Pham 291033

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 291033 Report

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

Pham number 291033 has 94 members, 9 are drafts.

Phages represented in each track:
• Track 1 : Bunnybear_77
• Track 2 : Lton_72
• Track 3 : Pepperoni_68
• Track 4 : Madavieve_78
• Track 5 : Nymphadora_83, Agueybana_84, Zirinka_78, BaxterFox_84, TimTam_83, Hugley_81, Bosnia_81, Eviarto_83, Herod_83, AlumE_81, Ohgeesy_83, BoyNamedSue_81, Bialota_78, BatStarr_82
• Track 6 : WelcomeAyanna_82, PantheRoc_85, Madeline_75, PhriskyACE_73, ThankyouJordi_82
• Track 7 : Trumpet_78, Zameen_78, Eudoria_78, Antonio_77, Kita_79, Neobush_80, Manasvini_80, Suscepit_78, Polly_75, Tayonia_78
• Track 8 : Maridalia_82
• Track 9 : Hyzer_98
• Track 10 : FroggyToad_72
• Track 11 : Haley23_74, Lamberg_70, GemG_74, TuertoX_74, Nettuno_70, Yeet412_72, Sproutie_74, Cynthia_74, Ebert_77, Bjanes7_71, Mocha12_74, Whiteclaw_74, SoilAssassin_73, Gizermo_74, Clap_74, Jalleen_76, LordFarquaad_75, Savage_74, Attis_73, Sahara_71
• Track 12 : Matteo_66
• Track 13 : JCole_72, Pickett_73, EdnaMode_74
• Track 14 : Vasanti_70
• Track 15 : Yeezy_85
• Track 16 : Thimann_79, Hortense_78, Twinkle_77, Adora_75, Howe_78, Shlim410_76
• Track 17 : DobbysSock_72, WinkNick_79, Annalisa_76, Sekhmet_78, Dolores_79, Oregano_78
• Track 18 : Tuti_77, Clark_76, Easley_75, Beenie_71, Invectra_80, MichaelScott_78
• Track 19 : Mcklovin_77
• Track 20 : Samman98_78
• Track 21 : Suerte_73
• Track 22 : Powerball_75
• Track 23 : Dorito_74
• Track 24 : Denise_76
• Track 25 : Moosehead_75
• Track 26 : OneDirection_68
• Track 27 : Faith5x5_70
• Track 28 : Sidious_78

- Track 29 : RavenCo17_73
- Track 30 : TinyDot_69
- Track 31 : Eyre_71
- Track 32 : Gudmit_73

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

The start number called the most often in the published annotations is 13, it was called in 52 of the 85 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Adora_75, Agueybana_84, AlumE_81, Annalisa_76, Antonio_77, BatStarr_82, BaxterFox_84, Beenie_71, Bialota_78, Bosnia_81, BoyNamedSue_81, Bunnybear_77, Clark_76, DobbysSock_72, Dolores_79, Dorito_74, Easley_75, Eudoria_78, Eviarto_83, Herod_83, Hortense_78, Howe_78, Hugley_81, Hyzer_98, Invectra_80, Kita_79, Madavieve_78, Madeline_75, Manasvini_80, Maridalia_82, Mcklovin_77, MichaelScott_78, Neobush_80, Nymphadora_83, Ohgeesy_83, Oregano_78, PantheRoc_85, PhriskyACE_73, Polly_75, Powerball_75, Samman98_78, Sekhmet_78, Shlim410_76, Sidious_78, Suscepit_78, Tayonia_78, ThankyouJordi_82, Thimann_79, TimTam_83, Trumpet_78, Tuti_77, Twinkle_77, WelcomeAyanna_82, WinkNick_79, Yeezy_85, Zameen_78, Zirinka_78,

Genes that have the "Most Annotated" start but do not call it:
- Suerte_73,

Genes that do not have the "Most Annotated" start:
- Attis_73, Bjanes7_71, Clap_74, Cynthia_74, Denise_76, Ebert_77, EdnaMode_74, Eyre_71, Faith5x5_70, FroggyToad_72, GemG_74, Gizermo_74, Gudmit_73, Haley23_74, JCole_72, Jalleen_76, Lamberg_70, LordFarquaad_75, Lton_72, Matteo_66, Mocha12_74, Moosehead_75, Nettuno_70, OneDirection_68, Pepperoni_68, Pickett_73, RavenCo17_73, Sahara_71, Savage_74, SoilAssassin_73, Sproutie_74, TinyDot_69, TuertoX_74, Vasanti_70, Whiteclaw_74, Yeet412_72,

