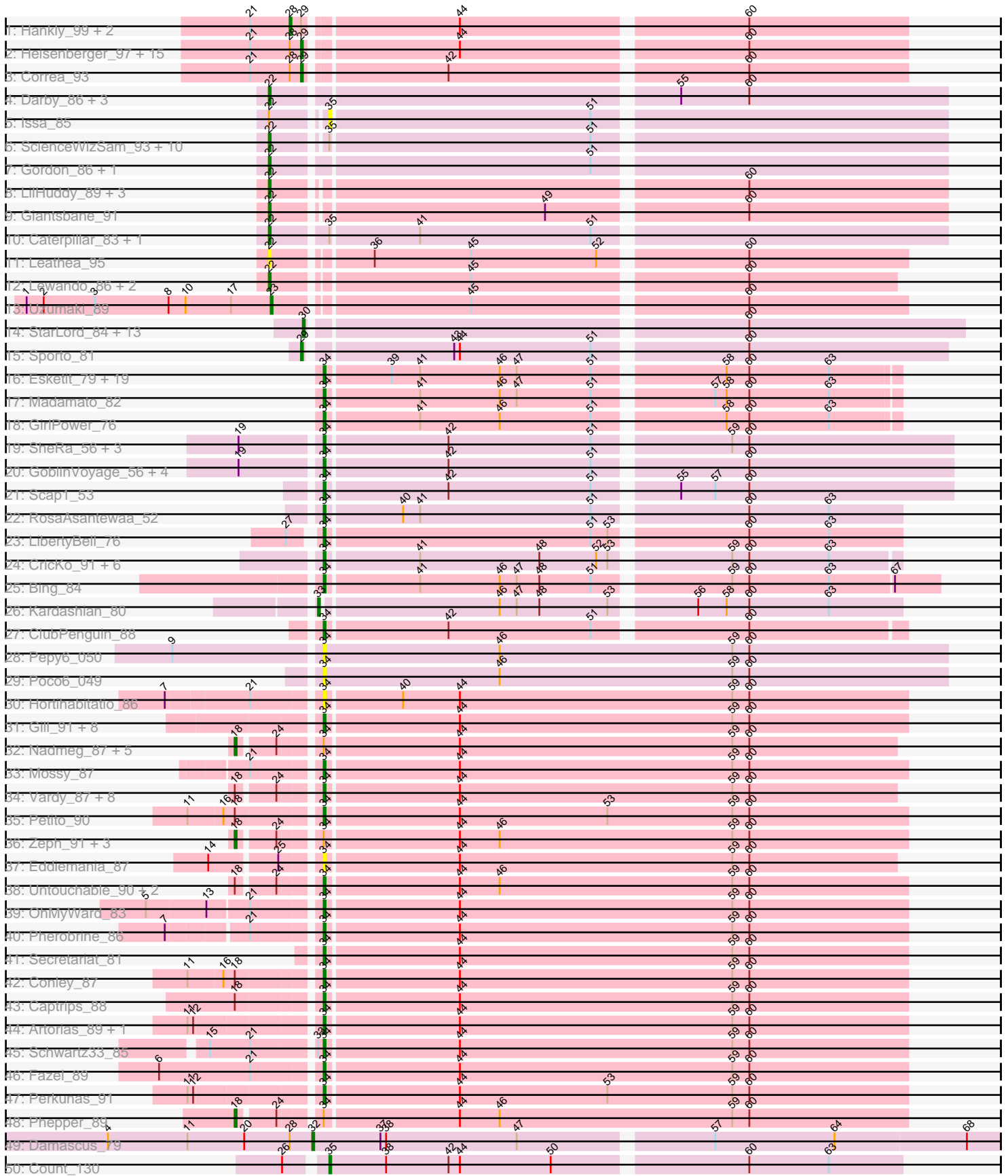
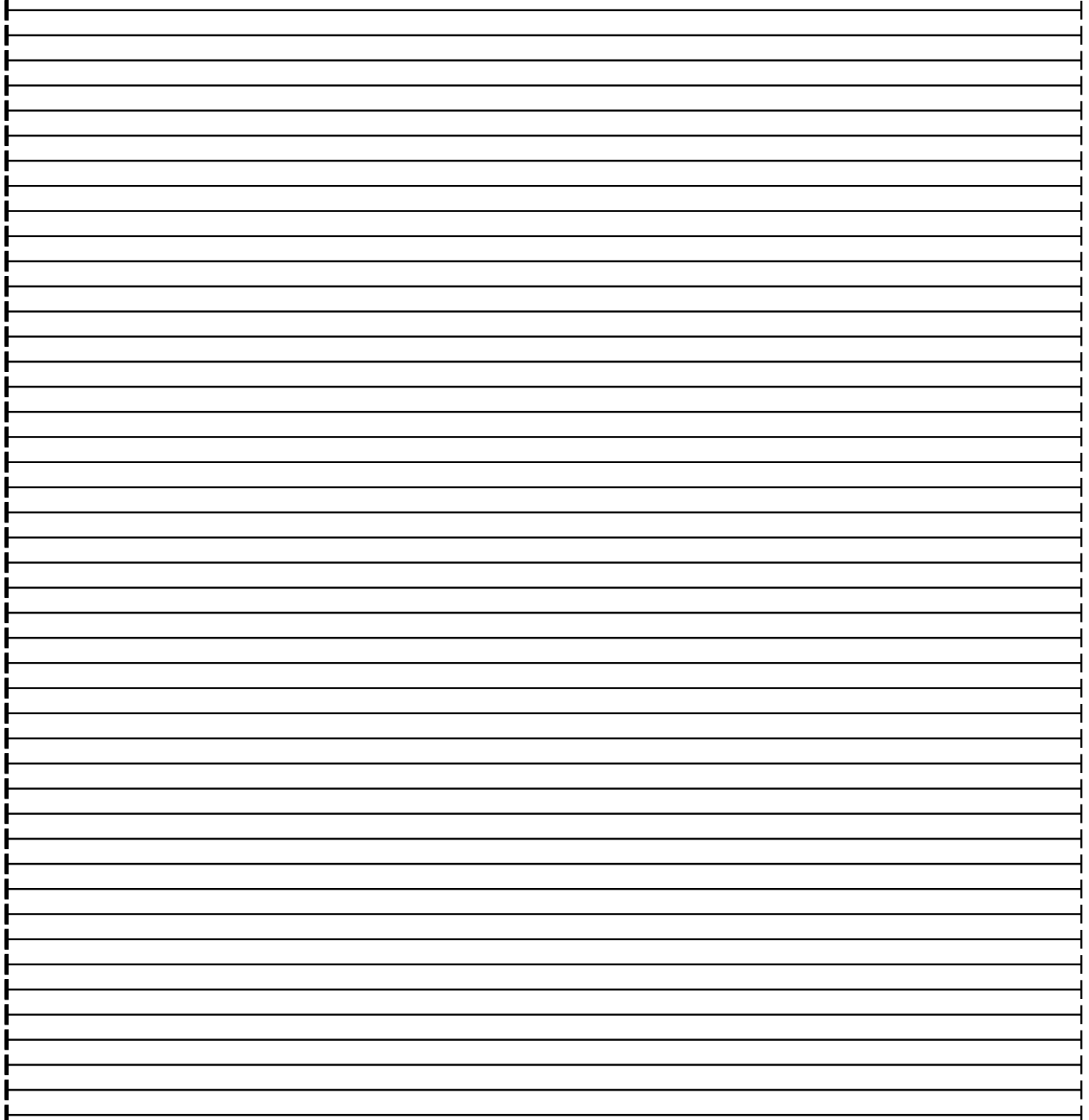
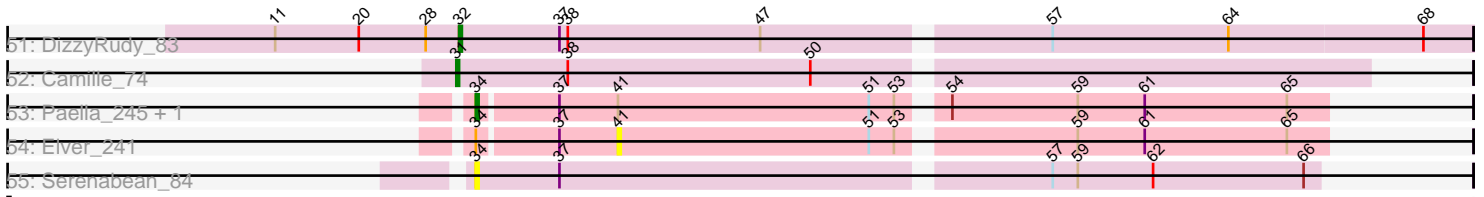


Pham 169766



Pham 169766



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 169766 Report

This analysis was run 07/09/24 on database version 566.

