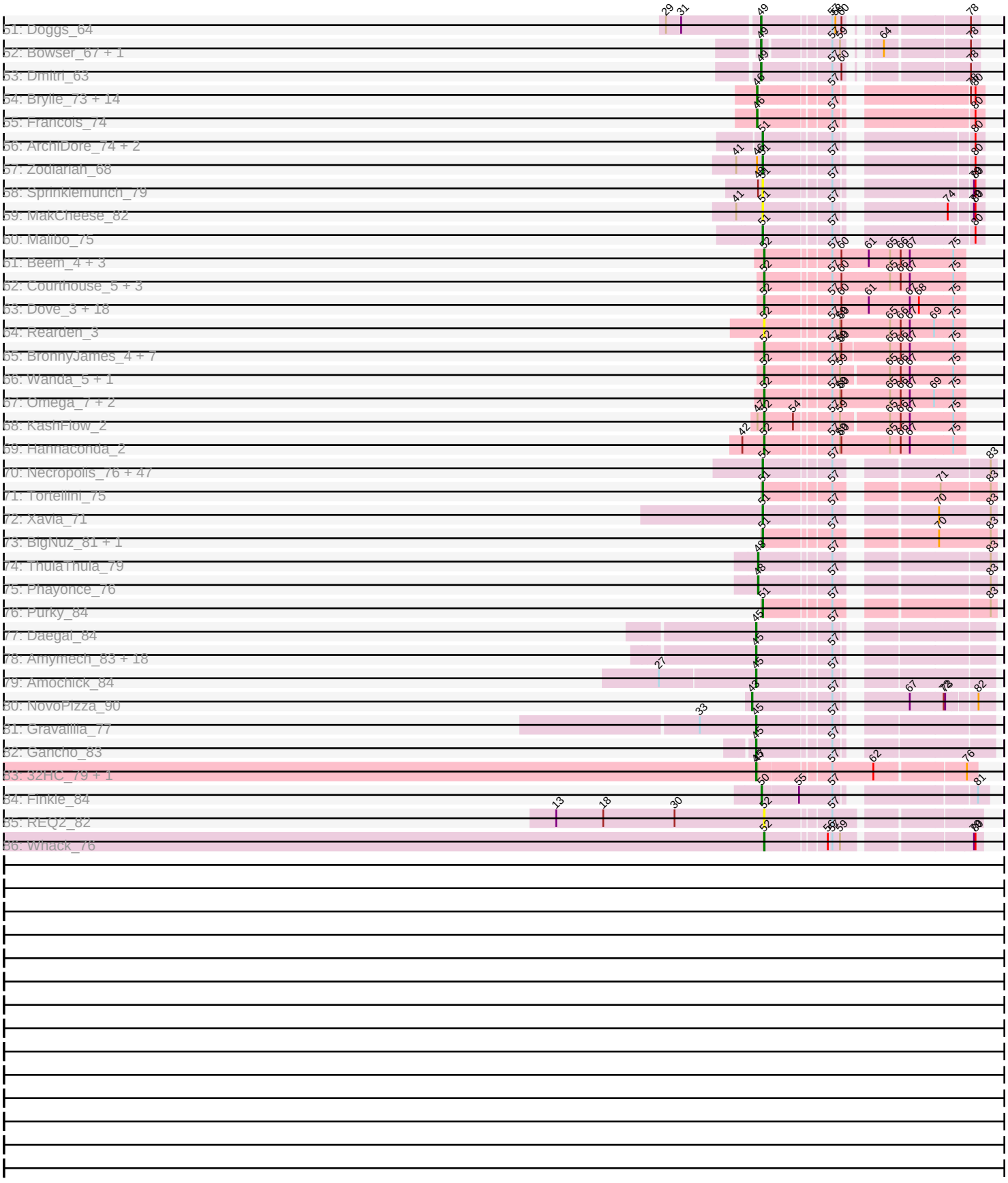
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1: JustASigh_89
2: Jalamman_82 + 2
3: CheeseSpider_90
4: Wocket_79
5: BlingBling_76
6: Blueberry_86 + 4
7: Guacamole_78 + 1
8: Otz_71 + 2
9: Samba_79
10: Zarboonamra_84
11: Barco_77
12: PrincePatrick_80 + 1
13: Bilno_81 + 2
14: William_83
15: JuJu_88
16: CaptainKirk2_79
17: PCoral7_80 + 1
18: Malachai_77
19: Mellie_76
20: ZiggyZoo_80
21: Melba_79
22: Lysidious_83
23: Wisp_76
24: Walrus_84
25: Murp_78
26: PhrostedPhlake_88
27: Ongeesy_85 + 1
28: Cynthia_75 + 14
29: Matteo_68 + 1
30: Pickett_74 + 2
31: PantheRoc_87 + 1
32: BaxterFox_85
33: DobbysSock_73
34: Hortense_80 + 4
35: Oregano_79
36: Tuti_73 + 5
37: Annalisa_77 + 3
38: PhriskyACE_73
39: Samman98_79 + 1
40: Suerte_74
41: Powerball_76
42: Dorito_75
43: Thimann_80
44: Sidious_79
45: HannahD_70 + 10
46: PatriciaStar_65 + 3
47: Hedwig_70
48: Opie_73
49: Kiko_67
50: DirtyBoi_68 + 1