Summary by start number:

Start 6:
- Found in 7 of 94 (7.4%) of genes in pham
- Manual Annotations of this start: 6 of 85
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Denise_76 (CZ5), EdnaMode_74 (CZ2), JCole_72 (CZ2), Matteo_66 (CZ2), Moosehead_75 (CZ6), Pickett_73 (CZ2), Vasanti_70 (CZ2),

Start 11:
- Found in 28 of 94 (29.8%) of genes in pham
- Manual Annotations of this start: 23 of 85
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Attis_73 (CZ2), Bjanes7_71 (CZ2), Clap_74 (CZ2), Cynthia_74 (CZ2), Ebert_77 (CZ2), Eyre_71 (singleton), GemG_74

(CZ2), Gizermo_74 (CZ2), Haley23_74 (CZ2), Jalleen_76 (CZ2), Lamberg_70 (CZ2), LordFarquaad_75 (CZ2), Lton_72 (CZ), Mocha12_74 (CZ2), Nettuno_70 (CZ2), OneDirection_68 (CZ6), RavenCo17_73 (CZ8), Sahara_71 (CZ2), Savage_74 (CZ2), SoilAssassin_73 (CZ2), Sproutie_74 (CZ2), TuertoX_74 (CZ2), Whiteclaw_74 (CZ2), Yeet412_72 (CZ2),

Start 12:
• Found in 1 of 94 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 85
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TinyDot_69 (singleton),

Start 13:
• Found in 58 of 94 (61.7%) of genes in pham
• Manual Annotations of this start: 52 of 85
• Called 98.3% of time when present
• Phage (with cluster) where this start called: Adora_75 (CZ4), Agueybana_84 (CZ1), AlumE_81 (CZ1), Annalisa_76 (CZ4), Antonio_77 (CZ1), BatStarr_82 (CZ1), BaxterFox_84 (CZ3), Beenie_71 (CZ4), Bialota_78 (CZ1), Bosnia_81 (CZ1), BoyNamedSue_81 (CZ1), Bunnybear_77 (CZ), Clark_76 (CZ4), DobbysSock_72 (CZ4), Dolores_79 (CZ4), Dorito_74 (CZ4), Easley_75 (CZ4), Eudoria_78 (CZ1), Eviarto_83 (CZ1), Herod_83 (CZ1), Hortense_78 (CZ4), Howe_78 (CZ4), Hugley_81 (CZ1), Hyzer_98 (CZ1), Invectra_80 (CZ4), Kita_79 (CZ1), Madavieve_78 (CZ1), Madeline_75 (CZ1), Manasvini_80 (CZ1), Maridalia_82 (CZ1), Mcklovin_77 (CZ4), MichaelScott_78 (CZ4), Neobush_80 (CZ1), Nymphadora_83 (CZ1), Ohgeesy_83 (CZ), Oregano_78 (CZ4), PantheRoc_85 (CZ3), PhriskyACE_73 (CZ4), Polly_75 (CZ1), Powerball_75 (CZ4), Samman98_78 (CZ4), Sekhmet_78 (CZ4), Shlim410_76 (CZ4), Sidious_78 (CZ7), Suscepit_78 (CZ1), Tayonia_78 (CZ1), ThankyouJordi_82 (CZ1), Thimann_79 (CZ4), TimTam_83 (CZ1), Trumpet_78 (CZ1), Tuti_77 (CZ4), Twinkle_77 (CZ4), WelcomeAyanna_82 (CZ1), WinkNick_79 (CZ4), Yeezy_85 (CZ3), Zameen_78 (CZ1), Zirinka_78 (CZ1),

Start 14:
• Found in 35 of 94 (37.2%) of genes in pham
• Manual Annotations of this start: 2 of 85
• Called 11.4% of time when present
• Phage (with cluster) where this start called: Faith5x5_70 (CZ6), FroggyToad_72 (CZ2), Gudmit_73 (singleton), Pepperoni_68 (CZ),

