# Pham 345478


1: TatarkaPM_52 + 41
2: Redfield_51 + 8
3: MonChoix_49 + 2
4: Renzie_52 + 2
5: JasperRussell_51 + 12
6: SJay_52 + 26
7: Leafus_51
8: GoneGirl_53 + 1
9: JasonD_53
10: McGalleon_53 + 1
11: Acosta_54 + 1
12: Superfresh_52 + 2
13: BeautPeep30_52 + 17
14: Agente005_52
15: Endor_53
16: Schnapsidee_51
17: Zada_53
18: PhillyPhantom_51
19: Aleyra_52
20: BeeBee8_52
21: Eleri_53 + 5
22: MCubed_53 + 4

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 345478 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345478 has 144 members, 7 are drafts.

Phages represented in each track:
• Track 1 : TatarkaPM_52, BonesMcCoy_52, Den3_52, Ioannes_52, PhredFlintston_52, TinSulphur_53, Inventa_52, Kouch_52, Exploradora_51, Thorongil_52, Strathdee_52, Blage_52, StirfryIV_51, ParleG_52, Alyxandracam_52, BigRedClifford_52, Convict_52, Velene_52, MillyPhilly_52, Greys_52, WildNOut_52, Sedgewig_51, Rapheph_52, Knox_52, Clancy_51, Janus167_51, Lovelyunicorn_52, Byron23_53, Pherferi_52, Phiderman_52, Shee_52, ShaiHulud_52, Phireproof_52, PuppyEggo_52, Gubbabump_51, StingRay_51, Riyhil_52, NickSell_52, GoingMerry_52, Ludgate_52, Vispistious_52, Bandik_52
• Track 2 : Redfield_51, Soror1_50, KingJulien_50, Raccoon_51, Balsa_50, Stormbreaker8_50, Hamlet_51, Etna_51, Peppino_51
• Track 3 : MonChoix_49, Anilorac_51, FarmerDoug_51
• Track 4 : Renzie_52, Dave_52, Antoinette_52
• Track 5 : JasperRussell_51, Benjalauren_52, Dothraki_52, KellyGreen_53, Asta_51, Duocatuli_51, Baines_51, RosieMae_51, Rog141_51, KannH_51, Figueroism_52, Jerbirus_53, Kale_51
• Track 6 : SJay_52, Klimt_52, Erla_51, AranulaLuti_51, Aubergine_51, Stanktossa_51, Garey24_52, Bonino_51, Chamuel_51, Nattles_51, ManRay_51, Gershwin_51, Winzigespinne_51, TeddyBear_51, Espinosa_51, Calix_51, Gelo_51, Pocket_51, Oats_51, SonOfLevi_52, Christoph_51, AlexAdler_52, Nagem_52, HankSprout_52, Etta_51, Tenda_51, Chako_51
• Track 7 : Leafus_51
• Track 8 : GoneGirl_53, GardenB_52
• Track 9 : JasonD_53
• Track 10 : McGalleon_53, Jenos_54
• Track 11 : Acosta_54, HavenFinLeoSun_54
• Track 12 : Superfresh_52, Peep_52, JeriBeth_51
• Track 13 : BeautPeep30_52, AxiPup_52, Oxtober96_53, Symere_51, Papafritta_51, HungryHenry_51, Raptor_52, Robinson_52, HanSolo_51, Ilzat_51, Thompsone_52, Teagan_52, Gargoyle_52, MrWorldwide_52, MaeLinda_52, CoraRita_51, Martin_53, Kurt1_52
• Track 14 : Agente005_52
• Track 15 : Endor_53
• Track 16 : Schnapsidee_51
• Track 17 : Zada_53
• Track 18 : PhillyPhantom_51
• Track 19 : Aleyra_52
• Track 20 : BeeBee8_52

• Track 21 : Eleri_53, ColaCorta_53, Xebius_53, PSirce_53, Andromedas_53, Saratos_53
• Track 22 : MCubed_53, Phanita_54, Zenitsu_53, ChikPic_53, Finny_54

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

The start number called the most often in the published annotations is 2, it was called in 74 of the 137 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AlexAdler_52, Alyxandracam_52, Antoinette_52, AranulaLuti_51, Aubergine_51, Bandik_52, BigRedClifford_52, Blage_52, BonesMcCoy_52, Bonino_51, Byron23_53, Calix_51, Chako_51, Chamuel_51, Christoph_51, Clancy_51, Convict_52, Dave_52, Den3_52, Erla_51, Espinosa_51, Etta_51, Exploradora_51, Garey24_52, Gelo_51, Gershwin_51, GoingMerry_52, Greys_52, Gubbabump_51, HankSprout_52, Inventa_52, Ioannes_52, Janus167_51, JasonD_53, Klimt_52, Knox_52, Kouch_52, Lovelyunicorn_52, Ludgate_52, ManRay_51, MillyPhilly_52, Nagem_52, Nattles_51, NickSell_52, Oats_51, ParleG_52, Pherferi_52, Phiderman_52, Phireproof_52, PhredFlintston_52, Pocket_51, PuppyEggo_52, Rapheph_52, Renzie_52, Riyhil_52, SJay_52, Sedgewig_51, ShaiHulud_52, Shee_52, SonOfLevi_52, Stanktossa_51, StingRay_51, StirfryIV_51, Strathdee_52, TatarkaPM_52, TeddyBear_51, Tenda_51, Thorongil_52, TinSulphur_53, Velene_52, Vispistious_52, WildNOut_52, Winzigespinne_51, Zada_53,

Genes that have the "Most Annotated" start but do not call it:
• Acosta_54, Asta_51, AxiPup_52, Baines_51, BeautPeep30_52, Benjalauren_52, CoraRita_51, Dothraki_52, Duocatuli_51, Figueroism_52, Gargoyle_52, HanSolo_51, HavenFinLeoSun_54, HungryHenry_51, Ilzat_51, JasperRussell_51, Jerbirus_53, JeriBeth_51, Kale_51, KannH_51, KellyGreen_53, Kurt1_52, MaeLinda_52, Martin_53, MrWorldwide_52, Oxtober96_53, Papafritta_51, Peep_52, Raptor_52, Robinson_52, Rog141_51, RosieMae_51, Superfresh_52, Symere_51, Teagan_52, Thompsone_52,

