 MA's), (29, 50092), (38, 50155), (47, 50230),

Gene: BlackSpider_78 Start: 47304, Stop: 47531, Start Num: 25

Candidate Starts for BlackSpider_78:

(Start: 25 @47304 has 43 MA's), (32, 47376), (36, 47397), (43, 47463), (44, 47466), (49, 47514),

Gene: BlueShadow_87 Start: 49643, Stop: 49882, Start Num: 25

Candidate Starts for BlueShadow_87:

(Start: 25 @49643 has 43 MA's), (29, 49685), (38, 49748), (47, 49823),

Gene: Bowling_70 Start: 43461, Stop: 43739, Start Num: 23

Candidate Starts for Bowling_70:

(Start: 23 @43461 has 21 MA's), (28, 43506), (32, 43539), (38, 43590), (44, 43638), (46, 43656), (51, 43704),

Gene: BrayBeast_64 Start: 36058, Stop: 36285, Start Num: 25

Candidate Starts for BrayBeast_64:

(9, 35845), (Start: 25 @36058 has 43 MA's), (32, 36130), (39, 36187), (44, 36220),

Gene: Bubbykins_61 Start: 45574, Stop: 45798, Start Num: 25

Candidate Starts for Bubbykins_61:

(Start: 25 @45574 has 43 MA's), (29, 45625), (32, 45646), (34, 45658), (37, 45676), (40, 45706), (44, 45736), (46, 45754),

Gene: Cassini_88 Start: 49322, Stop: 49549, Start Num: 25

Candidate Starts for Cassini_88:

(Start: 25 @49322 has 43 MA's), (32, 49394), (36, 49415), (43, 49481), (44, 49484), (46, 49502), (49, 49532),

Gene: Cheesy_69 Start: 42699, Stop: 42977, Start Num: 23

Candidate Starts for Cheesy_69:

(Start: 23 @42699 has 21 MA's), (28, 42744), (32, 42777), (38, 42828), (44, 42876), (46, 42894), (48, 42921), (51, 42942),

Gene: Circum_70 Start: 43275, Stop: 43553, Start Num: 23

Candidate Starts for Circum_70:

(Start: 23 @43275 has 21 MA's), (28, 43320), (30, 43335), (32, 43353), (38, 43404), (44, 43452), (46, 43470), (51, 43518),

Gene: CookieBear_88 Start: 49258, Stop: 49497, Start Num: 25

Candidate Starts for CookieBear_88:

(Start: 25 @49258 has 43 MA's), (29, 49300), (38, 49363), (47, 49438),

Gene: Correa_67 Start: 42273, Stop: 42551, Start Num: 23

Candidate Starts for Correa_67:

(Start: 23 @42273 has 21 MA's), (28, 42318), (32, 42351), (38, 42402), (44, 42450), (46, 42468), (48, 42495), (51, 42516),

Gene: Crescenzo_92 Start: 50951, Stop: 51178, Start Num: 25

Candidate Starts for Crescenzo_92:

(7, 50708), (10, 50816), (Start: 25 @50951 has 43 MA's), (32, 51023), (36, 51044), (43, 51110), (44, 51113), (49, 51161),

Gene: DarwinJr_93 Start: 51065, Stop: 51292, Start Num: 25

Candidate Starts for DarwinJr_93:

(7, 50822), (10, 50930), (Start: 25 @51065 has 43 MA's), (32, 51137), (36, 51158), (43, 51224), (44, 51227), (46, 51245),

Gene: Dynamite_69 Start: 43288, Stop: 43566, Start Num: 23

Candidate Starts for Dynamite_69:

(Start: 23 @43288 has 21 MA's), (28, 43333), (30, 43348), (32, 43366), (38, 43417), (44, 43465), (46, 43483), (51, 43531),

Gene: Elsa_69 Start: 43472, Stop: 43750, Start Num: 23

Candidate Starts for Elsa_69:

(Start: 23 @43472 has 21 MA's), (28, 43517), (30, 43532), (32, 43550), (38, 43601), (44, 43649), (46, 43667),

Gene: Elver_119 Start: 65771, Stop: 66007, Start Num: 25

Candidate Starts for Elver_119:

(24, 65768), (Start: 25 @65771 has 43 MA's), (31, 65837), (42, 65921), (44, 65930), (45, 65933), (46, 65948),