Start 16:
• Found in 94 of 94 (100.0%) of genes in pham
• Manual Annotations of this start: 1 of 85
• Called 1.1% of time when present
• Phage (with cluster) where this start called: Suerte_73 (CZ4),

Summary by clusters:

There are 10 clusters represented in this pham: CZ7, CZ8, CZ2, CZ3, CZ1, CZ6, singleton, CZ4, CZ5, CZ,

Info for manual annotations of cluster CZ:
•Start number 11 was manually annotated 1 time for cluster CZ.
•Start number 13 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 13 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 6 was manually annotated 4 times for cluster CZ2.
•Start number 11 was manually annotated 19 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 13 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:
•Start number 13 was manually annotated 21 times for cluster CZ4.
•Start number 16 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ5:
•Start number 6 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:
•Start number 6 was manually annotated 1 time for cluster CZ6.
•Start number 11 was manually annotated 1 time for cluster CZ6.
•Start number 14 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster CZ7:
•Start number 13 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster CZ8:
•Start number 11 was manually annotated 1 time for cluster CZ8.

Gene Information:
Gene: Adora_75 Start: 50646, Stop: 50954, Start Num: 13
Candidate Starts for Adora_75:
(Start: 13 @50646 has 52 MA's), (Start: 16 @50688 has 1 MA's), (25, 50880),

Gene: Agueybana_84 Start: 52113, Stop: 52421, Start Num: 13
Candidate Starts for Agueybana_84:
(10, 52077), (Start: 13 @52113 has 52 MA's), (Start: 16 @52155 has 1 MA's), (25, 52347),

Gene: AlumE_81 Start: 52004, Stop: 52312, Start Num: 13
Candidate Starts for AlumE_81:
(10, 51968), (Start: 13 @52004 has 52 MA's), (Start: 16 @52046 has 1 MA's), (25, 52238),

Gene: Annalisa_76 Start: 46540, Stop: 46848, Start Num: 13
Candidate Starts for Annalisa_76:
(Start: 13 @46540 has 52 MA's), (Start: 16 @46582 has 1 MA's), (25, 46774),

Gene: Antonio_77 Start: 49642, Stop: 49950, Start Num: 13
Candidate Starts for Antonio_77:
(Start: 13 @49642 has 52 MA's), (Start: 16 @49684 has 1 MA's), (25, 49876),

Gene: Attis_73 Start: 47175, Stop: 47504, Start Num: 11
Candidate Starts for Attis_73:
(Start: 11 @47175 has 23 MA's), (Start: 14 @47217 has 2 MA's), (Start: 16 @47241 has 1 MA's), (17, 47247), (18, 47271), (19, 47286), (25, 47427), (27, 47478),

Gene: BatStarr_82 Start: 52738, Stop: 53046, Start Num: 13
Candidate Starts for BatStarr_82:
(10, 52702), (Start: 13 @52738 has 52 MA's), (Start: 16 @52780 has 1 MA's), (25, 52972),

Gene: BaxterFox_84 Start: 52934, Stop: 53242, Start Num: 13
Candidate Starts for BaxterFox_84:
(10, 52898), (Start: 13 @52934 has 52 MA's), (Start: 16 @52976 has 1 MA's), (25, 53168),

Gene: Beenie_71 Start: 46939, Stop: 47247, Start Num: 13
Candidate Starts for Beenie_71:
(Start: 13 @46939 has 52 MA's), (15, 46972), (Start: 16 @46981 has 1 MA's), (25, 47173),

Gene: Bialota_78 Start: 51398, Stop: 51706, Start Num: 13
Candidate Starts for Bialota_78:
(10, 51362), (Start: 13 @51398 has 52 MA's), (Start: 16 @51440 has 1 MA's), (25, 51632),

Gene: Bjanes7_71 Start: 45336, Stop: 45665, Start Num: 11
Candidate Starts for Bjanes7_71:
(Start: 11 @45336 has 23 MA's), (Start: 14 @45378 has 2 MA's), (Start: 16 @45402 has 1 MA's), (17, 45408), (18, 45432), (19, 45447), (25, 45588), (27, 45639),

Gene: Bosnia_81 Start: 53852, Stop: 54160, Start Num: 13
Candidate Starts for Bosnia_81:
(10, 53816), (Start: 13 @53852 has 52 MA's), (Start: 16 @53894 has 1 MA's), (25, 54086),