Genes that do not have the "Most Annotated" start:
• Agente005_52, Aleyra_52, Andromedas_53, Anilorac_51, Balsa_50, BeeBee8_52, ChikPic_53, ColaCorta_53, Eleri_53, Endor_53, Etna_51, FarmerDoug_51, Finny_54, GardenB_52, GoneGirl_53, Hamlet_51, Jenos_54, KingJulien_50, Leafus_51, MCubed_53, McGalleon_53, MonChoix_49, PSirce_53, Peppino_51, Phanita_54, PhillyPhantom_51, Raccoon_51, Redfield_51, Saratos_53, Schnapsidee_51, Soror1_50, Stormbreaker8_50, Xebius_53, Zenitsu_53,

**Summary by start number:**

Start 2:
• Found in 110 of 144 ( 76.4% ) of genes in pham
• Manual Annotations of this start: 74 of 137
• Called 67.3% of time when present
• Phage (with cluster) where this start called: AlexAdler_52 (EA1), Alyxandracam_52 (EA1), Antoinette_52 (EA1), AranulaLuti_51 (EA1), Aubergine_51 (EA1), Bandik_52 (EA1), BigRedClifford_52 (EA1), Blage_52 (EA1), BonesMcCoy_52 (EA1), Bonino_51

(EA1), Byron23_53 (EA1), Calix_51 (EA1), Chako_51 (EA1), Chamuel_51 (EA1), Christoph_51 (EA1), Clancy_51 (EA1), Convict_52 (EA1), Dave_52 (EA1), Den3_52 (EA1), Erla_51 (EA1), Espinosa_51 (EA1), Etta_51 (EA1), Exploradora_51 (EA1), Garey24_52 (EA1), Gelo_51 (EA1), Gershwin_51 (EA1), GoingMerry_52 (EA1), Greys_52 (EA1), Gubbabump_51 (EA1), HankSprout_52 (EA1), Inventa_52 (EA1), Ioannes_52 (EA1), Janus167_51 (EA1), JasonD_53 (EA1), Klimt_52 (EA1), Knox_52 (EA1), Kouch_52 (EA1), Lovelyunicorn_52 (EA1), Ludgate_52 (EA1), ManRay_51 (EA1), MillyPhilly_52 (EA1), Nagem_52 (EA1), Nattles_51 (EA1), NickSell_52 (EA1), Oats_51 (EA1), ParleG_52 (EA1), Pherferi_52 (EA1), Phiderman_52 (EA1), Phireproof_52 (EA1), PhredFlintston_52 (EA1), Pocket_51 (EA1), PuppyEggo_52 (EA1), Rapheph_52 (EA1), Renzie_52 (EA1), Riyhil_52 (EA1), SJay_52 (EA1), Sedgewig_51 (EA1), ShaiHulud_52 (EA1), Shee_52 (EA1), SonOfLevi_52 (EA1), Stanktossa_51 (EA1), StingRay_51 (EA1), StirfryIV_51 (EA1), Strathdee_52 (EA1), TatarkaPM_52 (EA1), TeddyBear_51 (EA1), Tenda_51 (EA1), Thorongil_52 (EA1), TinSulphur_53 (EA1), Velene_52 (EA1), Vispistious_52 (EA1), WildNOut_52 (EA1), Winzigespinne_51 (EA1), Zada_53 (EA1),

Start 4:
• Found in 133 of 144 ( 92.4% ) of genes in pham
• Manual Annotations of this start: 53 of 137
• Called 42.9% of time when present
• Phage (with cluster) where this start called: Acosta_54 (EA1), Agente005_52 (EA1), Anilorac_51 (EA1), Asta_51 (EA1), AxiPup_52 (EA1), Baines_51 (EA1), Balsa_50 (EA1), BeautPeep30_52 (EA1), BeeBee8_52 (EA1), Benjalauren_52 (EA1), CoraRita_51 (EA1), Dothraki_52 (EA1), Duocatuli_51 (EA1), Endor_53 (EA1), Etna_51 (EA1), FarmerDoug_51 (EA1), Figueroism_52 (EA1), GardenB_52 (EA1), Gargoyle_52 (EA1), GoneGirl_53 (EA1), Hamlet_51 (EA1), HanSolo_51 (EA1), HavenFinLeoSun_54 (EA1), HungryHenry_51 (EA1), Ilzat_51 (EA1), JasperRussell_51 (EA1), Jenos_54 (EA1), Jerbirus_53 (EA1), JeriBeth_51 (EA1), Kale_51 (EA1), KannH_51 (EA1), KellyGreen_53 (EA1), KingJulien_50 (EA1), Kurt1_52 (EA1), Leafus_51 (EA1), MaeLinda_52 (EA1), Martin_53 (EA1), McGalleon_53 (EA1), MonChoix_49 (EA1), MrWorldwide_52 (EA1), Oxtober96_53 (EA1), Papafritta_51 (EA1), Peep_52 (EA1), Peppino_51 (EA1), Raccoon_51 (EA1), Raptor_52 (EA1), Redfield_51 (EA1), Robinson_52 (EA1), Rog141_51 (EA1), RosieMae_51 (EA1), Schnapsidee_51 (EA1), Soror1_50 (EA1), Stormbreaker8_50 (EA1), Superfresh_52 (EA1), Symere_51 (EA1), Teagan_52 (EA1), Thompsone_52 (EA1),

Start 5:
• Found in 11 of 144 ( 7.6% ) of genes in pham
• Manual Annotations of this start: 10 of 137
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Andromedas_53 (EA2), ChikPic_53 (EA2), ColaCorta_53 (EA2), Eleri_53 (EA2), Finny_54 (EA2), MCubed_53 (EA2), PSirce_53 (EA2), Phanita_54 (EA2), Saratos_53 (EA2), Xebius_53 (EA2), Zenitsu_53 (EA2),

Start 7:
• Found in 123 of 144 ( 85.4% ) of genes in pham
• No Manual Annotations of this start.
• Called 1.6% of time when present
• Phage (with cluster) where this start called: Aleyra_52 (EA1), PhillyPhantom_51 (EA1),

**Summary by clusters:**

There are 2 clusters represented in this pham: EA1, EA2,

Info for manual annotations of cluster EA1:
•Start number 2 was manually annotated 74 times for cluster EA1.
•Start number 4 was manually annotated 53 times for cluster EA1.