Pham number 169766 has 165 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Hankly_99, Circum_96, NapoleonB_97
- Track 2 : Heisenberger_97, Elsa_94, Arcadia_94, Mudcat_92, Kardesai_97, KeaneyLin_92, GoCrazy_92, Dynamite_96, Xenomorph_92, Mooshroom_98, Nason_94, BenitoAntonio_96, JEGGS_97, Benllo_97, Tribby_99, Cheesy_98
- Track 3 : Correa_93
- Track 4 : Darby_86, CastorTray_90, Trustiboi_87, AreFloNak_97
- Track 5 : Issa_85
- Track 6 : ScienceWizSam_93, Nightmare_89, MiniBagel_90, Tenno_89, CapnMurica_85, Teacup_85, Brunswick_93, Inked_92, Niktson_90, DevitoJr_89, ElephantMan_90
- Track 7 : Gordon_86, Synopsis_81
- Track 8 : LilHuddy_89, Phaby_88, Tokki_95, Shepard_89
- Track 9 : Giantsbane_91
- Track 10 : Caterpillar_83, MediumFry_82
- Track 11 : Leathea_95
- Track 12 : Lewando_86, BarbieDoll_89, Renaldo_90
- Track 13 : Uzumaki_89
- Track 14 : StarLord_84, Shiba_83, DoctorPepper_84, Sloopyjoe_84, MrAaronian_84, Stayer_84, Linda_84, Djungelskog_83, Michelle_84, ProfFrink_85, BronxBay_84, Egad_85, Salk_84, Raunak_85
- Track 15 : Sporto_81
- Track 16 : Esketit_79, OlympicHelado_85, FidgetOrca_85, Spectropatronm_82, DrGrey_79, Rima_84, TonyStarch_82, Soshi_82, TieDye_79, FrodoSwaggins_81, Jaylociraptor_83, Meibysrarus_81, TaidaOne_83, IceWarrior_83, Indigenous_85, Hoshi_84, Maya_83, Namu_85, CherryBlossom_83, Popy_81
- Track 17 : Madamato_82
- Track 18 : GirlPower_76
- Track 19 : SheRa_56, Annihilus_56, HotFries_54, Moozy_55
- Track 20 : GoblinVoyage_56, RavenPuff_56, Bilo_55, PherryCruz_55, Doxi13_57
- Track 21 : Scap1_53
- Track 22 : RosaAsantewaa_52
- Track 23 : LibertyBell_76
- Track 24 : CricKo_91, Rainydai_88, Regigigas_91, FromIndy_89, SendItCS_83, Miek_85, Thiqqums_91
- Track 25 : Bing_84
- Track 26 : Kardashian_80
- Track 27 : ClubPenguin_88

- Track 28 : Pepy6_050
- Track 29 : Poco6_049
- Track 30 : Hortihabitatio_86
- Track 31 : Gill_91, Kerry_90, Magel_92, Roney_89, Tanis_90, Capybara_88, Odesza_89, Avazak_90, Gravy_90
- Track 32 : Nadmeg_87, Figliar_87, Crocheter_88, Runhaar_86, Burley_87, AlainaMarie_89
- Track 33 : Mossy_87
- Track 34 : Vardy_87, Aflac_89, Duffington_89, Rickmore_89, BluerMoon_92, TenaciousP_95, EndAve_90, Jodelie19_88, OlgasClover_90
- Track 35 : Petite_90
- Track 36 : Zeph_91, Nithya_88, Hydrus_88, Madvan_86
- Track 37 : Eddiemania_87
- Track 38 : Untouchable_90, Kenosha_87, Chikenjars_89
- Track 39 : OhMyWard_83
- Track 40 : Pherobrine_86
- Track 41 : Secretariat_81
- Track 42 : Conley_87
- Track 43 : Captrips_88
- Track 44 : Artorias_89, FortCran_89
- Track 45 : Schwartz33_85
- Track 46 : Fazel_89
- Track 47 : Perkunas_91
- Track 48 : Phepper_89
- Track 49 : Damascus_79
- Track 50 : Count_130
- Track 51 : DizzyRudy_83
- Track 52 : Camille_74
- Track 53 : Paella_245, Qui_244
- Track 54 : Elver_241
- Track 55 : Serenabean_84

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

The start number called the most often in the published annotations is 34, it was called in 74 of the 144 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aflac_89, Annihilus_56, Artorias_89, Avazak_90, Bilo_55, Bing_84, BluerMoon_92, Captrips_88, Capybara_88, CherryBlossom_83, Chikenjars_89, ClubPenguin_88, Conley_87, CricKo_91, Doxi13_57, DrGrey_79, Duffington_89, Eddiemania_87, EndAve_90, Esketit_79, Fazel_89, FidgetOrca_85, FortCran_89, FrodoSwaggins_81, FromIndy_89, Gill_91, GirlPower_76, GoblinVoyage_56, Gravy_90, Hortihabitatio_86, Hoshi_84, HotFries_54, IceWarrior_83, Indigenous_85, Jaylociraptor_83, Jodelie19_88, Kenosha_87, Kerry_90, LibertyBell_76, Madamoto_82, Magel_92, Maya_83, Meibysrarus_81, Miek_85, Moozy_55, Mossy_87, Namo_85, Odesza_89, OhMyWard_83, OlgasClover_90, OlympicHelado_85, Paella_245, Pepy6_050, Perkunas_91, Petite_90, Pherobrine_86, PherryCruz_55, Poco6_049, Popy_81, Qui_244, Rainydai_88, RavenPuff_56, Regigigas_91, Rickmore_89, Rima_84, Roney_89, RosaAsantewaa_52, Scap1_53, Schwartz33_85, Secretariat_81,

SendItCS_83, Serenabean_84, SheRa_56, Soshi_82, Spectropatronm_82, TaidaOne_83, Tanis_90, TenaciousP_95, Thiqqums_91, TieDye_79, TonyStarch_82, Untouchable_90, Vardy_87,

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

- AlainaMarie_89, Burley_87, Crocheter_88, Elver_241, Figliar_87, Hydrus_88, Madvan_86, Nadmeg_87, Nithya_88, Phepper_89, Runhaar_86, Zeph_91,

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

- Arcadia_94, AreFloNak_97, BarbieDoll_89, BenitoAntonio_96, Benllo_97, BronxBay_84, Brunswick_93, Camille_74, CapnMurica_85, CastorTray_90, Caterpillar_83, Cheesy_98, Circum_96, Correa_93, Count_130, Damascus_79, Darby_86, DevitoJr_89, DizzyRudy_83, Djungelskog_83, DoctorPepper_84, Dynamite_96, Egad_85, ElephantMan_90, Elsa_94, Giantsbane_91, GoCrazy_92, Gordon_86, Hankly_99, Heisenberger_97, Inked_92, Issa_85, JEGGS_97, Kardashian_80, Kardesai_97, KeaneyLin_92, Leathea_95, Lewando_86, LilHuddy_89, Linda_84, MediumFry_82, Michelle_84, MiniBagel_90, Mooshroom_98, MrAaronian_84, Mudcat_92, NapoleonB_97, Nason_94, Nightmare_89, Niktson_90, Phaby_88, ProfFrink_85, Raunak_85, Renaldo_90, Salk_84, ScienceWizSam_93, Shepard_89, Shiba_83, Sloopyjoe_84, Sporto_81, StarLord_84, Stayer_84, Synopsis_81, Teacup_85, Tenno_89, Tokki_95, Tribby_99, Trustiboi_87, Uzumaki_89, Xenomorph_92,

Summary by start number:

Start 18:

- Found in 26 of 165 (15.8%) of genes in pham
- Manual Annotations of this start: 10 of 144
- Called 42.3% of time when present
- Phage (with cluster) where this start called: AlainaMarie_89 (DJ), Burley_87 (DJ), Crocheter_88 (DJ), Figliar_87 (DJ), Hydrus_88 (DJ), Madvan_86 (DJ), Nadmeg_87 (DJ), Nithya_88 (DJ), Phepper_89 (DJ), Runhaar_86 (DJ), Zeph_91 (DJ),

Start 22:

- Found in 29 of 165 (17.6%) of genes in pham
- Manual Annotations of this start: 23 of 144
- Called 96.6% of time when present
- Phage (with cluster) where this start called: AreFloNak_97 (AU1), BarbieDoll_89 (AU6), Brunswick_93 (AU1), CapnMurica_85 (AU1), CastorTray_90 (AU1), Caterpillar_83 (AU4), Darby_86 (AU1), DevitoJr_89 (AU1), ElephantMan_90 (AU1), Giantsbane_91 (AU2), Gordon_86 (AU1), Inked_92 (AU), Leathea_95 (AU6), Lewando_86 (AU6), LilHuddy_89 (AU2), MediumFry_82 (AU4), MiniBagel_90 (AU1), Nightmare_89 (AU1), Niktson_90 (AU1), Phaby_88 (AU2), Renaldo_90 (AU6), ScienceWizSam_93 (AU1), Shepard_89 (AU2), Synopsis_81 (AU1), Teacup_85 (AU1), Tenno_89 (AU1), Tokki_95 (AU2), Trustiboi_87 (AU1),

Start 23:

- Found in 1 of 165 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Uzumaki_89 (AU6),

Start 28:

- Found in 22 of 165 (13.3%) of genes in pham
- Manual Annotations of this start: 3 of 144
- Called 13.6% of time when present
- Phage (with cluster) where this start called: Circum_96 (AM), Hankly_99 (AM), NapoleonB_97 (AM),

Start 29:

- Found in 21 of 165 (12.7%) of genes in pham
- Manual Annotations of this start: 17 of 144
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Arcadia_94 (AM), BenitoAntonio_96 (AM), Benllo_97 (AM), Cheesy_98 (AM), Correa_93 (AM), Dynamite_96 (AM), Elsa_94 (AM), GoCrazy_92 (AM), Heisenberger_97 (AM), JEGGS_97 (AM), Kardesai_97 (AM), KeaneyLin_92 (AM), Mooshroom_98 (AM), Mudcat_92 (AM), Nason_94 (AM), Sporto_81 (AW), Tribby_99 (AM), Xenomorph_92 (AM),

Start 30:

- Found in 14 of 165 (8.5%) of genes in pham
- Manual Annotations of this start: 11 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BronxBay_84 (AW), Djungelskog_83 (AW), DoctorPepper_84 (AW), Egad_85 (AW), Linda_84 (AW), Michelle_84 (AW), MrAaronian_84 (AW), ProfFrink_85 (AW), Raunak_85 (AW), Salk_84 (AW), Shiba_83 (AW), Sloopyjoe_84 (AW), StarLord_84 (AW), Stayer_84 (AW),

Start 31:

- Found in 1 of 165 (0.6%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Camille_74 (EL),

Start 32:

- Found in 2 of 165 (1.2%) of genes in pham
- Manual Annotations of this start: 2 of 144
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Damascus_79 (EL), DizzyRudy_83 (EL),

Start 33:

- Found in 2 of 165 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kardashian_80 (BI6),

Start 34:

- Found in 95 of 165 (57.6%) of genes in pham
- Manual Annotations of this start: 74 of 144
- Called 87.4% of time when present
- Phage (with cluster) where this start called: Aflac_89 (DJ), Annihilus_56 (BI2), Artorias_89 (DJ), Avazak_90 (DJ), Bilo_55 (BI2), Bing_84 (BI5), BluerMoon_92 (DJ), Captrips_88 (DJ), Copybara_88 (DJ), CherryBlossom_83 (BI1), Chickenjars_89 (DJ), ClubPenguin_88 (BI7), Conley_87 (DJ), CricKo_91 (BI4), Doxi13_57 (BI2), DrGrey_79 (BI1), Duffington_89 (DJ), Eddiemania_87 (DJ), EndAve_90 (DJ), Esketit_79 (BI1), Fazel_89 (DJ), FidgetOrca_85 (BI1), FortCran_89 (DJ),

FrodoSwaggins_81 (BI1), FromIndy_89 (BI4), Gill_91 (DJ), GirlPower_76 (BI1), GoblinVoyage_56 (BI2), Gravy_90 (DJ), Hortihabitatio_86 (DJ), Hoshi_84 (BI1), HotFries_54 (BI2), IceWarrior_83 (BI1), Indigenous_85 (BI1), Jaylociraptor_83 (BI1), Jodelie19_88 (DJ), Kenosha_87 (DJ), Kerry_90 (DJ), LibertyBell_76 (BI3), Madamoto_82 (BI1), Magel_92 (DJ), Maya_83 (BI1), Meibysrarus_81 (BI1), Miek_85 (BI4), Moozy_55 (BI2), Mossy_87 (DJ), Namu_85 (BI1), Odesza_89 (DJ), OhMyWard_83 (DJ), OlgasClover_90 (DJ), OlympicHelado_85 (BI1), Paella_245 (FK), Pepy6_050 (CC), Perkunas_91 (DJ), Petite_90 (DJ), Pherobrine_86 (DJ), PherryCruz_55 (BI2), Poco6_049 (CC), Popy_81 (BI1), Qui_244 (FK), Rainydai_88 (BI4), RavenPuff_56 (BI2), Regigigas_91 (BI4), Rickmore_89 (DJ), Rima_84 (BI1), Roney_89 (DJ), RosaAsantewaa_52 (BI2), Scap1_53 (BI2), Schwartz33_85 (DJ), Secretariat_81 (DJ), SendItCS_83 (BI4), Serenabean_84 (HA), SheRa_56 (BI2), Soshi_82 (BI1), Spectropatronm_82 (BI1), TaidaOne_83 (BI1), Tanis_90 (DJ), TenaciousP_95 (DJ), Thiqqums_91 (BI4), TieDye_79 (BI1), TonyStarch_82 (BI1), Untouchable_90 (DJ), Vardy_87 (DJ),

Start 35:

- Found in 15 of 165 (9.1%) of genes in pham
- Manual Annotations of this start: 1 of 144
- Called 13.3% of time when present
- Phage (with cluster) where this start called: Count_130 (EL), Issa_85 (AU1),

Start 41:

- Found in 36 of 165 (21.8%) of genes in pham
- No Manual Annotations of this start.
- Called 2.8% of time when present
- Phage (with cluster) where this start called: Elver_241 (FK),

Summary by clusters:

There are 19 clusters represented in this pham: EL, BI5, DJ, CC, AM, HA, AU1, AU2, AU, AU4, AW, AU6, BI6, BI7, BI4, FK, BI2, BI3, BI1,

Info for manual annotations of cluster AM:

- Start number 28 was manually annotated 3 times for cluster AM.
- Start number 29 was manually annotated 16 times for cluster AM.

Info for manual annotations of cluster AU:

- Start number 22 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU1:

- Start number 22 was manually annotated 15 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 22 was manually annotated 4 times for cluster AU2.

Info for manual annotations of cluster AU4:

- Start number 22 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU6:

- Start number 22 was manually annotated 1 time for cluster AU6.
- Start number 23 was manually annotated 1 time for cluster AU6.

Info for manual annotations of cluster AW:

- Start number 29 was manually annotated 1 time for cluster AW.
- Start number 30 was manually annotated 11 times for cluster AW.

Info for manual annotations of cluster BI1:

- Start number 34 was manually annotated 22 times for cluster BI1.

Info for manual annotations of cluster BI2:

- Start number 34 was manually annotated 11 times for cluster BI2.

Info for manual annotations of cluster BI3:

- Start number 34 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:

- Start number 34 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:

- Start number 34 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:

- Start number 33 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:

- Start number 34 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster DJ:

- Start number 18 was manually annotated 10 times for cluster DJ.
- Start number 34 was manually annotated 31 times for cluster DJ.

Info for manual annotations of cluster EL:

- Start number 31 was manually annotated 1 time for cluster EL.
- Start number 32 was manually annotated 2 times for cluster EL.
- Start number 35 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster FK:

- Start number 34 was manually annotated 2 times for cluster FK.