Gene: BoyNamedSue_81 Start: 52004, Stop: 52312, Start Num: 13
Candidate Starts for BoyNamedSue_81:
(10, 51968), (Start: 13 @52004 has 52 MA's), (Start: 16 @52046 has 1 MA's), (25, 52238),

Gene: Bunnybear_77 Start: 50574, Stop: 50882, Start Num: 13
Candidate Starts for Bunnybear_77:
(Start: 13 @50574 has 52 MA's), (Start: 16 @50616 has 1 MA's), (25, 50808),

Gene: Clap_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Clap_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Clark_76 Start: 46702, Stop: 47010, Start Num: 13
Candidate Starts for Clark_76:
(Start: 13 @46702 has 52 MA's), (15, 46735), (Start: 16 @46744 has 1 MA's), (25, 46936),

Gene: Cynthia_74 Start: 45513, Stop: 45842, Start Num: 11
Candidate Starts for Cynthia_74:
(Start: 11 @45513 has 23 MA's), (Start: 14 @45555 has 2 MA's), (Start: 16 @45579 has 1 MA's), (17, 45585), (18, 45609), (19, 45624), (25, 45765), (27, 45816),

Gene: Denise_76 Start: 43912, Stop: 44241, Start Num: 6

Candidate Starts for Denise_76:
(Start: 6 @43912 has 6 MA's), (Start: 14 @43954 has 2 MA's), (Start: 16 @43978 has 1 MA's),

Gene: DobbysSock_72 Start: 47455, Stop: 47763, Start Num: 13
Candidate Starts for DobbysSock_72:
(Start: 13 @47455 has 52 MA's), (Start: 16 @47497 has 1 MA's), (25, 47689),

Gene: Dolores_79 Start: 46593, Stop: 46901, Start Num: 13
Candidate Starts for Dolores_79:
(Start: 13 @46593 has 52 MA's), (Start: 16 @46635 has 1 MA's), (25, 46827),

Gene: Dorito_74 Start: 46041, Stop: 46349, Start Num: 13
Candidate Starts for Dorito_74:
(Start: 13 @46041 has 52 MA's), (Start: 16 @46083 has 1 MA's), (25, 46275),

Gene: Easley_75 Start: 45703, Stop: 46011, Start Num: 13
Candidate Starts for Easley_75:
(Start: 13 @45703 has 52 MA's), (15, 45736), (Start: 16 @45745 has 1 MA's), (25, 45937),

Gene: Ebert_77 Start: 45947, Stop: 46276, Start Num: 11
Candidate Starts for Ebert_77:
(Start: 11 @45947 has 23 MA's), (Start: 14 @45989 has 2 MA's), (Start: 16 @46013 has 1 MA's), (17, 46019), (18, 46043), (19, 46058), (25, 46199), (27, 46250),

Gene: EdnaMode_74 Start: 45868, Stop: 46197, Start Num: 6
Candidate Starts for EdnaMode_74:
(Start: 6 @45868 has 6 MA's), (Start: 14 @45910 has 2 MA's), (Start: 16 @45934 has 1 MA's), (22, 46081),

Gene: Eudoria_78 Start: 49642, Stop: 49950, Start Num: 13
Candidate Starts for Eudoria_78:
(Start: 13 @49642 has 52 MA's), (Start: 16 @49684 has 1 MA's), (25, 49876),

Gene: Eviarto_83 Start: 52713, Stop: 53021, Start Num: 13
Candidate Starts for Eviarto_83:
(10, 52677), (Start: 13 @52713 has 52 MA's), (Start: 16 @52755 has 1 MA's), (25, 52947),

Gene: Eyre_71 Start: 43512, Stop: 43847, Start Num: 11
Candidate Starts for Eyre_71:
(Start: 11 @43512 has 23 MA's), (Start: 14 @43554 has 2 MA's), (Start: 16 @43578 has 1 MA's), (20, 43629), (22, 43725),

Gene: Faith5x5_70 Start: 40885, Stop: 41172, Start Num: 14
Candidate Starts for Faith5x5_70:
(Start: 11 @40843 has 23 MA's), (Start: 14 @40885 has 2 MA's), (Start: 16 @40909 has 1 MA's), (27, 41146),