Info for manual annotations of cluster EA2:
•Start number 5 was manually annotated 10 times for cluster EA2.

***Gene Information:***

Gene: Acosta_54 Start: 37147, Stop: 36935, Start Num: 4
Candidate Starts for Acosta_54:
(Start: 2 @37165 has 74 MA's), (Start: 4 @37147 has 53 MA's), (9, 37090),

Gene: Agente005_52 Start: 37041, Stop: 36820, Start Num: 4
Candidate Starts for Agente005_52:
(Start: 4 @37041 has 53 MA's), (7, 36996), (9, 36975),

Gene: AlexAdler_52 Start: 37010, Stop: 36777, Start Num: 2
Candidate Starts for AlexAdler_52:
(Start: 2 @37010 has 74 MA's), (Start: 4 @36992 has 53 MA's), (7, 36953), (9, 36932), (12, 36854),

Gene: Aleyra_52 Start: 37001, Stop: 36825, Start Num: 7
Candidate Starts for Aleyra_52:
(Start: 4 @37046 has 53 MA's), (7, 37001), (9, 36980),

Gene: Alyxandracam_52 Start: 37017, Stop: 36787, Start Num: 2
Candidate Starts for Alyxandracam_52:
(Start: 2 @37017 has 74 MA's), (Start: 4 @36999 has 53 MA's), (7, 36960), (9, 36939),

Gene: Andromedas_53 Start: 36580, Stop: 36368, Start Num: 5
Candidate Starts for Andromedas_53:
(3, 36616), (Start: 5 @36580 has 10 MA's), (6, 36556), (8, 36538),

Gene: Anilorac_51 Start: 36999, Stop: 36760, Start Num: 4
Candidate Starts for Anilorac_51:
(Start: 4 @36999 has 53 MA's), (9, 36930), (14, 36819),

Gene: Antoinette_52 Start: 37007, Stop: 36777, Start Num: 2
Candidate Starts for Antoinette_52:
(Start: 2 @37007 has 74 MA's), (Start: 4 @36989 has 53 MA's), (7, 36950), (9, 36929), (15, 36815),

Gene: AranulaLuti_51 Start: 36722, Stop: 36489, Start Num: 2
Candidate Starts for AranulaLuti_51:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: Asta_51 Start: 36714, Stop: 36499, Start Num: 4

Candidate Starts for Asta_51:
(Start: 2 @36732 has 74 MA's), (Start: 4 @36714 has 53 MA's), (7, 36675), (9, 36654), (12, 36576),

Gene: Aubergine_51 Start: 36732, Stop: 36499, Start Num: 2
Candidate Starts for Aubergine_51:
(Start: 2 @36732 has 74 MA's), (Start: 4 @36714 has 53 MA's), (7, 36675), (9, 36654), (12, 36576),

Gene: AxiPup_52 Start: 36968, Stop: 36756, Start Num: 4
Candidate Starts for AxiPup_52:
(Start: 2 @36986 has 74 MA's), (Start: 4 @36968 has 53 MA's), (7, 36929), (9, 36908),

Gene: Baines_51 Start: 36707, Stop: 36492, Start Num: 4
Candidate Starts for Baines_51:
(Start: 2 @36725 has 74 MA's), (Start: 4 @36707 has 53 MA's), (7, 36668), (9, 36647), (12, 36569),

Gene: Balsa_50 Start: 36805, Stop: 36584, Start Num: 4
Candidate Starts for Balsa_50:
(Start: 4 @36805 has 53 MA's), (7, 36760), (9, 36739),

Gene: Bandik_52 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for Bandik_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: BeautPeep30_52 Start: 37000, Stop: 36788, Start Num: 4
Candidate Starts for BeautPeep30_52:
(Start: 2 @37018 has 74 MA's), (Start: 4 @37000 has 53 MA's), (7, 36961), (9, 36940),

Gene: BeeBee8_52 Start: 36985, Stop: 36755, Start Num: 4
Candidate Starts for BeeBee8_52:
(Start: 4 @36985 has 53 MA's), (9, 36916), (14, 36805),

Gene: Benjalauren_52 Start: 36720, Stop: 36505, Start Num: 4
Candidate Starts for Benjalauren_52:
(Start: 2 @36738 has 74 MA's), (Start: 4 @36720 has 53 MA's), (7, 36681), (9, 36660), (12, 36582),

Gene: BigRedClifford_52 Start: 37013, Stop: 36783, Start Num: 2
Candidate Starts for BigRedClifford_52:
(Start: 2 @37013 has 74 MA's), (Start: 4 @36995 has 53 MA's), (7, 36956), (9, 36935),

Gene: Blage_52 Start: 37013, Stop: 36783, Start Num: 2
Candidate Starts for Blage_52:
(Start: 2 @37013 has 74 MA's), (Start: 4 @36995 has 53 MA's), (7, 36956), (9, 36935),

Gene: BonesMcCoy_52 Start: 37013, Stop: 36783, Start Num: 2
Candidate Starts for BonesMcCoy_52:
(Start: 2 @37013 has 74 MA's), (Start: 4 @36995 has 53 MA's), (7, 36956), (9, 36935),