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51: Doggs_64
52: Bowser_67 + 1
53: Dmitri_63
54: Brylie_73 + 14
55: Francois_74
56: ArchiDore_74 + 2
57: Zodiarian_68
58: Sprinklemunch_79
59: MakCheese_82
60: Malibo_75
61: Beem_4 + 3
62: Courthouse_5 + 3
63: Dove_3 + 18
64: Rearden_3
65: BronnyJames_4 + 7
66: Wanda_5 + 1
67: Omega_7 + 2
68: KashFlow_2
69: Hannaconda_2
70: Necropolis_76 + 47
71: Tortellini_75
72: Xavia_71
73: BigNuz_81 + 1
74: ThulaThula_79
75: Phayonce_76
76: Purky_84
77: Daegal_84
78: Amymech_83 + 18
79: Amochick_84
80: NovoPizza_90
81: Gravalilla_77
82: Gancho_83
83: 32HC_79 + 1
84: Finkle_84
85: REQ2_82
86: Whack_76

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 347205 Report

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

Pham number 347205 has 263 members, 25 are drafts.

Phages represented in each track:
- Track 1 : JustASigh_89
- Track 2 : Jalammah_82, Fenry_78, Zilla_76
- Track 3 : CheeseSpider_90
- Track 4 : Wocket_79
- Track 5 : BlingBling_76
- Track 6 : Blueberry_86, Gambino_89, Frokostdame_84, Azula_86, MissRona_86
- Track 7 : Guacamole_78, JasperJr_78
- Track 8 : Utz_71, UmaThurman_83, Obliviate_80
- Track 9 : Samba_79
- Track 10 : Zarbodnamra_84
- Track 11 : Barco_77
- Track 12 : PrincePatrick_80, Fairfaxidum_81
- Track 13 : Blino_81, Soilmate_84, CarolAnn_80
- Track 14 : William_83
- Track 15 : JuJu_88
- Track 16 : CaptainKirk2_79
- Track 17 : PCoral7_80, Toast_81
- Track 18 : Malachai_77
- Track 19 : Mellie_76
- Track 20 : ZiggyZoo_80
- Track 21 : Melba_79
- Track 22 : Lysidious_83
- Track 23 : Wisp_76
- Track 24 : Walrus_84
- Track 25 : Murp_78
- Track 26 : PhrostedPhlake_88
- Track 27 : Ohgeesy_85, Yeezy_87
- Track 28 : Cynthia_75, Lamberg_71, GemG_75, Bjanes7_72, Ebert_78, Sproutie_75, Mocha12_75, Haley23_75, Clap_75, Attis_74, Savage_75, Nettuno_71, SoilAssassin_74, Sahara_72, LordFarquaad_76
- Track 29 : Matteo_68, Denise_78
- Track 30 : Pickett_74, JCole_73, EdnaMode_75
- Track 31 : PantheRoc_87, Archis_82
- Track 32 : BaxterFox_85
- Track 33 : DobbysSock_73
- Track 34 : Hortense_80, Twinkle_79, Adora_77, Howe_80, Shlim410_78
- Track 35 : Oregano_79