Gene Information:

Gene: Aflac_89 Start: 57301, Stop: 57600, Start Num: 34

Candidate Starts for Aflac_89:

(Start: 18 @57265 has 10 MA's), (24, 57283), (Start: 34 @57301 has 74 MA's), (44, 57370), (59, 57514), (60, 57523),

Gene: AlainaMarie_89 Start: 57292, Stop: 57627, Start Num: 18

Candidate Starts for AlainaMarie_89:

(Start: 18 @57292 has 10 MA's), (24, 57310), (Start: 34 @57328 has 74 MA's), (44, 57397), (59, 57541), (60, 57550),

Gene: Annihilus_56 Start: 39529, Stop: 39849, Start Num: 34
Candidate Starts for Annihilus_56:
(19, 39490), (Start: 34 @39529 has 74 MA's), (42, 39592), (51, 39667), (59, 39733), (60, 39742),

Gene: Arcadia_94 Start: 54217, Stop: 54519, Start Num: 29
Candidate Starts for Arcadia_94:
(21, 54190), (Start: 28 @54211 has 3 MA's), (Start: 29 @54217 has 17 MA's), (44, 54292), (60, 54436),

Gene: AreFloNak_97 Start: 54422, Stop: 54763, Start Num: 22
Candidate Starts for AreFloNak_97:
(Start: 22 @54422 has 23 MA's), (55, 54623), (60, 54659),

Gene: Artorias_89 Start: 55853, Stop: 56158, Start Num: 34
Candidate Starts for Artorias_89:
(11, 55790), (12, 55793), (Start: 34 @55853 has 74 MA's), (44, 55922), (59, 56066), (60, 56075),

Gene: Avazak_90 Start: 56283, Stop: 56588, Start Num: 34
Candidate Starts for Avazak_90:
(Start: 34 @56283 has 74 MA's), (44, 56352), (59, 56496), (60, 56505),

Gene: BarbieDoll_89 Start: 51742, Stop: 52053, Start Num: 22
Candidate Starts for BarbieDoll_89:
(Start: 22 @51742 has 23 MA's), (45, 51838), (60, 51976),

Gene: BenitoAntonio_96 Start: 54148, Stop: 54450, Start Num: 29
Candidate Starts for BenitoAntonio_96:
(21, 54121), (Start: 28 @54142 has 3 MA's), (Start: 29 @54148 has 17 MA's), (44, 54223), (60, 54367),

Gene: Benllo_97 Start: 54986, Stop: 55288, Start Num: 29
Candidate Starts for Benllo_97:
(21, 54959), (Start: 28 @54980 has 3 MA's), (Start: 29 @54986 has 17 MA's), (44, 55061), (60, 55205),

Gene: Bilo_55 Start: 39823, Stop: 40143, Start Num: 34
Candidate Starts for Bilo_55:
(19, 39784), (Start: 34 @39823 has 74 MA's), (42, 39886), (51, 39961), (60, 40036),

Gene: Bing_84 Start: 52233, Stop: 52544, Start Num: 34
Candidate Starts for Bing_84:
(Start: 34 @52233 has 74 MA's), (41, 52281), (46, 52323), (47, 52332), (48, 52344), (51, 52371), (59, 52437), (60, 52446), (63, 52488), (67, 52521),

Gene: BluerMoon_92 Start: 57131, Stop: 57430, Start Num: 34
Candidate Starts for BluerMoon_92:
(Start: 18 @57095 has 10 MA's), (24, 57113), (Start: 34 @57131 has 74 MA's), (44, 57200), (59, 57344), (60, 57353),

Gene: BronxBay_84 Start: 50569, Stop: 50901, Start Num: 30
Candidate Starts for BronxBay_84:
(Start: 30 @50569 has 11 MA's), (60, 50788),

Gene: Brunswick_93 Start: 54283, Stop: 54621, Start Num: 22
Candidate Starts for Brunswick_93:
(Start: 22 @54283 has 23 MA's), (Start: 35 @54307 has 1 MA's), (51, 54442),

Gene: Burley_87 Start: 56095, Stop: 56430, Start Num: 18
Candidate Starts for Burley_87:
(Start: 18 @56095 has 10 MA's), (24, 56113), (Start: 34 @56131 has 74 MA's), (44, 56200), (59, 56344), (60, 56353),

Gene: Camille_74 Start: 49086, Stop: 49403, Start Num: 31
Candidate Starts for Camille_74:
(Start: 31 @49086 has 1 MA's), (38, 49125), (50, 49212),

Gene: CapnMurica_85 Start: 54229, Stop: 54567, Start Num: 22
Candidate Starts for CapnMurica_85:
(Start: 22 @54229 has 23 MA's), (Start: 35 @54253 has 1 MA's), (51, 54388),

Gene: Captrips_88 Start: 55634, Stop: 55939, Start Num: 34
Candidate Starts for Captrips_88:
(Start: 18 @55595 has 10 MA's), (Start: 34 @55634 has 74 MA's), (44, 55703), (59, 55847), (60, 55856),

Gene: Capybara_88 Start: 55857, Stop: 56162, Start Num: 34
Candidate Starts for Capybara_88:
(Start: 34 @55857 has 74 MA's), (44, 55926), (59, 56070), (60, 56079),

Gene: CastorTray_90 Start: 54445, Stop: 54786, Start Num: 22
Candidate Starts for CastorTray_90:
(Start: 22 @54445 has 23 MA's), (55, 54646), (60, 54682),

Gene: Caterpillar_83 Start: 52687, Stop: 53028, Start Num: 22
Candidate Starts for Caterpillar_83:
(Start: 22 @52687 has 23 MA's), (Start: 35 @52714 has 1 MA's), (41, 52759), (51, 52849),

Gene: Cheesy_98 Start: 54899, Stop: 55201, Start Num: 29
Candidate Starts for Cheesy_98:
(21, 54872), (Start: 28 @54893 has 3 MA's), (Start: 29 @54899 has 17 MA's), (44, 54974), (60, 55118),

Gene: CherryBlossom_83 Start: 51474, Stop: 51764, Start Num: 34
Candidate Starts for CherryBlossom_83:
(Start: 34 @51474 has 74 MA's), (39, 51507), (41, 51522), (46, 51564), (47, 51573), (51, 51612), (58, 51675), (60, 51687), (63, 51729),

Gene: Chikenjars_89 Start: 57556, Stop: 57855, Start Num: 34
Candidate Starts for Chikenjars_89:
(Start: 18 @57520 has 10 MA's), (24, 57538), (Start: 34 @57556 has 74 MA's), (44, 57625), (46, 57646), (59, 57769), (60, 57778),

Gene: Circum_96 Start: 54506, Stop: 54814, Start Num: 28
Candidate Starts for Circum_96:
(21, 54485), (Start: 28 @54506 has 3 MA's), (Start: 29 @54512 has 17 MA's), (44, 54587), (60, 54731),

Gene: ClubPenguin_88 Start: 52169, Stop: 52462, Start Num: 34
Candidate Starts for ClubPenguin_88:
(Start: 34 @52169 has 74 MA's), (42, 52232), (51, 52307), (60, 52382),

Gene: Conley_87 Start: 56148, Stop: 56453, Start Num: 34
Candidate Starts for Conley_87:
(11, 56085), (16, 56103), (Start: 18 @56109 has 10 MA's), (Start: 34 @56148 has 74 MA's), (44, 56217), (59, 56361), (60, 56370),

Gene: Correa_93 Start: 53560, Stop: 53862, Start Num: 29
Candidate Starts for Correa_93:
(21, 53533), (Start: 28 @53554 has 3 MA's), (Start: 29 @53560 has 17 MA's), (42, 53629), (60, 53779),

Gene: Count_130 Start: 74858, Stop: 75151, Start Num: 35
Candidate Starts for Count_130:
(26, 74840), (Start: 35 @74858 has 1 MA's), (38, 74888), (42, 74921), (44, 74927), (50, 74975), (60, 75071), (63, 75113),

Gene: CricKo_91 Start: 53655, Stop: 53945, Start Num: 34
Candidate Starts for CricKo_91:
(Start: 34 @53655 has 74 MA's), (41, 53703), (48, 53766), (52, 53796), (53, 53802), (59, 53859), (60, 53868), (63, 53910),

Gene: Crocheter_88 Start: 56515, Stop: 56850, Start Num: 18
Candidate Starts for Crocheter_88:
(Start: 18 @56515 has 10 MA's), (24, 56533), (Start: 34 @56551 has 74 MA's), (44, 56620), (59, 56764), (60, 56773),

Gene: Damascus_79 Start: 52477, Stop: 52830, Start Num: 32
Candidate Starts for Damascus_79:
(4, 52369), (11, 52411), (20, 52441), (Start: 28 @52465 has 3 MA's), (Start: 32 @52477 has 2 MA's), (37, 52513), (38, 52516), (47, 52585), (57, 52681), (64, 52744), (68, 52813),

Gene: Darby_86 Start: 53826, Stop: 54167, Start Num: 22
Candidate Starts for Darby_86:
(Start: 22 @53826 has 23 MA's), (55, 54027), (60, 54063),

Gene: DevitoJr_89 Start: 54115, Stop: 54453, Start Num: 22
Candidate Starts for DevitoJr_89:
(Start: 22 @54115 has 23 MA's), (Start: 35 @54139 has 1 MA's), (51, 54274),

Gene: DizzyRudy_83 Start: 51813, Stop: 52166, Start Num: 32
Candidate Starts for DizzyRudy_83:
(11, 51747), (20, 51777), (Start: 28 @51801 has 3 MA's), (Start: 32 @51813 has 2 MA's), (37, 51849), (38, 51852), (47, 51921), (57, 52017), (64, 52080), (68, 52149),