Gene: Bonino_51 Start: 36711, Stop: 36478, Start Num: 2
Candidate Starts for Bonino_51:
(Start: 2 @36711 has 74 MA's), (Start: 4 @36693 has 53 MA's), (7, 36654), (9, 36633), (12, 36555),

Gene: Byron23_53 Start: 37015, Stop: 36785, Start Num: 2
Candidate Starts for Byron23_53:

(Start: 2 @37015 has 74 MA's), (Start: 4 @36997 has 53 MA's), (7, 36958), (9, 36937),

Gene: Calix_51 Start: 36718, Stop: 36485, Start Num: 2
Candidate Starts for Calix_51:
(Start: 2 @36718 has 74 MA's), (Start: 4 @36700 has 53 MA's), (7, 36661), (9, 36640), (12, 36562),

Gene: Chako_51 Start: 36722, Stop: 36489, Start Num: 2
Candidate Starts for Chako_51:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: Chamuel_51 Start: 36744, Stop: 36511, Start Num: 2
Candidate Starts for Chamuel_51:
(Start: 2 @36744 has 74 MA's), (Start: 4 @36726 has 53 MA's), (7, 36687), (9, 36666), (12, 36588),

Gene: ChikPic_53 Start: 36428, Stop: 36222, Start Num: 5
Candidate Starts for ChikPic_53:
(3, 36464), (Start: 5 @36428 has 10 MA's),

Gene: Christoph_51 Start: 36731, Stop: 36498, Start Num: 2
Candidate Starts for Christoph_51:
(Start: 2 @36731 has 74 MA's), (Start: 4 @36713 has 53 MA's), (7, 36674), (9, 36653), (12, 36575),

Gene: Clancy_51 Start: 36764, Stop: 36534, Start Num: 2
Candidate Starts for Clancy_51:
(Start: 2 @36764 has 74 MA's), (Start: 4 @36746 has 53 MA's), (7, 36707), (9, 36686),

Gene: ColaCorta_53 Start: 36580, Stop: 36368, Start Num: 5
Candidate Starts for ColaCorta_53:
(3, 36616), (Start: 5 @36580 has 10 MA's), (6, 36556), (8, 36538),

Gene: Convict_52 Start: 37013, Stop: 36783, Start Num: 2
Candidate Starts for Convict_52:
(Start: 2 @37013 has 74 MA's), (Start: 4 @36995 has 53 MA's), (7, 36956), (9, 36935),

Gene: CoraRita_51 Start: 36716, Stop: 36504, Start Num: 4
Candidate Starts for CoraRita_51:
(Start: 2 @36734 has 74 MA's), (Start: 4 @36716 has 53 MA's), (7, 36677), (9, 36656),

Gene: Dave_52 Start: 37007, Stop: 36777, Start Num: 2
Candidate Starts for Dave_52:
(Start: 2 @37007 has 74 MA's), (Start: 4 @36989 has 53 MA's), (7, 36950), (9, 36929), (15, 36815),

Gene: Den3_52 Start: 37018, Stop: 36788, Start Num: 2
Candidate Starts for Den3_52:
(Start: 2 @37018 has 74 MA's), (Start: 4 @37000 has 53 MA's), (7, 36961), (9, 36940),

Gene: Dothraki_52 Start: 36997, Stop: 36785, Start Num: 4
Candidate Starts for Dothraki_52:
(Start: 2 @37015 has 74 MA's), (Start: 4 @36997 has 53 MA's), (7, 36958), (9, 36937), (12, 36859),

Gene: Duocatuli_51 Start: 36704, Stop: 36489, Start Num: 4
Candidate Starts for Duocatuli_51:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: Eleri_53 Start: 36425, Stop: 36213, Start Num: 5
Candidate Starts for Eleri_53:
(3, 36461), (Start: 5 @36425 has 10 MA's), (6, 36401), (8, 36383),

Gene: Endor_53 Start: 37239, Stop: 37024, Start Num: 4
Candidate Starts for Endor_53:
(Start: 4 @37239 has 53 MA's), (7, 37200), (9, 37179), (13, 37080),

Gene: Erla_51 Start: 36715, Stop: 36482, Start Num: 2
Candidate Starts for Erla_51:
(Start: 2 @36715 has 74 MA's), (Start: 4 @36697 has 53 MA's), (7, 36658), (9, 36637), (12, 36559),

Gene: Espinosa_51 Start: 36730, Stop: 36497, Start Num: 2
Candidate Starts for Espinosa_51:
(Start: 2 @36730 has 74 MA's), (Start: 4 @36712 has 53 MA's), (7, 36673), (9, 36652), (12, 36574),

Gene: Etna_51 Start: 36852, Stop: 36631, Start Num: 4
Candidate Starts for Etna_51:
(Start: 4 @36852 has 53 MA's), (7, 36807), (9, 36786),

Gene: Etta_51 Start: 36719, Stop: 36486, Start Num: 2
Candidate Starts for Etta_51:
(Start: 2 @36719 has 74 MA's), (Start: 4 @36701 has 53 MA's), (7, 36662), (9, 36641), (12, 36563),

Gene: Exploradora_51 Start: 36719, Stop: 36489, Start Num: 2
Candidate Starts for Exploradora_51:
(Start: 2 @36719 has 74 MA's), (Start: 4 @36701 has 53 MA's), (7, 36662), (9, 36641),

Gene: FarmerDoug_51 Start: 36768, Stop: 36529, Start Num: 4
Candidate Starts for FarmerDoug_51:
(Start: 4 @36768 has 53 MA's), (9, 36699), (14, 36588),

Gene: Figueroism_52 Start: 36991, Stop: 36776, Start Num: 4
Candidate Starts for Figueroism_52:
(Start: 2 @37009 has 74 MA's), (Start: 4 @36991 has 53 MA's), (7, 36952), (9, 36931), (12, 36853),