Gene: EvePickles_90 Start: 50663, Stop: 50890, Start Num: 25

Candidate Starts for EvePickles_90:

(Start: 25 @50663 has 43 MA's), (29, 50714), (32, 50735), (36, 50756), (43, 50822), (44, 50825), (46, 50843),

Gene: Faja_90 Start: 49924, Stop: 50151, Start Num: 25

Candidate Starts for Faja_90:

(7, 49681), (Start: 25 @49924 has 43 MA's), (29, 49975), (32, 49996), (43, 50083), (44, 50086), (46, 50104),

Gene: Gandionco_116 Start: 64583, Stop: 64819, Start Num: 25

Candidate Starts for Gandionco_116:

(19, 64550), (24, 64580), (Start: 25 @64583 has 43 MA's), (31, 64649), (42, 64733), (44, 64742), (45, 64745), (46, 64760),

Gene: Gibbzilla_73 Start: 36826, Stop: 37053, Start Num: 25

Candidate Starts for Gibbzilla_73:

(1, 36319), (2, 36364), (3, 36379), (5, 36505), (6, 36568), (Start: 25 @36826 has 43 MA's), (32, 36898), (39, 36955), (44, 36988),

Gene: Globfish_89 Start: 48667, Stop: 48894, Start Num: 25

Candidate Starts for Globfish_89:

(Start: 25 @48667 has 43 MA's), (32, 48739), (43, 48826), (44, 48829), (46, 48847),

Gene: GoCrazy_66 Start: 42732, Stop: 43010, Start Num: 23

Candidate Starts for GoCrazy_66:

(Start: 23 @42732 has 21 MA's), (28, 42777), (30, 42792), (32, 42810), (38, 42861), (44, 42909), (46, 42927),

Gene: Gorpy_87 Start: 50675, Stop: 50902, Start Num: 25

Candidate Starts for Gorpy_87:

(Start: 25 @50675 has 43 MA's), (32, 50747), (36, 50768), (43, 50834), (44, 50837),

Gene: Hankly_68 Start: 42356, Stop: 42634, Start Num: 23

Candidate Starts for Hankly_68:

(Start: 23 @42356 has 21 MA's), (28, 42401), (30, 42416), (32, 42434), (38, 42485), (44, 42533), (46, 42551), (51, 42599),

Gene: Heisenberger_68 Start: 42694, Stop: 42972, Start Num: 23

Candidate Starts for Heisenberger_68:

(Start: 23 @42694 has 21 MA's), (28, 42739), (30, 42754), (32, 42772), (38, 42823), (44, 42871), (46, 42889), (51, 42937),

Gene: Hestia_83 Start: 47282, Stop: 47509, Start Num: 25

Candidate Starts for Hestia_83:

(Start: 25 @47282 has 43 MA's), (32, 47354), (36, 47375), (43, 47441), (44, 47444),

Gene: Hillester_93 Start: 49669, Stop: 49896, Start Num: 25

Candidate Starts for Hillester_93:

(Start: 25 @49669 has 43 MA's), (32, 49741), (36, 49762), (43, 49828), (44, 49831), (46, 49849), (49, 49879),

Gene: Isolde_90 Start: 50517, Stop: 50744, Start Num: 25

Candidate Starts for Isolde_90:

(Start: 25 @50517 has 43 MA's), (27, 50523), (29, 50568), (32, 50589), (36, 50610), (43, 50676), (44, 50679), (46, 50697),

Gene: JEGGS_68 Start: 42773, Stop: 43051, Start Num: 23

Candidate Starts for JEGGS_68:

(Start: 23 @42773 has 21 MA's), (28, 42818), (30, 42833), (32, 42851), (38, 42902), (44, 42950), (46, 42968), (51, 43016),

Gene: JeNeSaisPas_114 Start: 65186, Stop: 65422, Start Num: 24

Candidate Starts for JeNeSaisPas_114:

(12, 65111), (14, 65135), (15, 65138), (18, 65153), (24, 65186), (31, 65252), (42, 65336), (44, 65345), (45, 65348), (46, 65363),

Gene: JellyBread_86 Start: 49663, Stop: 49890, Start Num: 25

Candidate Starts for JellyBread_86:

(Start: 25 @49663 has 43 MA's), (32, 49735), (36, 49756), (43, 49822), (44, 49825), (46, 49843), (49, 49873),