• Track 36 : Tuti_73, Clark_78, Easley_77, Beenie_73, Rizz_82, MichaelScott_80
• Track 37 : Annalisa_77, WinkNick_80, Dolores_80, Sekhmet_79
• Track 38 : PhriskyACE_73
• Track 39 : Samman98_79, Invectra_81
• Track 40 : Suerte_74
• Track 41 : Powerball_76
• Track 42 : Dorito_75
• Track 43 : Thimann_80
• Track 44 : Sidious_79
• Track 45 : HannahD_70, Bunker_61, BBQValindra_67, MagicMan_70, BackstagePass_68, Eyes_65, Jecs_73, GEazy_73, NaLuna_72, TaronosaurasRx_75, Schnabeltier_71
• Track 46 : PatriciaStar_65, RayTheFireFly_73, Coriander_66, Moonflower_65
• Track 47 : Hedwig_70
• Track 48 : Opie_73
• Track 49 : Kiko_67
• Track 50 : DirtyBoi_68, Chipko_70
• Track 51 : Doggs_64
• Track 52 : Bowser_67, ZAYM_76
• Track 53 : Dmitri_63
• Track 54 : Brylie_73, Ayotoya_74, BetterKatz_74, GrandSlam_75, Bock_75, WheatThin_73, Mulch_73, Nadeem_73, SussRoloMann_74, Parada_73, Pimento_76, DelRio_74, NancyRae_72, Chop_75, Hamood_75
• Track 55 : Francois_74
• Track 56 : ArchiDore_74, Ruthy_72, DumpsterDude_70
• Track 57 : Zodiariah_68
• Track 58 : Sprinklemunch_79
• Track 59 : MakCheese_82
• Track 60 : Malibo_75
• Track 61 : Beem_4, Bobby_5, Halley_4, Ejimix_5
• Track 62 : Courthouse_5, Ariel_4, Zelink_4, JuicyJay_5
• Track 63 : Dove_3, DmpstrDiver_4, BAKA_4, HokkenD_4, EricMillard_4, Hidrated_4, Duke13_4, Bagrid_3, Pound_4, ThreeRngTarjay_4, Schatzie_3, Constella_3, NihilNomen_4, Hughesyang_4, Yeet_3, Minerva_4, Phoebus_4, Kalah2_5, Optimus_4
• Track 64 : Rearden_3
• Track 65 : BronnyJames_4, Porcelain_5, Gonephishing_8, MiaZeal_5, Nibley_4, Shaboozey_4, Lucky2013_5, Squint_5
• Track 66 : Wanda_5, Klein_5
• Track 67 : Omega_7, Nekros_6, LittleE_5
• Track 68 : KashFlow_2
• Track 69 : Hannaconda_2
• Track 70 : Necropolis_76, Ksquared_80, Bunnies_81, BronnyJr_73, StevieRay_81, Shipwreck_81, Gavriela_77, Mangethe_81, Arib1_78, Zilizebeth_83, Jebeks_77, Etoile_78, GaloreK_75, Chubbello_77, Camster_80, CactusJack_79, Malithi_79, Thespis_78, HUHilltop_81, Sonah_81, Glaske_78, Donovan_78, Fishburne_77, Phegasus_81, Kari_80, Polkaroo_80, Bhagsy_82, Bogie_81, GreaseLightnin_80, Brusacoram_78, PeanutPie_81, Atcoo_78, Bartholomew_77, Pygmy_82, Juniormint_74, Megiddo_78, FirstPlacePfu_82, Langerak_77, Majeke_81, Techage_79, Dynamo_78, StressBall_78, Phalm_79, Jung_77, Willsammy_80, Vidya_76, KilKor_79, Venti_79
• Track 71 : Tortellini_75
• Track 72 : Xavia_71

• Track 73 : BigNuz_81, Nazo_82
• Track 74 : ThulaThula_79
• Track 75 : Phayonce_76
• Track 76 : Purky_84
• Track 77 : Daegal_84
• Track 78 : Amymech_83, OBUpride_82, Kinbote_81, BloominB_82, Hadrien_80, Ubuntu_83, Ein37_83, Evanesce_82, LilHazelnut_83, DeepSoil15_83, Webster2_83, HH92_82, Luna22_76, Giles_76, Dewey_76, Hail_76, Luke_80, Forge_76, Wishmaker_76
• Track 79 : Amochick_84
• Track 80 : NovoPizza_90
• Track 81 : Gravaillia_77
• Track 82 : Gancho_83
• Track 83 : 32HC_79, Rem711_78
• Track 84 : Finkle_84
• Track 85 : REQ2_82
• Track 86 : Whack_76