Gene: Finny_54 Start: 36412, Stop: 36206, Start Num: 5
Candidate Starts for Finny_54:
(3, 36448), (Start: 5 @36412 has 10 MA's),

Gene: GardenB_52 Start: 37010, Stop: 36783, Start Num: 4
Candidate Starts for GardenB_52:
(Start: 4 @37010 has 53 MA's), (7, 36959), (9, 36938),

Gene: Garey24_52 Start: 36698, Stop: 36465, Start Num: 2
Candidate Starts for Garey24_52:
(Start: 2 @36698 has 74 MA's), (Start: 4 @36680 has 53 MA's), (7, 36641), (9, 36620), (12, 36542),

Gene: Gargoyle_52 Start: 37000, Stop: 36788, Start Num: 4
Candidate Starts for Gargoyle_52:
(Start: 2 @37018 has 74 MA's), (Start: 4 @37000 has 53 MA's), (7, 36961), (9, 36940),

Gene: Gelo_51 Start: 36725, Stop: 36492, Start Num: 2
Candidate Starts for Gelo_51:
(Start: 2 @36725 has 74 MA's), (Start: 4 @36707 has 53 MA's), (7, 36668), (9, 36647), (12, 36569),

Gene: Gershwin_51 Start: 36732, Stop: 36499, Start Num: 2
Candidate Starts for Gershwin_51:
(Start: 2 @36732 has 74 MA's), (Start: 4 @36714 has 53 MA's), (7, 36675), (9, 36654), (12, 36576),

Gene: GoingMerry_52 Start: 36996, Stop: 36766, Start Num: 2
Candidate Starts for GoingMerry_52:
(Start: 2 @36996 has 74 MA's), (Start: 4 @36978 has 53 MA's), (7, 36939), (9, 36918),

Gene: GoneGirl_53 Start: 36997, Stop: 36776, Start Num: 4
Candidate Starts for GoneGirl_53:
(Start: 4 @36997 has 53 MA's), (7, 36952), (9, 36931),

Gene: Greys_52 Start: 37014, Stop: 36784, Start Num: 2
Candidate Starts for Greys_52:
(Start: 2 @37014 has 74 MA's), (Start: 4 @36996 has 53 MA's), (7, 36957), (9, 36936),

Gene: Gubbabump_51 Start: 36709, Stop: 36479, Start Num: 2
Candidate Starts for Gubbabump_51:
(Start: 2 @36709 has 74 MA's), (Start: 4 @36691 has 53 MA's), (7, 36652), (9, 36631),

Gene: Hamlet_51 Start: 36797, Stop: 36576, Start Num: 4
Candidate Starts for Hamlet_51:
(Start: 4 @36797 has 53 MA's), (7, 36752), (9, 36731),

Gene: HanSolo_51 Start: 36701, Stop: 36489, Start Num: 4
Candidate Starts for HanSolo_51:
(Start: 2 @36719 has 74 MA's), (Start: 4 @36701 has 53 MA's), (7, 36662), (9, 36641),

Gene: HankSprout_52 Start: 36599, Stop: 36366, Start Num: 2
Candidate Starts for HankSprout_52:
(Start: 2 @36599 has 74 MA's), (Start: 4 @36581 has 53 MA's), (7, 36542), (9, 36521), (12, 36443),

Gene: HavenFinLeoSun_54 Start: 37093, Stop: 36881, Start Num: 4
Candidate Starts for HavenFinLeoSun_54:
(Start: 2 @37111 has 74 MA's), (Start: 4 @37093 has 53 MA's), (9, 37036),

Gene: HungryHenry_51 Start: 36706, Stop: 36494, Start Num: 4
Candidate Starts for HungryHenry_51:
(Start: 2 @36724 has 74 MA's), (Start: 4 @36706 has 53 MA's), (7, 36667), (9, 36646),

Gene: Ilzat_51 Start: 36717, Stop: 36505, Start Num: 4
Candidate Starts for Ilzat_51:
(Start: 2 @36735 has 74 MA's), (Start: 4 @36717 has 53 MA's), (7, 36678), (9, 36657),

Gene: Inventa_52 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for Inventa_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: Ioannes_52 Start: 37016, Stop: 36786, Start Num: 2

Candidate Starts for Ioannes_52:
(Start: 2 @37016 has 74 MA's), (Start: 4 @36998 has 53 MA's), (7, 36959), (9, 36938),

Gene: Janus167_51 Start: 36746, Stop: 36516, Start Num: 2
Candidate Starts for Janus167_51:
(Start: 2 @36746 has 74 MA's), (Start: 4 @36728 has 53 MA's), (7, 36689), (9, 36668),

Gene: JasonD_53 Start: 36946, Stop: 36716, Start Num: 2
Candidate Starts for JasonD_53:
(Start: 2 @36946 has 74 MA's), (Start: 4 @36928 has 53 MA's), (9, 36871),

Gene: JasperRussell_51 Start: 36704, Stop: 36489, Start Num: 4
Candidate Starts for JasperRussell_51:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: Jenos_54 Start: 37661, Stop: 37449, Start Num: 4
Candidate Starts for Jenos_54:
(Start: 4 @37661 has 53 MA's), (9, 37604),

Gene: Jerbirus_53 Start: 36704, Stop: 36489, Start Num: 4
Candidate Starts for Jerbirus_53:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: JeriBeth_51 Start: 36564, Stop: 36352, Start Num: 4
Candidate Starts for JeriBeth_51:
(Start: 2 @36582 has 74 MA's), (Start: 4 @36564 has 53 MA's), (7, 36525), (9, 36504), (15, 36390),

Gene: Kale_51 Start: 36716, Stop: 36501, Start Num: 4
Candidate Starts for Kale_51:
(Start: 2 @36734 has 74 MA's), (Start: 4 @36716 has 53 MA's), (7, 36677), (9, 36656), (12, 36578),