Gene: Djungelskog_83 Start: 50571, Stop: 50903, Start Num: 30
Candidate Starts for Djungelskog_83:
(Start: 30 @50571 has 11 MA's), (60, 50790),

Gene: DoctorPepper_84 Start: 50302, Stop: 50634, Start Num: 30

Candidate Starts for DoctorPepper_84:
(Start: 30 @50302 has 11 MA's), (60, 50521),

Gene: Doxi13_57 Start: 39659, Stop: 39979, Start Num: 34
Candidate Starts for Doxi13_57:
(19, 39620), (Start: 34 @39659 has 74 MA's), (42, 39722), (51, 39797), (60, 39872),

Gene: DrGrey_79 Start: 51987, Stop: 52277, Start Num: 34
Candidate Starts for DrGrey_79:
(Start: 34 @51987 has 74 MA's), (39, 52020), (41, 52035), (46, 52077), (47, 52086), (51, 52125), (58, 52188), (60, 52200), (63, 52242),

Gene: Duffington_89 Start: 57356, Stop: 57655, Start Num: 34
Candidate Starts for Duffington_89:
(Start: 18 @57320 has 10 MA's), (24, 57338), (Start: 34 @57356 has 74 MA's), (44, 57425), (59, 57569), (60, 57578),

Gene: Dynamite_96 Start: 54004, Stop: 54306, Start Num: 29
Candidate Starts for Dynamite_96:
(21, 53977), (Start: 28 @53998 has 3 MA's), (Start: 29 @54004 has 17 MA's), (44, 54079), (60, 54223),

Gene: Eddiemania_87 Start: 57446, Stop: 57745, Start Num: 34
Candidate Starts for Eddiemania_87:
(14, 57395), (25, 57428), (Start: 34 @57446 has 74 MA's), (44, 57515), (59, 57659), (60, 57668),

Gene: Egad_85 Start: 50576, Stop: 50908, Start Num: 30
Candidate Starts for Egad_85:
(Start: 30 @50576 has 11 MA's), (60, 50795),

Gene: ElephantMan_90 Start: 54476, Stop: 54814, Start Num: 22
Candidate Starts for ElephantMan_90:
(Start: 22 @54476 has 23 MA's), (Start: 35 @54500 has 1 MA's), (51, 54635),

Gene: Elsa_94 Start: 54217, Stop: 54519, Start Num: 29
Candidate Starts for Elsa_94:
(21, 54190), (Start: 28 @54211 has 3 MA's), (Start: 29 @54217 has 17 MA's), (44, 54292), (60, 54436),

Gene: Elver_241 Start: 109130, Stop: 109375, Start Num: 41
Candidate Starts for Elver_241:
(Start: 34 @109082 has 74 MA's), (37, 109109), (41, 109130), (51, 109220), (53, 109229), (59, 109286), (61, 109310), (65, 109361),

Gene: EndAve_90 Start: 57266, Stop: 57565, Start Num: 34
Candidate Starts for EndAve_90:
(Start: 18 @57230 has 10 MA's), (24, 57248), (Start: 34 @57266 has 74 MA's), (44, 57335), (59, 57479), (60, 57488),

Gene: Esketit_79 Start: 50575, Stop: 50865, Start Num: 34
Candidate Starts for Esketit_79:
(Start: 34 @50575 has 74 MA's), (39, 50608), (41, 50623), (46, 50665), (47, 50674), (51, 50713), (58, 50776), (60, 50788), (63, 50830),

Gene: Fazel_89 Start: 56115, Stop: 56420, Start Num: 34

Candidate Starts for Fazel_89:

(6, 56034), (21, 56082), (Start: 34 @56115 has 74 MA's), (44, 56184), (59, 56328), (60, 56337),

Gene: FidgetOrca_85 Start: 52025, Stop: 52315, Start Num: 34

Candidate Starts for FidgetOrca_85:

(Start: 34 @52025 has 74 MA's), (39, 52058), (41, 52073), (46, 52115), (47, 52124), (51, 52163), (58, 52226), (60, 52238), (63, 52280),

Gene: Figliar_87 Start: 57124, Stop: 57459, Start Num: 18

Candidate Starts for Figliar_87:

(Start: 18 @57124 has 10 MA's), (24, 57142), (Start: 34 @57160 has 74 MA's), (44, 57229), (59, 57373), (60, 57382),

Gene: FortCran_89 Start: 55854, Stop: 56159, Start Num: 34

Candidate Starts for FortCran_89:

(11, 55791), (12, 55794), (Start: 34 @55854 has 74 MA's), (44, 55923), (59, 56067), (60, 56076),

Gene: FrodoSwaggins_81 Start: 52382, Stop: 52672, Start Num: 34

Candidate Starts for FrodoSwaggins_81:

(Start: 34 @52382 has 74 MA's), (39, 52415), (41, 52430), (46, 52472), (47, 52481), (51, 52520), (58, 52583), (60, 52595), (63, 52637),

Gene: FromIndy_89 Start: 52855, Stop: 53145, Start Num: 34

Candidate Starts for FromIndy_89:

(Start: 34 @52855 has 74 MA's), (41, 52903), (48, 52966), (52, 52996), (53, 53002), (59, 53059), (60, 53068), (63, 53110),

Gene: Giantsbane_91 Start: 52822, Stop: 53160, Start Num: 22

Candidate Starts for Giantsbane_91:

(Start: 22 @52822 has 23 MA's), (49, 52957), (60, 53056),

Gene: Gill_91 Start: 55884, Stop: 56189, Start Num: 34

Candidate Starts for Gill_91:

(Start: 34 @55884 has 74 MA's), (44, 55953), (59, 56097), (60, 56106),

Gene: GirlPower_76 Start: 51444, Stop: 51734, Start Num: 34

Candidate Starts for GirlPower_76:

(Start: 34 @51444 has 74 MA's), (41, 51492), (46, 51534), (51, 51582), (58, 51645), (60, 51657), (63, 51699),

Gene: GoCrazy_92 Start: 52968, Stop: 53270, Start Num: 29

Candidate Starts for GoCrazy_92:

(21, 52941), (Start: 28 @52962 has 3 MA's), (Start: 29 @52968 has 17 MA's), (44, 53043), (60, 53187),

Gene: GoblinVoyage_56 Start: 39503, Stop: 39823, Start Num: 34

Candidate Starts for GoblinVoyage_56:

(19, 39464), (Start: 34 @39503 has 74 MA's), (42, 39566), (51, 39641), (60, 39716),

Gene: Gordon_86 Start: 54346, Stop: 54687, Start Num: 22

Candidate Starts for Gordon_86:

(Start: 22 @54346 has 23 MA's), (51, 54508),

Gene: Gravy_90 Start: 55547, Stop: 55852, Start Num: 34

Candidate Starts for Gravy_90:

(Start: 34 @55547 has 74 MA's), (44, 55616), (59, 55760), (60, 55769),

Gene: Hankly_99 Start: 54591, Stop: 54899, Start Num: 28

Candidate Starts for Hankly_99:

(21, 54570), (Start: 28 @54591 has 3 MA's), (Start: 29 @54597 has 17 MA's), (44, 54672), (60, 54816),

Gene: Heisenberger_97 Start: 54367, Stop: 54669, Start Num: 29

Candidate Starts for Heisenberger_97:

(21, 54340), (Start: 28 @54361 has 3 MA's), (Start: 29 @54367 has 17 MA's), (44, 54442), (60, 54586),

Gene: Hortihabitatio_86 Start: 55884, Stop: 56189, Start Num: 34

Candidate Starts for Hortihabitatio_86:

(7, 55809), (21, 55851), (Start: 34 @55884 has 74 MA's), (40, 55923), (44, 55953), (59, 56097), (60, 56106),

Gene: Hoshi_84 Start: 51639, Stop: 51929, Start Num: 34

Candidate Starts for Hoshi_84:

(Start: 34 @51639 has 74 MA's), (39, 51672), (41, 51687), (46, 51729), (47, 51738), (51, 51777), (58, 51840), (60, 51852), (63, 51894),

Gene: HotFries_54 Start: 39686, Stop: 40006, Start Num: 34

Candidate Starts for HotFries_54:

(19, 39647), (Start: 34 @39686 has 74 MA's), (42, 39749), (51, 39824), (59, 39890), (60, 39899),

Gene: Hydrus_88 Start: 56826, Stop: 57167, Start Num: 18

Candidate Starts for Hydrus_88:

(Start: 18 @56826 has 10 MA's), (24, 56844), (Start: 34 @56862 has 74 MA's), (44, 56931), (46, 56952), (59, 57075), (60, 57084),