Gene: FroggyToad_72 Start: 46027, Stop: 46314, Start Num: 14
Candidate Starts for FroggyToad_72:
(1, 45631), (8, 45919), (9, 45943), (Start: 11 @45985 has 23 MA's), (Start: 14 @46027 has 2 MA's), (Start: 16 @46051 has 1 MA's),

Gene: GemG_74 Start: 45519, Stop: 45848, Start Num: 11

Candidate Starts for GemG_74:
(Start: 11 @45519 has 23 MA's), (Start: 14 @45561 has 2 MA's), (Start: 16 @45585 has 1 MA's), (17, 45591), (18, 45615), (19, 45630), (25, 45771), (27, 45822),

Gene: Gizermo_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Gizermo_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Gudmit_73 Start: 41550, Stop: 41837, Start Num: 14
Candidate Starts for Gudmit_73:
(7, 41394), (Start: 11 @41508 has 23 MA's), (Start: 14 @41550 has 2 MA's), (Start: 16 @41574 has 1 MA's), (26, 41796),

Gene: Haley23_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Haley23_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Herod_83 Start: 53132, Stop: 53440, Start Num: 13
Candidate Starts for Herod_83:
(10, 53096), (Start: 13 @53132 has 52 MA's), (Start: 16 @53174 has 1 MA's), (25, 53366),

Gene: Hortense_78 Start: 52001, Stop: 52309, Start Num: 13
Candidate Starts for Hortense_78:
(Start: 13 @52001 has 52 MA's), (Start: 16 @52043 has 1 MA's), (25, 52235),

Gene: Howe_78 Start: 52001, Stop: 52309, Start Num: 13
Candidate Starts for Howe_78:
(Start: 13 @52001 has 52 MA's), (Start: 16 @52043 has 1 MA's), (25, 52235),

Gene: Hugley_81 Start: 53112, Stop: 53420, Start Num: 13
Candidate Starts for Hugley_81:
(10, 53076), (Start: 13 @53112 has 52 MA's), (Start: 16 @53154 has 1 MA's), (25, 53346),

Gene: Hyzer_98 Start: 59654, Stop: 59962, Start Num: 13
Candidate Starts for Hyzer_98:
(2, 59345), (Start: 13 @59654 has 52 MA's), (Start: 16 @59696 has 1 MA's), (25, 59888),

Gene: Invectra_80 Start: 48275, Stop: 48583, Start Num: 13
Candidate Starts for Invectra_80:
(Start: 13 @48275 has 52 MA's), (15, 48308), (Start: 16 @48317 has 1 MA's), (25, 48509),

Gene: JCole_72 Start: 44430, Stop: 44759, Start Num: 6
Candidate Starts for JCole_72:
(Start: 6 @44430 has 6 MA's), (Start: 14 @44472 has 2 MA's), (Start: 16 @44496 has 1 MA's), (22, 44643),

Gene: Jalleen_76 Start: 45272, Stop: 45601, Start Num: 11
Candidate Starts for Jalleen_76:
(Start: 11 @45272 has 23 MA's), (Start: 14 @45314 has 2 MA's), (Start: 16 @45338 has 1 MA's), (17, 45344), (18, 45368), (19, 45383), (25, 45524), (27, 45575),

Gene: Kita_79 Start: 49651, Stop: 49959, Start Num: 13
Candidate Starts for Kita_79:
(Start: 13 @49651 has 52 MA's), (Start: 16 @49693 has 1 MA's), (25, 49885),

Gene: Lamberg_70 Start: 44024, Stop: 44353, Start Num: 11
Candidate Starts for Lamberg_70:
(Start: 11 @44024 has 23 MA's), (Start: 14 @44066 has 2 MA's), (Start: 16 @44090 has 1 MA's), (17, 44096), (18, 44120), (19, 44135), (25, 44276), (27, 44327),

Gene: LordFarquaad_75 Start: 47157, Stop: 47486, Start Num: 11
Candidate Starts for LordFarquaad_75:
(Start: 11 @47157 has 23 MA's), (Start: 14 @47199 has 2 MA's), (Start: 16 @47223 has 1 MA's), (17, 47229), (18, 47253), (19, 47268), (25, 47409), (27, 47460),