Gene: KannH_51 Start: 36704, Stop: 36489, Start Num: 4
Candidate Starts for KannH_51:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: KellyGreen_53 Start: 36698, Stop: 36483, Start Num: 4
Candidate Starts for KellyGreen_53:
(Start: 2 @36716 has 74 MA's), (Start: 4 @36698 has 53 MA's), (7, 36659), (9, 36638), (12, 36560),

Gene: KingJulien_50 Start: 36688, Stop: 36467, Start Num: 4
Candidate Starts for KingJulien_50:
(Start: 4 @36688 has 53 MA's), (7, 36643), (9, 36622),

Gene: Klimt_52 Start: 36750, Stop: 36517, Start Num: 2
Candidate Starts for Klimt_52:
(Start: 2 @36750 has 74 MA's), (Start: 4 @36732 has 53 MA's), (7, 36693), (9, 36672), (12, 36594),

Gene: Knox_52 Start: 37013, Stop: 36783, Start Num: 2
Candidate Starts for Knox_52:
(Start: 2 @37013 has 74 MA's), (Start: 4 @36995 has 53 MA's), (7, 36956), (9, 36935),

Gene: Kouch_52 Start: 36719, Stop: 36489, Start Num: 2
Candidate Starts for Kouch_52:

(Start: 2 @36719 has 74 MA's), (Start: 4 @36701 has 53 MA's), (7, 36662), (9, 36641),

Gene: Kurt1_52 Start: 36994, Stop: 36782, Start Num: 4
Candidate Starts for Kurt1_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: Leafus_51 Start: 36951, Stop: 36730, Start Num: 4
Candidate Starts for Leafus_51:
(1, 37032), (Start: 4 @36951 has 53 MA's), (7, 36906), (9, 36885),

Gene: Lovelyunicorn_52 Start: 37014, Stop: 36784, Start Num: 2
Candidate Starts for Lovelyunicorn_52:
(Start: 2 @37014 has 74 MA's), (Start: 4 @36996 has 53 MA's), (7, 36957), (9, 36936),

Gene: Ludgate_52 Start: 37015, Stop: 36785, Start Num: 2
Candidate Starts for Ludgate_52:
(Start: 2 @37015 has 74 MA's), (Start: 4 @36997 has 53 MA's), (7, 36958), (9, 36937),

Gene: MCubed_53 Start: 36443, Stop: 36237, Start Num: 5
Candidate Starts for MCubed_53:
(3, 36479), (Start: 5 @36443 has 10 MA's),

Gene: MaeLinda_52 Start: 36998, Stop: 36786, Start Num: 4
Candidate Starts for MaeLinda_52:
(Start: 2 @37016 has 74 MA's), (Start: 4 @36998 has 53 MA's), (7, 36959), (9, 36938),

Gene: ManRay_51 Start: 36732, Stop: 36499, Start Num: 2
Candidate Starts for ManRay_51:
(Start: 2 @36732 has 74 MA's), (Start: 4 @36714 has 53 MA's), (7, 36675), (9, 36654), (12, 36576),

Gene: Martin_53 Start: 37003, Stop: 36791, Start Num: 4
Candidate Starts for Martin_53:
(Start: 2 @37021 has 74 MA's), (Start: 4 @37003 has 53 MA's), (7, 36964), (9, 36943),

Gene: McGalleon_53 Start: 37799, Stop: 37587, Start Num: 4
Candidate Starts for McGalleon_53:
(Start: 4 @37799 has 53 MA's), (9, 37742),

Gene: MillyPhilly_52 Start: 37009, Stop: 36779, Start Num: 2
Candidate Starts for MillyPhilly_52:
(Start: 2 @37009 has 74 MA's), (Start: 4 @36991 has 53 MA's), (7, 36952), (9, 36931),

Gene: MonChoix_49 Start: 36614, Stop: 36375, Start Num: 4
Candidate Starts for MonChoix_49:
(Start: 4 @36614 has 53 MA's), (9, 36545), (14, 36434),

Gene: MrWorldwide_52 Start: 37001, Stop: 36789, Start Num: 4
Candidate Starts for MrWorldwide_52:
(Start: 2 @37019 has 74 MA's), (Start: 4 @37001 has 53 MA's), (7, 36962), (9, 36941),

Gene: Nagem_52 Start: 37015, Stop: 36782, Start Num: 2
Candidate Starts for Nagem_52:
(Start: 2 @37015 has 74 MA's), (Start: 4 @36997 has 53 MA's), (7, 36958), (9, 36937), (12, 36859),

Gene: Nattles_51 Start: 36719, Stop: 36486, Start Num: 2
Candidate Starts for Nattles_51:
(Start: 2 @36719 has 74 MA's), (Start: 4 @36701 has 53 MA's), (7, 36662), (9, 36641), (12, 36563),

Gene: NickSell_52 Start: 37022, Stop: 36792, Start Num: 2
Candidate Starts for NickSell_52:
(Start: 2 @37022 has 74 MA's), (Start: 4 @37004 has 53 MA's), (7, 36965), (9, 36944),

Gene: Oats_51 Start: 36732, Stop: 36499, Start Num: 2
Candidate Starts for Oats_51:
(Start: 2 @36732 has 74 MA's), (Start: 4 @36714 has 53 MA's), (7, 36675), (9, 36654), (12, 36576),

Gene: Oxtober96_53 Start: 36996, Stop: 36784, Start Num: 4
Candidate Starts for Oxtober96_53:
(Start: 2 @37014 has 74 MA's), (Start: 4 @36996 has 53 MA's), (7, 36957), (9, 36936),

Gene: PSirce_53 Start: 36579, Stop: 36367, Start Num: 5
Candidate Starts for PSirce_53:
(3, 36615), (Start: 5 @36579 has 10 MA's), (6, 36555), (8, 36537),

Gene: Papafritta_51 Start: 36752, Stop: 36540, Start Num: 4
Candidate Starts for Papafritta_51:
(Start: 2 @36770 has 74 MA's), (Start: 4 @36752 has 53 MA's), (7, 36713), (9, 36692),