Gene: Kardesai_69 Start: 43082, Stop: 43360, Start Num: 23

Candidate Starts for Kardesai_69:

(Start: 23 @43082 has 21 MA's), (28, 43127), (30, 43142), (32, 43160), (38, 43211), (44, 43259), (46, 43277),

Gene: KeaneyLin_65 Start: 42732, Stop: 43010, Start Num: 23

Candidate Starts for KeaneyLin_65:

(Start: 23 @42732 has 21 MA's), (28, 42777), (30, 42792), (32, 42810), (38, 42861), (44, 42909), (46, 42927),

Gene: Kureo_117 Start: 64776, Stop: 65015, Start Num: 24

Candidate Starts for Kureo_117:

(24, 64776), (Start: 25 @64779 has 43 MA's), (31, 64845), (42, 64929), (44, 64938), (45, 64941), (46, 64956),

Gene: Lasker_91 Start: 50385, Stop: 50648, Start Num: 25

Candidate Starts for Lasker_91:

(Start: 25 @50385 has 43 MA's), (33, 50466), (34, 50472),

Gene: Lawnathon_93 Start: 50019, Stop: 50246, Start Num: 25

Candidate Starts for Lawnathon_93:

(Start: 25 @50019 has 43 MA's), (32, 50091), (36, 50112), (43, 50178), (44, 50181), (46, 50199), (49, 50229), (50, 50238),

Gene: LeBruni_93 Start: 49787, Stop: 50014, Start Num: 25

Candidate Starts for LeBruni_93:

(Start: 25 @49787 has 43 MA's), (32, 49859), (36, 49880), (43, 49946), (44, 49949), (46, 49967),

Gene: MUWow_91 Start: 50713, Stop: 50940, Start Num: 25

Candidate Starts for MUWow_91:

(Start: 25 @50713 has 43 MA's), (32, 50785), (35, 50803), (37, 50815), (44, 50875), (47, 50902),

Gene: Mapleville_83 Start: 48161, Stop: 48388, Start Num: 25

Candidate Starts for Mapleville_83:

(Start: 25 @48161 has 43 MA's), (32, 48233), (36, 48254), (43, 48320), (44, 48323), (49, 48371),

Gene: Marianna39_117 Start: 65194, Stop: 65430, Start Num: 25

Candidate Starts for Marianna39_117:

(19, 65161), (24, 65191), (Start: 25 @65194 has 43 MA's), (31, 65260), (42, 65344), (44, 65353), (45, 65356), (46, 65371),

Gene: Maruru_66 Start: 45050, Stop: 45310, Start Num: 20

Candidate Starts for Maruru_66:

(8, 44834), (Start: 20 @45050 has 2 MA's), (32, 45140), (34, 45152), (44, 45230), (46, 45248),

Gene: MaterMagnus_88 Start: 49961, Stop: 50188, Start Num: 25

Candidate Starts for MaterMagnus_88:

(Start: 25 @49961 has 43 MA's), (32, 50033), (36, 50054), (43, 50120), (44, 50123),

Gene: MidnightRain_96 Start: 51168, Stop: 51395, Start Num: 25

Candidate Starts for MidnightRain_96:

(Start: 25 @51168 has 43 MA's), (29, 51219), (32, 51240), (36, 51261), (43, 51327), (44, 51330), (46, 51348),

Gene: MissAmericana_13 Start: 9042, Stop: 8782, Start Num: 21

Candidate Starts for MissAmericana_13:

(17, 9063), (Start: 21 @9042 has 2 MA's), (38, 8925), (47, 8850),

Gene: Mooshroom_70 Start: 43082, Stop: 43360, Start Num: 23

Candidate Starts for Mooshroom_70:

(Start: 23 @43082 has 21 MA's), (28, 43127), (30, 43142), (32, 43160), (38, 43211), (44, 43259), (46, 43277),

Gene: Mudcat_65 Start: 44131, Stop: 44409, Start Num: 23

Candidate Starts for Mudcat_65:

(Start: 23 @44131 has 21 MA's), (28, 44176), (30, 44191), (32, 44209), (38, 44260), (44, 44308), (46, 44326), (51, 44374),

Gene: NapoleonB_70 Start: 43288, Stop: 43566, Start Num: 23

Candidate Starts for NapoleonB_70:

(Start: 23 @43288 has 21 MA's), (28, 43333), (30, 43348), (32, 43366), (38, 43417), (44, 43465), (46, 43483), (51, 43531),