Gene: Lton_72 Start: 40999, Stop: 41328, Start Num: 11
Candidate Starts for Lton_72:
(Start: 11 @40999 has 23 MA's), (Start: 14 @41041 has 2 MA's), (Start: 16 @41065 has 1 MA's), (19, 41110), (23, 41218), (25, 41251), (27, 41302),

Gene: Madavieve_78 Start: 51054, Stop: 51362, Start Num: 13
Candidate Starts for Madavieve_78:
(Start: 13 @51054 has 52 MA's), (Start: 16 @51096 has 1 MA's), (25, 51288),

Gene: Madeline_75 Start: 50976, Stop: 51284, Start Num: 13
Candidate Starts for Madeline_75:
(Start: 13 @50976 has 52 MA's), (Start: 16 @51018 has 1 MA's), (25, 51210),

Gene: Manasvini_80 Start: 49666, Stop: 49974, Start Num: 13
Candidate Starts for Manasvini_80:
(Start: 13 @49666 has 52 MA's), (Start: 16 @49708 has 1 MA's), (25, 49900),

Gene: Maridalia_82 Start: 50934, Stop: 51242, Start Num: 13
Candidate Starts for Maridalia_82:
(2, 50622), (Start: 13 @50934 has 52 MA's), (Start: 16 @50976 has 1 MA's), (25, 51168),

Gene: Matteo_66 Start: 43086, Stop: 43415, Start Num: 6
Candidate Starts for Matteo_66:
(Start: 6 @43086 has 6 MA's), (Start: 14 @43128 has 2 MA's), (Start: 16 @43152 has 1 MA's), (27, 43389),

Gene: Mcklovin_77 Start: 52464, Stop: 52772, Start Num: 13
Candidate Starts for Mcklovin_77:
(Start: 13 @52464 has 52 MA's), (Start: 16 @52506 has 1 MA's), (25, 52698),

Gene: MichaelScott_78 Start: 47383, Stop: 47691, Start Num: 13
Candidate Starts for MichaelScott_78:
(Start: 13 @47383 has 52 MA's), (15, 47416), (Start: 16 @47425 has 1 MA's), (25, 47617),

Gene: Mocha12_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Mocha12_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Moosehead_75 Start: 41533, Stop: 41862, Start Num: 6
Candidate Starts for Moosehead_75:
(5, 41476), (Start: 6 @41533 has 6 MA's), (Start: 14 @41575 has 2 MA's), (Start: 16 @41599 has 1 MA's), (27, 41836),

Gene: Neobush_80 Start: 50210, Stop: 50518, Start Num: 13
Candidate Starts for Neobush_80:
(Start: 13 @50210 has 52 MA's), (Start: 16 @50252 has 1 MA's), (25, 50444),

Gene: Nettuno_70 Start: 43822, Stop: 44151, Start Num: 11
Candidate Starts for Nettuno_70:
(Start: 11 @43822 has 23 MA's), (Start: 14 @43864 has 2 MA's), (Start: 16 @43888 has 1 MA's), (17, 43894), (18, 43918), (19, 43933), (25, 44074), (27, 44125),

Gene: Nymphadora_83 Start: 52737, Stop: 53045, Start Num: 13
Candidate Starts for Nymphadora_83:
(10, 52701), (Start: 13 @52737 has 52 MA's), (Start: 16 @52779 has 1 MA's), (25, 52971),

Gene: Ohgeesy_83 Start: 52276, Stop: 52584, Start Num: 13
Candidate Starts for Ohgeesy_83:
(10, 52240), (Start: 13 @52276 has 52 MA's), (Start: 16 @52318 has 1 MA's), (25, 52510),

Gene: OneDirection_68 Start: 39305, Stop: 39634, Start Num: 11
Candidate Starts for OneDirection_68:
(Start: 11 @39305 has 23 MA's), (Start: 14 @39347 has 2 MA's), (Start: 16 @39371 has 1 MA's), (19, 39416), (25, 39557), (27, 39608),

Gene: Oregano_78 Start: 46832, Stop: 47140, Start Num: 13
Candidate Starts for Oregano_78:
(Start: 13 @46832 has 52 MA's), (Start: 16 @46874 has 1 MA's), (25, 47066),