Gene: ParleG_52 Start: 37019, Stop: 36789, Start Num: 2
Candidate Starts for ParleG_52:
(Start: 2 @37019 has 74 MA's), (Start: 4 @37001 has 53 MA's), (7, 36962), (9, 36941),

Gene: Peep_52 Start: 36986, Stop: 36774, Start Num: 4
Candidate Starts for Peep_52:
(Start: 2 @37004 has 74 MA's), (Start: 4 @36986 has 53 MA's), (7, 36947), (9, 36926), (15, 36812),

Gene: Peppino_51 Start: 36791, Stop: 36576, Start Num: 4
Candidate Starts for Peppino_51:
(Start: 4 @36791 has 53 MA's), (7, 36752), (9, 36731),

Gene: Phanita_54 Start: 36355, Stop: 36149, Start Num: 5
Candidate Starts for Phanita_54:
(3, 36391), (Start: 5 @36355 has 10 MA's),

Gene: Pherferi_52 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for Pherferi_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: Phiderman_52 Start: 37009, Stop: 36779, Start Num: 2
Candidate Starts for Phiderman_52:
(Start: 2 @37009 has 74 MA's), (Start: 4 @36991 has 53 MA's), (7, 36952), (9, 36931),

Gene: PhillyPhantom_51 Start: 36742, Stop: 36566, Start Num: 7
Candidate Starts for PhillyPhantom_51:
(Start: 4 @36787 has 53 MA's), (7, 36742), (9, 36721),

Gene: Phireproof_52 Start: 37018, Stop: 36788, Start Num: 2
Candidate Starts for Phireproof_52:
(Start: 2 @37018 has 74 MA's), (Start: 4 @37000 has 53 MA's), (7, 36961), (9, 36940),

Gene: PhredFlintston_52 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for PhredFlintston_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: Pocket_51 Start: 36759, Stop: 36526, Start Num: 2
Candidate Starts for Pocket_51:
(Start: 2 @36759 has 74 MA's), (Start: 4 @36741 has 53 MA's), (7, 36702), (9, 36681), (12, 36603),

Gene: PuppyEggo_52 Start: 37019, Stop: 36789, Start Num: 2
Candidate Starts for PuppyEggo_52:
(Start: 2 @37019 has 74 MA's), (Start: 4 @37001 has 53 MA's), (7, 36962), (9, 36941),

Gene: Raccoon_51 Start: 36754, Stop: 36533, Start Num: 4
Candidate Starts for Raccoon_51:
(Start: 4 @36754 has 53 MA's), (7, 36709), (9, 36688),

Gene: Rapheph_52 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for Rapheph_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: Raptor_52 Start: 36998, Stop: 36786, Start Num: 4
Candidate Starts for Raptor_52:
(Start: 2 @37016 has 74 MA's), (Start: 4 @36998 has 53 MA's), (7, 36959), (9, 36938),

Gene: Redfield_51 Start: 36799, Stop: 36584, Start Num: 4
Candidate Starts for Redfield_51:
(Start: 4 @36799 has 53 MA's), (7, 36760), (9, 36739),

Gene: Renzie_52 Start: 37007, Stop: 36777, Start Num: 2
Candidate Starts for Renzie_52:
(Start: 2 @37007 has 74 MA's), (Start: 4 @36989 has 53 MA's), (7, 36950), (9, 36929), (15, 36815),

Gene: Riyhil_52 Start: 37022, Stop: 36792, Start Num: 2
Candidate Starts for Riyhil_52:
(Start: 2 @37022 has 74 MA's), (Start: 4 @37004 has 53 MA's), (7, 36965), (9, 36944),

Gene: Robinson_52 Start: 36992, Stop: 36780, Start Num: 4
Candidate Starts for Robinson_52:
(Start: 2 @37010 has 74 MA's), (Start: 4 @36992 has 53 MA's), (7, 36953), (9, 36932),

Gene: Rog141_51 Start: 36704, Stop: 36489, Start Num: 4
Candidate Starts for Rog141_51:
(Start: 2 @36722 has 74 MA's), (Start: 4 @36704 has 53 MA's), (7, 36665), (9, 36644), (12, 36566),

Gene: RosieMae_51 Start: 36759, Stop: 36544, Start Num: 4
Candidate Starts for RosieMae_51:
(Start: 2 @36777 has 74 MA's), (Start: 4 @36759 has 53 MA's), (7, 36720), (9, 36699), (12, 36621),

Gene: SJay_52 Start: 37016, Stop: 36783, Start Num: 2

Candidate Starts for SJay_52:
(Start: 2 @37016 has 74 MA's), (Start: 4 @36998 has 53 MA's), (7, 36959), (9, 36938), (12, 36860),

Gene: Saratos_53 Start: 36409, Stop: 36197, Start Num: 5
Candidate Starts for Saratos_53:
(3, 36445), (Start: 5 @36409 has 10 MA's), (6, 36385), (8, 36367),

Gene: Schnapsidee_51 Start: 36828, Stop: 36589, Start Num: 4
Candidate Starts for Schnapsidee_51:
(Start: 4 @36828 has 53 MA's), (9, 36759), (14, 36648),

Gene: Sedgewig_51 Start: 36717, Stop: 36487, Start Num: 2
Candidate Starts for Sedgewig_51:
(Start: 2 @36717 has 74 MA's), (Start: 4 @36699 has 53 MA's), (7, 36660), (9, 36639),

Gene: ShaiHulud_52 Start: 37028, Stop: 36798, Start Num: 2
Candidate Starts for ShaiHulud_52:
(Start: 2 @37028 has 74 MA's), (Start: 4 @37010 has 53 MA's), (7, 36971), (9, 36950),

Gene: Shee_52 Start: 37009, Stop: 36779, Start Num: 2
Candidate Starts for Shee_52:
(Start: 2 @37009 has 74 MA's), (Start: 4 @36991 has 53 MA's), (7, 36952), (9, 36931),