Gene: IceWarrior_83 Start: 51444, Stop: 51734, Start Num: 34

Candidate Starts for IceWarrior_83:

(Start: 34 @51444 has 74 MA's), (39, 51477), (41, 51492), (46, 51534), (47, 51543), (51, 51582), (58, 51645), (60, 51657), (63, 51699),

Gene: Indigenous_85 Start: 52030, Stop: 52320, Start Num: 34

Candidate Starts for Indigenous_85:

(Start: 34 @52030 has 74 MA's), (39, 52063), (41, 52078), (46, 52120), (47, 52129), (51, 52168), (58, 52231), (60, 52243), (63, 52285),

Gene: Inked_92 Start: 53930, Stop: 54268, Start Num: 22

Candidate Starts for Inked_92:

(Start: 22 @53930 has 23 MA's), (Start: 35 @53954 has 1 MA's), (51, 54089),

Gene: Issa_85 Start: 53558, Stop: 53872, Start Num: 35

Candidate Starts for Issa_85:

(Start: 22 @53534 has 23 MA's), (Start: 35 @53558 has 1 MA's), (51, 53693),

Gene: JEGGS_97 Start: 54446, Stop: 54748, Start Num: 29

Candidate Starts for JEGGS_97:

(21, 54419), (Start: 28 @54440 has 3 MA's), (Start: 29 @54446 has 17 MA's), (44, 54521), (60, 54665),

Gene: Jaylociraptor_83 Start: 51610, Stop: 51900, Start Num: 34

Candidate Starts for Jaylociraptor_83:

(Start: 34 @51610 has 74 MA's), (39, 51643), (41, 51658), (46, 51700), (47, 51709), (51, 51748), (58, 51811), (60, 51823), (63, 51865),

Gene: Jodelie19_88 Start: 58344, Stop: 58643, Start Num: 34

Candidate Starts for Jodelie19_88:

(Start: 18 @58308 has 10 MA's), (24, 58326), (Start: 34 @58344 has 74 MA's), (44, 58413), (59, 58557), (60, 58566),

Gene: Kardashian_80 Start: 51975, Stop: 52268, Start Num: 33

Candidate Starts for Kardashian_80:

(Start: 33 @51975 has 1 MA's), (46, 52065), (47, 52074), (48, 52086), (53, 52122), (56, 52161), (58, 52176), (60, 52188), (63, 52230),

Gene: Kardesai_97 Start: 54025, Stop: 54327, Start Num: 29

Candidate Starts for Kardesai_97:

(21, 53998), (Start: 28 @54019 has 3 MA's), (Start: 29 @54025 has 17 MA's), (44, 54100), (60, 54244),

Gene: KeaneyLin_92 Start: 54006, Stop: 54308, Start Num: 29

Candidate Starts for KeaneyLin_92:

(21, 53979), (Start: 28 @54000 has 3 MA's), (Start: 29 @54006 has 17 MA's), (44, 54081), (60, 54225),

Gene: Kenosha_87 Start: 56919, Stop: 57224, Start Num: 34

Candidate Starts for Kenosha_87:

(Start: 18 @56883 has 10 MA's), (24, 56901), (Start: 34 @56919 has 74 MA's), (44, 56988), (46, 57009), (59, 57132), (60, 57141),

Gene: Kerry_90 Start: 55610, Stop: 55915, Start Num: 34

Candidate Starts for Kerry_90:

(Start: 34 @55610 has 74 MA's), (44, 55679), (59, 55823), (60, 55832),

Gene: Leathea_95 Start: 51147, Stop: 51464, Start Num: 22

Candidate Starts for Leathea_95:

(Start: 22 @51147 has 23 MA's), (36, 51192), (45, 51243), (52, 51309), (60, 51381),

Gene: Lewando_86 Start: 51174, Stop: 51485, Start Num: 22

Candidate Starts for Lewando_86:

(Start: 22 @51174 has 23 MA's), (45, 51270), (60, 51408),

Gene: LibertyBell_76 Start: 48692, Stop: 48985, Start Num: 34

Candidate Starts for LibertyBell_76:

(27, 48680), (Start: 34 @48692 has 74 MA's), (51, 48830), (53, 48839), (60, 48905), (63, 48947),

Gene: LilHuddy_89 Start: 53435, Stop: 53773, Start Num: 22

Candidate Starts for LilHuddy_89:

(Start: 22 @53435 has 23 MA's), (60, 53669),

Gene: Linda_84 Start: 50589, Stop: 50921, Start Num: 30

Candidate Starts for Linda_84:

(Start: 30 @50589 has 11 MA's), (60, 50808),

Gene: Madamoto_82 Start: 51285, Stop: 51575, Start Num: 34

Candidate Starts for Madamoto_82:

(Start: 34 @51285 has 74 MA's), (41, 51333), (46, 51375), (47, 51384), (51, 51423), (57, 51480), (58, 51486), (60, 51498), (63, 51540),

Gene: Madvan_86 Start: 56138, Stop: 56479, Start Num: 18

Candidate Starts for Madvan_86:

(Start: 18 @56138 has 10 MA's), (24, 56156), (Start: 34 @56174 has 74 MA's), (44, 56243), (46, 56264), (59, 56387), (60, 56396),

Gene: Magel_92 Start: 55799, Stop: 56104, Start Num: 34

Candidate Starts for Magel_92:

(Start: 34 @55799 has 74 MA's), (44, 55868), (59, 56012), (60, 56021),

Gene: Maya_83 Start: 51624, Stop: 51914, Start Num: 34

Candidate Starts for Maya_83:

(Start: 34 @51624 has 74 MA's), (39, 51657), (41, 51672), (46, 51714), (47, 51723), (51, 51762), (58, 51825), (60, 51837), (63, 51879),

Gene: MediumFry_82 Start: 53043, Stop: 53384, Start Num: 22

Candidate Starts for MediumFry_82:

(Start: 22 @53043 has 23 MA's), (Start: 35 @53070 has 1 MA's), (41, 53115), (51, 53205),

Gene: Meibysrarus_81 Start: 51008, Stop: 51298, Start Num: 34

Candidate Starts for Meibysrarus_81:

(Start: 34 @51008 has 74 MA's), (39, 51041), (41, 51056), (46, 51098), (47, 51107), (51, 51146), (58, 51209), (60, 51221), (63, 51263),

Gene: Michelle_84 Start: 50568, Stop: 50900, Start Num: 30

Candidate Starts for Michelle_84:

(Start: 30 @50568 has 11 MA's), (60, 50787),

Gene: Miek_85 Start: 52037, Stop: 52327, Start Num: 34

Candidate Starts for Miek_85:

(Start: 34 @52037 has 74 MA's), (41, 52085), (48, 52148), (52, 52178), (53, 52184), (59, 52241), (60, 52250), (63, 52292),

Gene: MiniBagel_90 Start: 54346, Stop: 54684, Start Num: 22

Candidate Starts for MiniBagel_90:

(Start: 22 @54346 has 23 MA's), (Start: 35 @54370 has 1 MA's), (51, 54505),

Gene: Mooshroom_98 Start: 54025, Stop: 54327, Start Num: 29

Candidate Starts for Mooshroom_98:

(21, 53998), (Start: 28 @54019 has 3 MA's), (Start: 29 @54025 has 17 MA's), (44, 54100), (60, 54244),

Gene: Moozy_55 Start: 39513, Stop: 39833, Start Num: 34

Candidate Starts for Moozy_55:

(19, 39474), (Start: 34 @39513 has 74 MA's), (42, 39576), (51, 39651), (59, 39717), (60, 39726),

Gene: Mossy_87 Start: 57201, Stop: 57506, Start Num: 34

Candidate Starts for Mossy_87:

(21, 57168), (Start: 34 @57201 has 74 MA's), (44, 57270), (59, 57414), (60, 57423),

Gene: MrAaronian_84 Start: 50568, Stop: 50900, Start Num: 30

Candidate Starts for MrAaronian_84:

(Start: 30 @50568 has 11 MA's), (60, 50787),

Gene: Mudcat_92 Start: 55602, Stop: 55904, Start Num: 29

Candidate Starts for Mudcat_92:

(21, 55575), (Start: 28 @55596 has 3 MA's), (Start: 29 @55602 has 17 MA's), (44, 55677), (60, 55821),

Gene: Nadmeg_87 Start: 57121, Stop: 57456, Start Num: 18

Candidate Starts for Nadmeg_87:

(Start: 18 @57121 has 10 MA's), (24, 57139), (Start: 34 @57157 has 74 MA's), (44, 57226), (59, 57370), (60, 57379),