Gene: PantheRoc_85 Start: 52347, Stop: 52655, Start Num: 13
Candidate Starts for PantheRoc_85:
(Start: 13 @52347 has 52 MA's), (Start: 16 @52389 has 1 MA's), (25, 52581),

Gene: Pepperoni_68 Start: 40729, Stop: 41016, Start Num: 14
Candidate Starts for Pepperoni_68:
(Start: 11 @40687 has 23 MA's), (Start: 14 @40729 has 2 MA's), (Start: 16 @40753 has 1 MA's), (17, 40759), (19, 40798), (25, 40939), (27, 40990),

Gene: PhriskyACE_73 Start: 46489, Stop: 46797, Start Num: 13
Candidate Starts for PhriskyACE_73:
(Start: 13 @46489 has 52 MA's), (Start: 16 @46531 has 1 MA's), (25, 46723),

Gene: Pickett_73 Start: 44706, Stop: 45035, Start Num: 6
Candidate Starts for Pickett_73:
(Start: 6 @44706 has 6 MA's), (Start: 14 @44748 has 2 MA's), (Start: 16 @44772 has 1 MA's), (22, 44919),

Gene: Polly_75 Start: 49085, Stop: 49393, Start Num: 13
Candidate Starts for Polly_75:
(Start: 13 @49085 has 52 MA's), (Start: 16 @49127 has 1 MA's), (25, 49319),

Gene: Powerball_75 Start: 46940, Stop: 47248, Start Num: 13
Candidate Starts for Powerball_75:
(Start: 13 @46940 has 52 MA's), (Start: 16 @46982 has 1 MA's), (25, 47174),

Gene: RavenCo17_73 Start: 48930, Stop: 49265, Start Num: 11
Candidate Starts for RavenCo17_73:
(Start: 11 @48930 has 23 MA's), (Start: 14 @48972 has 2 MA's), (Start: 16 @48996 has 1 MA's), (17, 49002), (20, 49047), (21, 49134), (22, 49143),

Gene: Sahara_71 Start: 44366, Stop: 44695, Start Num: 11
Candidate Starts for Sahara_71:
(Start: 11 @44366 has 23 MA's), (Start: 14 @44408 has 2 MA's), (Start: 16 @44432 has 1 MA's), (17, 44438), (18, 44462), (19, 44477), (25, 44618), (27, 44669),

Gene: Samman98_78 Start: 46805, Stop: 47113, Start Num: 13
Candidate Starts for Samman98_78:
(Start: 13 @46805 has 52 MA's), (Start: 16 @46847 has 1 MA's), (25, 47039),

Gene: Savage_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Savage_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Sekhmet_78 Start: 46992, Stop: 47300, Start Num: 13
Candidate Starts for Sekhmet_78:
(Start: 13 @46992 has 52 MA's), (Start: 16 @47034 has 1 MA's), (25, 47226),

Gene: Shlim410_76 Start: 52001, Stop: 52309, Start Num: 13
Candidate Starts for Shlim410_76:
(Start: 13 @52001 has 52 MA's), (Start: 16 @52043 has 1 MA's), (25, 52235),

Gene: Sidious_78 Start: 50989, Stop: 51297, Start Num: 13
Candidate Starts for Sidious_78:
(Start: 13 @50989 has 52 MA's), (Start: 16 @51031 has 1 MA's), (25, 51223),

Gene: SoilAssassin_73 Start: 47174, Stop: 47503, Start Num: 11
Candidate Starts for SoilAssassin_73:
(Start: 11 @47174 has 23 MA's), (Start: 14 @47216 has 2 MA's), (Start: 16 @47240 has 1 MA's), (17, 47246), (18, 47270), (19, 47285), (25, 47426), (27, 47477),

Gene: Sproutie_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Sproutie_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Suerte_73 Start: 46605, Stop: 46871, Start Num: 16
Candidate Starts for Suerte_73:
(Start: 13 @46563 has 52 MA's), (Start: 16 @46605 has 1 MA's), (25, 46797),

Gene: Suscepit_78 Start: 49643, Stop: 49951, Start Num: 13
Candidate Starts for Suscepit_78:
(Start: 13 @49643 has 52 MA's), (Start: 16 @49685 has 1 MA's), (25, 49877),