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

The start number called the most often in the published annotations is 49, it was called in 94 of the 238 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Adora_77, Annalisa_77, Archis_82, Attis_74, BBQValindra_67, BackstagePass_68, Barco_77, BaxterFox_85, Beenie_73, Bjanes7_72, BlingBling_76, Bowser_67, Bunker_61, CaptainKirk2_79, Chipko_70, Clap_75, Clark_78, Coriander_66, Cynthia_75, Denise_78, DirtyBoi_68, Dmitri_63, DobbysSock_73, Doggs_64, Dolores_80, Dorito_75, Easley_77, Ebert_78, EdnaMode_75, Eyes_65, Fairfaxidum_81, Fenry_78, GEazy_73, GemG_75, Guacamole_78, Haley23_75, HannahD_70, Hedwig_70, Hortense_80, Howe_80, Invectra_81, JCole_73, Jalammah_82, JasperJr_78, Jecs_73, Kiko_67, Lamberg_71, LordFarquaad_76, Lysidious_83, MagicMan_70, Malachai_77, Matteo_68, Melba_79, Mellie_76, MichaelScott_80, Mocha12_75, Moonflower_65, Murp_78, NaLuna_72, Nettuno_71, Obliviate_80, Ohgeesy_85, Opie_73, Oregano_79, PCoral7_80, PantheRoc_87, PatriciaStar_65, PhriskyACE_73, PhrostedPhlake_88, Pickett_74, Powerball_76, PrincePatrick_80, RayTheFireFly_73, Rizz_82, Sahara_72, Samba_79, Samman98_79, Savage_75, Schnabeltier_71, Sekhmet_79, Shlim410_78, Sidious_79, SoilAssassin_74, Sproutie_75, Suerte_74, TaronosaurasRx_75, Thimann_80, Toast_81, Tuti_73, Twinkle_79, UmaThurman_83, Utz_71, William_83, WinkNick_80, Wisp_76, Wocket_79, Yeezy_87, ZAYM_76, Zarbodnamra_84, ZiggyZoo_80, Zilla_76,

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

Genes that do not have the "Most Annotated" start:
• 32HC_79, Amochick_84, Amymech_83, ArchiDore_74, Arib1_78, Ariel_4, Atcoo_78, Ayotoya_74, Azula_86, BAKA_4, Bagrid_3, Bartholomew_77, Beem_4, BetterKatz_74, Bhagsy_82, BigNuz_81, Blino_81, BloominB_82, Blueberry_86,

Bobby_5, Bock_75, Bogie_81, BronnyJames_4, BronnyJr_73, Brusacoram_78, Brylie_73, Bunnies_81, CactusJack_79, Camster_80, CarolAnn_80, CheeseSpider_90, Chop_75, Chubbello_77, Constella_3, Courthouse_5, Daegal_84, DeepSoil15_83, DelRio_74, Dewey_76, DmpstrDiver_4, Donovan_78, Dove_3, Duke13_4, DumpsterDude_70, Dynamo_78, Ein37_83, Ejimix_5, EricMillard_4, Etoile_78, Evanesce_82, Finkle_84, FirstPlacePfu_82, Fishburne_77, Forge_76, Francois_74, Frokostdame_84, GaloreK_75, Gambino_89, Gancho_83, Gavriela_77, Giles_76, Glaske_78, Gonephishing_8, GrandSlam_75, Gravaillia_77, GreaseLightnin_80, HH92_82, HUHilltop_81, Hadrien_80, Hail_76, Halley_4, Hamood_75, Hannaconda_2, Hidrated_4, HokkenD_4, Hughesyang_4, Jebeks_77, JuJu_88, JuicyJay_5, Jung_77, Juniormint_74, JustASigh_89, Kalah2_5, Kari_80, KashFlow_2, KilKor_79, Kinbote_81, Klein_5, Ksquared_80, Langerak_77, LilHazelnut_83, LittleE_5, Lucky2013_5, Luke_80, Luna22_76, Majeke_81, MakCheese_82, Malibo_75, Malithi_79, Mangethe_81, Megiddo_78, MiaZeal_5, Minerva_4, MissRona_86, Mulch_73, Nadeem_73, NancyRae_72, Nazo_82, Necropolis_76, Nekros_6, Nibley_4, NihilNomen_4, NovoPizza_90, OBUpride_82, Omega_7, Optimus_4, Parada_73, PeanutPie_81, Phalm_79, Phayonce_76, Phegasus_81, Phoebus_4, Pimento_76, Polkaroo_80, Porcelain_5, Pound_4, Purky_84, Pygmy_82, REQ2_82, Rearden_3, Rem711_78, Ruthy_72, Schatzie_3, Shaboozey_4, Shipwreck_81, Soilmate_84, Sonah_81, Sprinklemunch_79, Squint_5, StevieRay_81, StressBall_78, SussRoloMann_74, Techage_79, Thespis_78, ThreeRngTarjay_4, ThulaThula_79, Tortellini_75, Ubuntu_83, Venti_79, Vidya_76, Walrus_84, Wanda_5, Webster2_83, Whack_76, WheatThin_73, Willsammy_80, Wishmaker_76, Xavia_71, Yeet_3, Zelink_4, Zilizebeth_83, Zodiariah_68,