Gene: Namo_85 Start: 52079, Stop: 52369, Start Num: 34

Candidate Starts for Namo_85:

(Start: 34 @52079 has 74 MA's), (39, 52112), (41, 52127), (46, 52169), (47, 52178), (51, 52217), (58, 52280), (60, 52292), (63, 52334),

Gene: NapoleonB_97 Start: 53998, Stop: 54306, Start Num: 28

Candidate Starts for NapoleonB_97:

(21, 53977), (Start: 28 @53998 has 3 MA's), (Start: 29 @54004 has 17 MA's), (44, 54079), (60, 54223),

Gene: Nason_94 Start: 54217, Stop: 54519, Start Num: 29

Candidate Starts for Nason_94:

(21, 54190), (Start: 28 @54211 has 3 MA's), (Start: 29 @54217 has 17 MA's), (44, 54292), (60, 54436),

Gene: Nightmare_89 Start: 54909, Stop: 55247, Start Num: 22

Candidate Starts for Nightmare_89:

(Start: 22 @54909 has 23 MA's), (Start: 35 @54933 has 1 MA's), (51, 55068),

Gene: Niktson_90 Start: 54476, Stop: 54814, Start Num: 22

Candidate Starts for Niktson_90:

(Start: 22 @54476 has 23 MA's), (Start: 35 @54500 has 1 MA's), (51, 54635),

Gene: Nithya_88 Start: 57069, Stop: 57404, Start Num: 18

Candidate Starts for Nithya_88:

(Start: 18 @57069 has 10 MA's), (24, 57087), (Start: 34 @57105 has 74 MA's), (44, 57174), (46, 57195), (59, 57318), (60, 57327),

Gene: Odesza_89 Start: 55746, Stop: 56051, Start Num: 34

Candidate Starts for Odesza_89:

(Start: 34 @55746 has 74 MA's), (44, 55815), (59, 55959), (60, 55968),

Gene: OhMyWard_83 Start: 56996, Stop: 57301, Start Num: 34
Candidate Starts for OhMyWard_83:
(5, 56912), (13, 56942), (21, 56963), (Start: 34 @56996 has 74 MA's), (44, 57065), (59, 57209), (60, 57218),

Gene: OlgasClover_90 Start: 57939, Stop: 58238, Start Num: 34
Candidate Starts for OlgasClover_90:
(Start: 18 @57903 has 10 MA's), (24, 57921), (Start: 34 @57939 has 74 MA's), (44, 58008), (59, 58152), (60, 58161),

Gene: OlympicHelado_85 Start: 52100, Stop: 52390, Start Num: 34
Candidate Starts for OlympicHelado_85:
(Start: 34 @52100 has 74 MA's), (39, 52133), (41, 52148), (46, 52190), (47, 52199), (51, 52238), (58, 52301), (60, 52313), (63, 52355),

Gene: Paella_245 Start: 109816, Stop: 110109, Start Num: 34
Candidate Starts for Paella_245:
(Start: 34 @109816 has 74 MA's), (37, 109843), (41, 109864), (51, 109954), (53, 109963), (54, 109975), (59, 110020), (61, 110044), (65, 110095),

Gene: Pepy6_050 Start: 72684, Stop: 73013, Start Num: 34
Candidate Starts for Pepy6_050:
(9, 72609), (Start: 34 @72684 has 74 MA's), (46, 72777), (59, 72900), (60, 72909),

Gene: Perkunas_91 Start: 55643, Stop: 55948, Start Num: 34
Candidate Starts for Perkunas_91:
(11, 55580), (12, 55583), (Start: 34 @55643 has 74 MA's), (44, 55712), (53, 55790), (59, 55856), (60, 55865),

Gene: Petite_90 Start: 56517, Stop: 56822, Start Num: 34
Candidate Starts for Petite_90:
(11, 56454), (16, 56472), (Start: 18 @56478 has 10 MA's), (Start: 34 @56517 has 74 MA's), (44, 56586), (53, 56664), (59, 56730), (60, 56739),

Gene: Phaby_88 Start: 53367, Stop: 53705, Start Num: 22
Candidate Starts for Phaby_88:
(Start: 22 @53367 has 23 MA's), (60, 53601),

Gene: Phepper_89 Start: 56610, Stop: 56951, Start Num: 18
Candidate Starts for Phepper_89:
(Start: 18 @56610 has 10 MA's), (24, 56628), (Start: 34 @56646 has 74 MA's), (44, 56715), (46, 56736), (59, 56859), (60, 56868),

Gene: Pherobrine_86 Start: 56340, Stop: 56645, Start Num: 34
Candidate Starts for Pherobrine_86:
(7, 56268), (21, 56307), (Start: 34 @56340 has 74 MA's), (44, 56409), (59, 56553), (60, 56562),

Gene: PherryCruz_55 Start: 39702, Stop: 40022, Start Num: 34
Candidate Starts for PherryCruz_55:
(19, 39663), (Start: 34 @39702 has 74 MA's), (42, 39765), (51, 39840), (60, 39915),

Gene: Poco6_049 Start: 73946, Stop: 74275, Start Num: 34
Candidate Starts for Poco6_049:

(Start: 34 @73946 has 74 MA's), (46, 74039), (59, 74162), (60, 74171),

Gene: Popy_81 Start: 52381, Stop: 52671, Start Num: 34

Candidate Starts for Popy_81:

(Start: 34 @52381 has 74 MA's), (39, 52414), (41, 52429), (46, 52471), (47, 52480), (51, 52519), (58, 52582), (60, 52594), (63, 52636),

Gene: ProfFrink_85 Start: 50537, Stop: 50869, Start Num: 30

Candidate Starts for ProfFrink_85:

(Start: 30 @50537 has 11 MA's), (60, 50756),

Gene: Qui_244 Start: 109804, Stop: 110097, Start Num: 34

Candidate Starts for Qui_244:

(Start: 34 @109804 has 74 MA's), (37, 109831), (41, 109852), (51, 109942), (53, 109951), (54, 109963), (59, 110008), (61, 110032), (65, 110083),

Gene: Rainydai_88 Start: 53655, Stop: 53945, Start Num: 34

Candidate Starts for Rainydai_88:

(Start: 34 @53655 has 74 MA's), (41, 53703), (48, 53766), (52, 53796), (53, 53802), (59, 53859), (60, 53868), (63, 53910),

Gene: Raunak_85 Start: 50247, Stop: 50579, Start Num: 30

Candidate Starts for Raunak_85:

(Start: 30 @50247 has 11 MA's), (60, 50466),

Gene: RavenPuff_56 Start: 39672, Stop: 39992, Start Num: 34

Candidate Starts for RavenPuff_56:

(19, 39633), (Start: 34 @39672 has 74 MA's), (42, 39735), (51, 39810), (60, 39885),

Gene: Regigigas_91 Start: 53267, Stop: 53557, Start Num: 34

Candidate Starts for Regigigas_91:

(Start: 34 @53267 has 74 MA's), (41, 53315), (48, 53378), (52, 53408), (53, 53414), (59, 53471), (60, 53480), (63, 53522),

Gene: Renaldo_90 Start: 51279, Stop: 51590, Start Num: 22

Candidate Starts for Renaldo_90:

(Start: 22 @51279 has 23 MA's), (45, 51375), (60, 51513),

Gene: Rickmore_89 Start: 56232, Stop: 56531, Start Num: 34

Candidate Starts for Rickmore_89:

(Start: 18 @56196 has 10 MA's), (24, 56214), (Start: 34 @56232 has 74 MA's), (44, 56301), (59, 56445), (60, 56454),

Gene: Rima_84 Start: 52079, Stop: 52369, Start Num: 34

Candidate Starts for Rima_84:

(Start: 34 @52079 has 74 MA's), (39, 52112), (41, 52127), (46, 52169), (47, 52178), (51, 52217), (58, 52280), (60, 52292), (63, 52334),

Gene: Roney_89 Start: 55909, Stop: 56214, Start Num: 34

Candidate Starts for Roney_89:

(Start: 34 @55909 has 74 MA's), (44, 55978), (59, 56122), (60, 56131),

Gene: RosaAsantewaa_52 Start: 38783, Stop: 39076, Start Num: 34

Candidate Starts for RosaAsantewaa_52:

(Start: 34 @38783 has 74 MA's), (40, 38822), (41, 38831), (51, 38921), (60, 38996), (63, 39038),

Gene: Runhaar_86 Start: 56213, Stop: 56548, Start Num: 18

Candidate Starts for Runhaar_86:

(Start: 18 @56213 has 10 MA's), (24, 56231), (Start: 34 @56249 has 74 MA's), (44, 56318), (59, 56462), (60, 56471),