Gene: Tayonia_78 Start: 49642, Stop: 49950, Start Num: 13
Candidate Starts for Tayonia_78:
(Start: 13 @49642 has 52 MA's), (Start: 16 @49684 has 1 MA's), (25, 49876),

Gene: ThankyouJordi_82 Start: 52759, Stop: 53067, Start Num: 13
Candidate Starts for ThankyouJordi_82:
(Start: 13 @52759 has 52 MA's), (Start: 16 @52801 has 1 MA's), (25, 52993),

Gene: Thimann_79 Start: 47303, Stop: 47611, Start Num: 13
Candidate Starts for Thimann_79:
(Start: 13 @47303 has 52 MA's), (Start: 16 @47345 has 1 MA's), (25, 47537),

Gene: TimTam_83 Start: 52737, Stop: 53045, Start Num: 13
Candidate Starts for TimTam_83:
(10, 52701), (Start: 13 @52737 has 52 MA's), (Start: 16 @52779 has 1 MA's), (25, 52971),

Gene: TinyDot_69 Start: 40745, Stop: 41056, Start Num: 12
Candidate Starts for TinyDot_69:
(3, 40502), (4, 40523), (Start: 12 @40745 has 1 MA's), (Start: 16 @40805 has 1 MA's), (24, 40976),

Gene: Trumpet_78 Start: 49643, Stop: 49951, Start Num: 13
Candidate Starts for Trumpet_78:
(Start: 13 @49643 has 52 MA's), (Start: 16 @49685 has 1 MA's), (25, 49877),

Gene: TuertoX_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for TuertoX_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: Tuti_77 Start: 47241, Stop: 47549, Start Num: 13
Candidate Starts for Tuti_77:
(Start: 13 @47241 has 52 MA's), (15, 47274), (Start: 16 @47283 has 1 MA's), (25, 47475),

Gene: Twinkle_77 Start: 53060, Stop: 53368, Start Num: 13
Candidate Starts for Twinkle_77:
(Start: 13 @53060 has 52 MA's), (Start: 16 @53102 has 1 MA's), (25, 53294),

Gene: Vasanti_70 Start: 45756, Stop: 46085, Start Num: 6
Candidate Starts for Vasanti_70:
(Start: 6 @45756 has 6 MA's), (Start: 14 @45798 has 2 MA's), (Start: 16 @45822 has 1 MA's),

Gene: WelcomeAyanna_82 Start: 52906, Stop: 53214, Start Num: 13
Candidate Starts for WelcomeAyanna_82:
(Start: 13 @52906 has 52 MA's), (Start: 16 @52948 has 1 MA's), (25, 53140),

Gene: Whiteclaw_74 Start: 45515, Stop: 45844, Start Num: 11
Candidate Starts for Whiteclaw_74:
(Start: 11 @45515 has 23 MA's), (Start: 14 @45557 has 2 MA's), (Start: 16 @45581 has 1 MA's), (17, 45587), (18, 45611), (19, 45626), (25, 45767), (27, 45818),

Gene: WinkNick_79 Start: 46516, Stop: 46824, Start Num: 13
Candidate Starts for WinkNick_79:
(Start: 13 @46516 has 52 MA's), (Start: 16 @46558 has 1 MA's), (25, 46750),

Gene: Yeet412_72 Start: 45978, Stop: 46307, Start Num: 11
Candidate Starts for Yeet412_72:
(Start: 11 @45978 has 23 MA's), (Start: 14 @46020 has 2 MA's), (Start: 16 @46044 has 1 MA's), (17, 46050), (18, 46074), (19, 46089), (25, 46230), (27, 46281),

Gene: Yeezy_85 Start: 50799, Stop: 51107, Start Num: 13
Candidate Starts for Yeezy_85:
(10, 50763), (Start: 13 @50799 has 52 MA's), (Start: 16 @50841 has 1 MA's), (25, 51033),

Gene: Zameen_78 Start: 49642, Stop: 49950, Start Num: 13
Candidate Starts for Zameen_78:
(Start: 13 @49642 has 52 MA's), (Start: 16 @49684 has 1 MA's), (25, 49876),

Gene: Zirinka_78 Start: 51386, Stop: 51694, Start Num: 13
Candidate Starts for Zirinka_78:
(10, 51350), (Start: 13 @51386 has 52 MA's), (Start: 16 @51428 has 1 MA's), (25, 51620),