Gene: Nason_69 Start: 43472, Stop: 43750, Start Num: 23

Candidate Starts for Nason_69:

(Start: 23 @43472 has 21 MA's), (28, 43517), (30, 43532), (32, 43550), (38, 43601), (44, 43649), (46, 43667),

Gene: NewKitty_90 Start: 50156, Stop: 50383, Start Num: 25

Candidate Starts for NewKitty_90:

(Start: 25 @50156 has 43 MA's), (32, 50228), (35, 50246), (37, 50258), (44, 50318), (47, 50345),

Gene: Nyilah_96 Start: 49629, Stop: 49856, Start Num: 25

Candidate Starts for Nyilah_96:

(Start: 25 @49629 has 43 MA's), (27, 49635), (32, 49701), (36, 49722), (43, 49788), (44, 49791), (49, 49839),

Gene: Paella_119 Start: 66359, Stop: 66595, Start Num: 25

Candidate Starts for Paella_119:

(24, 66356), (Start: 25 @66359 has 43 MA's), (31, 66425), (42, 66509), (44, 66518), (45, 66521), (46, 66536),

Gene: Persistence_84 Start: 47327, Stop: 47554, Start Num: 25

Candidate Starts for Persistence_84:

(Start: 25 @47327 has 43 MA's), (29, 47378), (32, 47399), (36, 47420), (43, 47486), (44, 47489),

Gene: Phrank15_95 Start: 50347, Stop: 50574, Start Num: 25

Candidate Starts for Phrank15_95:

(Start: 25 @50347 has 43 MA's), (32, 50419), (36, 50440), (43, 50506), (44, 50509),

Gene: Pigu_66 Start: 34831, Stop: 35052, Start Num: 27

Candidate Starts for Pigu_66:

(27, 34831), (32, 34897), (39, 34954), (44, 34987),

Gene: Qui_119 Start: 66359, Stop: 66595, Start Num: 25

Candidate Starts for Qui_119:

(24, 66356), (Start: 25 @66359 has 43 MA's), (31, 66425), (42, 66509), (44, 66518), (45, 66521), (46, 66536),

Gene: RadFad_94 Start: 49669, Stop: 49896, Start Num: 25

Candidate Starts for RadFad_94:

(Start: 25 @49669 has 43 MA's), (32, 49741), (36, 49762), (43, 49828), (44, 49831), (46, 49849), (49, 49879),

Gene: Raphaella_89 Start: 48624, Stop: 48887, Start Num: 25

Candidate Starts for Raphaella_89:

(Start: 25 @48624 has 43 MA's), (33, 48705), (34, 48711),

Gene: Raqqa_93 Start: 50720, Stop: 50947, Start Num: 25

Candidate Starts for Raqqa_93:

(12, 50645), (16, 50678), (Start: 25 @50720 has 43 MA's), (32, 50792), (43, 50879), (44, 50882), (46, 50900),

Gene: Richie_92 Start: 50519, Stop: 50746, Start Num: 25

Candidate Starts for Richie_92:

(Start: 25 @50519 has 43 MA's), (32, 50591), (36, 50612), (43, 50678), (44, 50681), (49, 50729),

Gene: Rooter_72 Start: 36880, Stop: 37107, Start Num: 25

Candidate Starts for Rooter_72:

(Start: 25 @36880 has 43 MA's), (32, 36952), (39, 37009), (44, 37042),

Gene: Sakai_86 Start: 49386, Stop: 49613, Start Num: 25

Candidate Starts for Sakai_86:

(Start: 25 @49386 has 43 MA's), (32, 49458), (36, 49479), (43, 49545), (44, 49548),

Gene: Sarge_61 Start: 33816, Stop: 34043, Start Num: 25

Candidate Starts for Sarge_61:

(Start: 25 @33816 has 43 MA's), (29, 33867), (32, 33888), (39, 33945), (44, 33978),

Gene: Sashimi_90 Start: 49657, Stop: 49884, Start Num: 25

Candidate Starts for Sashimi_90:

(22, 49651), (Start: 25 @49657 has 43 MA's), (29, 49708), (32, 49729), (36, 49750), (43, 49816), (44, 49819),

Gene: Satrap_88 Start: 49096, Stop: 49323, Start Num: 25

Candidate Starts for Satrap_88:

(Start: 25 @49096 has 43 MA's), (32, 49168), (36, 49189), (43, 49255), (44, 49258), (46, 49276), (49, 49306), (50, 49315),

Gene: Seahorse_95 Start: 54032, Stop: 54259, Start Num: 25

Candidate Starts for Seahorse_95:

(Start: 25 @54032 has 43 MA's), (32, 54104), (36, 54125), (43, 54191), (44, 54194), (49, 54242),

Gene: Shoya_64 Start: 35887, Stop: 36126, Start Num: 25

Candidate Starts for Shoya_64:

(Start: 25 @35887 has 43 MA's), (38, 35992), (42, 36031), (47, 36067),

Gene: Shukran_86 Start: 47862, Stop: 48089, Start Num: 25

Candidate Starts for Shukran_86:

(Start: 25 @47862 has 43 MA's), (32, 47934), (34, 47946), (43, 48021), (44, 48024),

Gene: SilentRX_47 Start: 38442, Stop: 38200, Start Num: 23

Candidate Starts for SilentRX_47:

(Start: 23 @38442 has 21 MA's), (29, 38391), (34, 38358), (43, 38283),

Gene: Sonali_66 Start: 45518, Stop: 45778, Start Num: 20

Candidate Starts for Sonali_66:

(8, 45302), (Start: 20 @45518 has 2 MA's), (32, 45608), (34, 45620), (44, 45698), (46, 45716),

Gene: SpicyFrank_91 Start: 49438, Stop: 49665, Start Num: 25

Candidate Starts for SpicyFrank_91:

(Start: 25 @49438 has 43 MA's), (32, 49510), (43, 49597), (44, 49600),

Gene: Sunshine23_67 Start: 45169, Stop: 45429, Start Num: 20

Candidate Starts for Sunshine23_67:

(Start: 20 @45169 has 2 MA's), (32, 45259), (34, 45271), (44, 45349), (46, 45367),

Gene: ThayneTheZag_96 Start: 51075, Stop: 51302, Start Num: 25

Candidate Starts for ThayneTheZag_96:

(Start: 25 @51075 has 43 MA's), (29, 51126), (32, 51147), (43, 51234), (44, 51237), (46, 51255), (49, 51285),

Gene: Tiff81_84 Start: 47744, Stop: 48007, Start Num: 25

Candidate Starts for Tiff81_84:

(Start: 25 @47744 has 43 MA's), (33, 47825), (34, 47831),

Gene: Tribby_72 Start: 43659, Stop: 43937, Start Num: 23

Candidate Starts for Tribby_72:

(Start: 23 @43659 has 21 MA's), (28, 43704), (32, 43737), (38, 43788), (44, 43836), (46, 43854), (48, 43881), (51, 43902),

Gene: Vopal_90 Start: 50690, Stop: 50953, Start Num: 25

Candidate Starts for Vopal_90:

(Start: 25 @50690 has 43 MA's), (33, 50771), (34, 50777),

Gene: Windest_94 Start: 48912, Stop: 49139, Start Num: 25

Candidate Starts for Windest_94:

(Start: 25 @48912 has 43 MA's), (27, 48918), (29, 48963), (32, 48984), (36, 49005), (43, 49071), (44, 49074), (46, 49092),

Gene: Xenomorph_65 Start: 43143, Stop: 43421, Start Num: 23

Candidate Starts for Xenomorph_65:

(Start: 23 @43143 has 21 MA's), (28, 43188), (30, 43203), (32, 43221), (38, 43272), (44, 43320), (46, 43338), (48, 43365), (51, 43386),

Gene: YoshiYama_70 Start: 43715, Stop: 43993, Start Num: 23

Candidate Starts for YoshiYama_70:

(Start: 23 @43715 has 21 MA's), (28, 43760), (30, 43775), (32, 43793), (38, 43844), (44, 43892), (46, 43910), (51, 43958),

Gene: YoungHarleezy_90 Start: 50145, Stop: 50372, Start Num: 25

Candidate Starts for YoungHarleezy_90:

(Start: 25 @50145 has 43 MA's), (27, 50151), (29, 50196), (32, 50217), (36, 50238), (43, 50304), (44, 50307),

Gene: Zucker_89 Start: 50629, Stop: 50856, Start Num: 25

Candidate Starts for Zucker_89:

(Start: 25 @50629 has 43 MA's), (32, 50701), (36, 50722), (43, 50788), (44, 50791),