Gene: Salk_84 Start: 50551, Stop: 50883, Start Num: 30

Candidate Starts for Salk_84:

(Start: 30 @50551 has 11 MA's), (60, 50770),

Gene: Scap1_53 Start: 39048, Stop: 39368, Start Num: 34

Candidate Starts for Scap1_53:

(Start: 34 @39048 has 74 MA's), (42, 39111), (51, 39186), (55, 39225), (57, 39243), (60, 39261),

Gene: Schwartz33_85 Start: 55529, Stop: 55834, Start Num: 34

Candidate Starts for Schwartz33_85:

(15, 55475), (21, 55496), (Start: 33 @55526 has 1 MA's), (Start: 34 @55529 has 74 MA's), (44, 55598), (59, 55742), (60, 55751),

Gene: ScienceWizSam_93 Start: 54288, Stop: 54626, Start Num: 22

Candidate Starts for ScienceWizSam_93:

(Start: 22 @54288 has 23 MA's), (Start: 35 @54312 has 1 MA's), (51, 54447),

Gene: Secretariat_81 Start: 53797, Stop: 54102, Start Num: 34

Candidate Starts for Secretariat_81:

(Start: 34 @53797 has 74 MA's), (44, 53866), (59, 54010), (60, 54019),

Gene: SendItCS_83 Start: 52025, Stop: 52315, Start Num: 34

Candidate Starts for SendItCS_83:

(Start: 34 @52025 has 74 MA's), (41, 52073), (48, 52136), (52, 52166), (53, 52172), (59, 52229), (60, 52238), (63, 52280),

Gene: Serenabean_84 Start: 51398, Stop: 51691, Start Num: 34

Candidate Starts for Serenabean_84:

(Start: 34 @51398 has 74 MA's), (37, 51428), (57, 51596), (59, 51605), (62, 51632), (66, 51686),

Gene: SheRa_56 Start: 39582, Stop: 39902, Start Num: 34

Candidate Starts for SheRa_56:

(19, 39543), (Start: 34 @39582 has 74 MA's), (42, 39645), (51, 39720), (59, 39786), (60, 39795),

Gene: Shepard_89 Start: 53355, Stop: 53693, Start Num: 22

Candidate Starts for Shepard_89:

(Start: 22 @53355 has 23 MA's), (60, 53589),

Gene: Shiba_83 Start: 50263, Stop: 50595, Start Num: 30

Candidate Starts for Shiba_83:

(Start: 30 @50263 has 11 MA's), (60, 50482),

Gene: Sloopyjoe_84 Start: 50570, Stop: 50902, Start Num: 30

Candidate Starts for Sloopyjoe_84:

(Start: 30 @50570 has 11 MA's), (60, 50789),

Gene: Soshi_82 Start: 52222, Stop: 52512, Start Num: 34

Candidate Starts for Soshi_82:

(Start: 34 @52222 has 74 MA's), (39, 52255), (41, 52270), (46, 52312), (47, 52321), (51, 52360), (58, 52423), (60, 52435), (63, 52477),

Gene: Spectropatronm_82 Start: 51618, Stop: 51908, Start Num: 34

Candidate Starts for Spectropatronm_82:

(Start: 34 @51618 has 74 MA's), (39, 51651), (41, 51666), (46, 51708), (47, 51717), (51, 51756), (58, 51819), (60, 51831), (63, 51873),

Gene: Sporto_81 Start: 50849, Stop: 51172, Start Num: 29

Candidate Starts for Sporto_81:

(Start: 29 @50849 has 17 MA's), (43, 50921), (44, 50924), (51, 50993), (60, 51068),

Gene: StarLord_84 Start: 50563, Stop: 50895, Start Num: 30

Candidate Starts for StarLord_84:

(Start: 30 @50563 has 11 MA's), (60, 50782),

Gene: Stayer_84 Start: 50566, Stop: 50898, Start Num: 30

Candidate Starts for Stayer_84:

(Start: 30 @50566 has 11 MA's), (60, 50785),

Gene: Synopsis_81 Start: 53610, Stop: 53951, Start Num: 22

Candidate Starts for Synopsis_81:

(Start: 22 @53610 has 23 MA's), (51, 53772),

Gene: TaidaOne_83 Start: 52094, Stop: 52384, Start Num: 34

Candidate Starts for TaidaOne_83:

(Start: 34 @52094 has 74 MA's), (39, 52127), (41, 52142), (46, 52184), (47, 52193), (51, 52232), (58, 52295), (60, 52307), (63, 52349),

Gene: Tanis_90 Start: 55729, Stop: 56034, Start Num: 34

Candidate Starts for Tanis_90:

(Start: 34 @55729 has 74 MA's), (44, 55798), (59, 55942), (60, 55951),

Gene: Teacup_85 Start: 54308, Stop: 54646, Start Num: 22

Candidate Starts for Teacup_85:

(Start: 22 @54308 has 23 MA's), (Start: 35 @54332 has 1 MA's), (51, 54467),

Gene: TenaciousP_95 Start: 58307, Stop: 58606, Start Num: 34

Candidate Starts for TenaciousP_95:

(Start: 18 @58271 has 10 MA's), (24, 58289), (Start: 34 @58307 has 74 MA's), (44, 58376), (59, 58520), (60, 58529),

Gene: Tenno_89 Start: 54263, Stop: 54601, Start Num: 22

Candidate Starts for Tenno_89:

(Start: 22 @54263 has 23 MA's), (Start: 35 @54287 has 1 MA's), (51, 54422),

Gene: Thiqqums_91 Start: 53655, Stop: 53945, Start Num: 34

Candidate Starts for Thiqqums_91:

(Start: 34 @53655 has 74 MA's), (41, 53703), (48, 53766), (52, 53796), (53, 53802), (59, 53859), (60, 53868), (63, 53910),

Gene: TieDye_79 Start: 50942, Stop: 51232, Start Num: 34

Candidate Starts for TieDye_79:

(Start: 34 @50942 has 74 MA's), (39, 50975), (41, 50990), (46, 51032), (47, 51041), (51, 51080), (58, 51143), (60, 51155), (63, 51197),

Gene: Tokki_95 Start: 53736, Stop: 54074, Start Num: 22

Candidate Starts for Tokki_95:

(Start: 22 @53736 has 23 MA's), (60, 53970),

Gene: TonyStarch_82 Start: 51380, Stop: 51670, Start Num: 34

Candidate Starts for TonyStarch_82:

(Start: 34 @51380 has 74 MA's), (39, 51413), (41, 51428), (46, 51470), (47, 51479), (51, 51518), (58, 51581), (60, 51593), (63, 51635),

Gene: Tribby_99 Start: 55243, Stop: 55545, Start Num: 29

Candidate Starts for Tribby_99:

(21, 55216), (Start: 28 @55237 has 3 MA's), (Start: 29 @55243 has 17 MA's), (44, 55318), (60, 55462),

Gene: Trustiboi_87 Start: 54309, Stop: 54650, Start Num: 22

Candidate Starts for Trustiboi_87:

(Start: 22 @54309 has 23 MA's), (55, 54510), (60, 54546),

Gene: Untouchable_90 Start: 57643, Stop: 57948, Start Num: 34

Candidate Starts for Untouchable_90:

(Start: 18 @57607 has 10 MA's), (24, 57625), (Start: 34 @57643 has 74 MA's), (44, 57712), (46, 57733), (59, 57856), (60, 57865),

Gene: Uzumaki_89 Start: 51465, Stop: 51782, Start Num: 23

Candidate Starts for Uzumaki_89:

(1, 51336), (2, 51345), (3, 51372), (8, 51411), (10, 51420), (17, 51444), (Start: 23 @51465 has 1 MA's), (45, 51561), (60, 51699),

Gene: Vardy_87 Start: 56164, Stop: 56463, Start Num: 34

Candidate Starts for Vardy_87:

(Start: 18 @56128 has 10 MA's), (24, 56146), (Start: 34 @56164 has 74 MA's), (44, 56233), (59, 56377), (60, 56386),

Gene: Xenomorph_92 Start: 54848, Stop: 55150, Start Num: 29

Candidate Starts for Xenomorph_92:

(21, 54821), (Start: 28 @54842 has 3 MA's), (Start: 29 @54848 has 17 MA's), (44, 54923), (60, 55067),

Gene: Zeph_91 Start: 57411, Stop: 57752, Start Num: 18

Candidate Starts for Zeph_91:

(Start: 18 @57411 has 10 MA's), (24, 57429), (Start: 34 @57447 has 74 MA's), (44, 57516), (46, 57537), (59, 57660), (60, 57669),