Gene: SonOfLevi_52 Start: 36750, Stop: 36517, Start Num: 2
Candidate Starts for SonOfLevi_52:
(Start: 2 @36750 has 74 MA's), (Start: 4 @36732 has 53 MA's), (7, 36693), (9, 36672), (12, 36594),

Gene: Soror1_50 Start: 36703, Stop: 36482, Start Num: 4
Candidate Starts for Soror1_50:
(Start: 4 @36703 has 53 MA's), (7, 36658), (9, 36637),

Gene: Stanktossa_51 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for Stanktossa_51:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934), (12, 36856),

Gene: StingRay_51 Start: 36733, Stop: 36503, Start Num: 2
Candidate Starts for StingRay_51:
(Start: 2 @36733 has 74 MA's), (Start: 4 @36715 has 53 MA's), (7, 36676), (9, 36655),

Gene: StirfryIV_51 Start: 36728, Stop: 36498, Start Num: 2
Candidate Starts for StirfryIV_51:
(Start: 2 @36728 has 74 MA's), (Start: 4 @36710 has 53 MA's), (7, 36671), (9, 36650),

Gene: Stormbreaker8_50 Start: 36689, Stop: 36468, Start Num: 4
Candidate Starts for Stormbreaker8_50:
(Start: 4 @36689 has 53 MA's), (7, 36644), (9, 36623),

Gene: Strathdee_52 Start: 37018, Stop: 36788, Start Num: 2
Candidate Starts for Strathdee_52:
(Start: 2 @37018 has 74 MA's), (Start: 4 @37000 has 53 MA's), (7, 36961), (9, 36940),

Gene: Superfresh_52 Start: 36989, Stop: 36777, Start Num: 4
Candidate Starts for Superfresh_52:

(Start: 2 @37007 has 74 MA's), (Start: 4 @36989 has 53 MA's), (7, 36950), (9, 36929), (15, 36815),

Gene: Symere_51 Start: 36709, Stop: 36497, Start Num: 4
Candidate Starts for Symere_51:
(Start: 2 @36727 has 74 MA's), (Start: 4 @36709 has 53 MA's), (7, 36670), (9, 36649),

Gene: TatarkaPM_52 Start: 37022, Stop: 36792, Start Num: 2
Candidate Starts for TatarkaPM_52:
(Start: 2 @37022 has 74 MA's), (Start: 4 @37004 has 53 MA's), (7, 36965), (9, 36944),

Gene: Teagan_52 Start: 36991, Stop: 36779, Start Num: 4
Candidate Starts for Teagan_52:
(Start: 2 @37009 has 74 MA's), (Start: 4 @36991 has 53 MA's), (7, 36952), (9, 36931),

Gene: TeddyBear_51 Start: 36732, Stop: 36499, Start Num: 2
Candidate Starts for TeddyBear_51:
(Start: 2 @36732 has 74 MA's), (Start: 4 @36714 has 53 MA's), (7, 36675), (9, 36654), (12, 36576),

Gene: Tenda_51 Start: 36730, Stop: 36497, Start Num: 2
Candidate Starts for Tenda_51:
(Start: 2 @36730 has 74 MA's), (Start: 4 @36712 has 53 MA's), (7, 36673), (9, 36652), (12, 36574),

Gene: Thompsone_52 Start: 36998, Stop: 36786, Start Num: 4
Candidate Starts for Thompsone_52:
(Start: 2 @37016 has 74 MA's), (Start: 4 @36998 has 53 MA's), (7, 36959), (9, 36938),

Gene: Thorongil_52 Start: 36533, Stop: 36303, Start Num: 2
Candidate Starts for Thorongil_52:
(Start: 2 @36533 has 74 MA's), (Start: 4 @36515 has 53 MA's), (7, 36476), (9, 36455),

Gene: TinSulphur_53 Start: 37018, Stop: 36788, Start Num: 2
Candidate Starts for TinSulphur_53:
(Start: 2 @37018 has 74 MA's), (Start: 4 @37000 has 53 MA's), (7, 36961), (9, 36940),

Gene: Velene_52 Start: 37014, Stop: 36784, Start Num: 2
Candidate Starts for Velene_52:
(Start: 2 @37014 has 74 MA's), (Start: 4 @36996 has 53 MA's), (7, 36957), (9, 36936),

Gene: Vispistious_52 Start: 37019, Stop: 36789, Start Num: 2
Candidate Starts for Vispistious_52:
(Start: 2 @37019 has 74 MA's), (Start: 4 @37001 has 53 MA's), (7, 36962), (9, 36941),

Gene: WildNOut_52 Start: 37012, Stop: 36782, Start Num: 2
Candidate Starts for WildNOut_52:
(Start: 2 @37012 has 74 MA's), (Start: 4 @36994 has 53 MA's), (7, 36955), (9, 36934),

Gene: Winzigespinne_51 Start: 36718, Stop: 36485, Start Num: 2
Candidate Starts for Winzigespinne_51:
(Start: 2 @36718 has 74 MA's), (Start: 4 @36700 has 53 MA's), (7, 36661), (9, 36640), (12, 36562),

Gene: Xebius_53 Start: 36412, Stop: 36200, Start Num: 5
Candidate Starts for Xebius_53:
(3, 36448), (Start: 5 @36412 has 10 MA's), (6, 36388), (8, 36370),

Gene: Zada_53 Start: 36992, Stop: 36810, Start Num: 2
Candidate Starts for Zada_53:
(Start: 2 @36992 has 74 MA's), (Start: 4 @36974 has 53 MA's), (7, 36935), (9, 36914), (10, 36890), (11, 36842),

Gene: Zenitsu_53 Start: 36448, Stop: 36242, Start Num: 5
Candidate Starts for Zenitsu_53:
(3, 36484), (Start: 5 @36448 has 10 MA's),