Summary by start number:

Start 43:
• Found in 1 of 263 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 238
• Called 100.0% of time when present
• Phage (with cluster) where this start called: NovoPizza_90 (Q),

Start 44:
• Found in 1 of 263 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 238
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JustASigh_89 (AH),

Start 45:
• Found in 25 of 263 (9.5%) of genes in pham
• Manual Annotations of this start: 24 of 238
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 32HC_79 (Z), Amochick_84 (Q), Amymech_83 (Q), BloominB_82 (Q), Daegal_84 (Q), DeepSoil15_83 (Q), Dewey_76 (Q), Ein37_83 (Q), Evanesce_82 (Q), Forge_76 (Q), Gancho_83 (Q), Giles_76 (Q), Gravaillia_77 (Q), HH92_82 (Q), Hadrien_80 (Q), Hail_76 (Q), Kinbote_81 (Q), LilHazelnut_83 (Q), Luke_80 (Q), Luna22_76 (Q), OBUpride_82 (Q), Rem711_78 (Z), Ubuntu_83 (Q), Webster2_83 (Q), Wishmaker_76 (Q),

Start 46:
• Found in 17 of 263 (6.5%) of genes in pham
• Manual Annotations of this start: 15 of 238

• Called 94.1% of time when present
• Phage (with cluster) where this start called: Ayotoya_74 (DI), BetterKatz_74 (DI), Bock_75 (DI), Brylie_73 (DI), Chop_75 (DI), DelRio_74 (DI), Francois_74 (DI), GrandSlam_75 (DI), Hamood_75 (DI), Mulch_73 (DI), Nadeem_73 (DI), NancyRae_72 (DI), Parada_73 (DI), Pimento_76 (DI), SussRoloMann_74 (DI), WheatThin_73 (DI),

Start 48:
• Found in 3 of 263 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 238
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Phayonce_76 (P5), ThulaThula_79 (P5),

Start 49:
• Found in 101 of 263 (38.4%) of genes in pham
• Manual Annotations of this start: 94 of 238
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Adora_77 (CZ4), Annalisa_77 (CZ4), Archis_82 (CV), Attis_74 (CZ2), BBQValindra_67 (DB), BackstagePass_68 (DB), Barco_77 (CV), BaxterFox_85 (CZ3), Beenie_73 (CZ4), Bjanes7_72 (CZ2), BlingBling_76 (CV), Bowser_67 (DB), Bunker_61 (DB), CaptainKirk2_79 (CV), Chipko_70 (DB), Clap_75 (CZ2), Clark_78 (CZ4), Coriander_66 (DB), Cynthia_75 (CZ2), Denise_78 (CZ5), DirtyBoi_68 (DB), Dmitri_63 (DB), DobbysSock_73 (CZ4), Doggs_64 (DB), Dolores_80 (CZ4), Dorito_75 (CZ4), Easley_77 (CZ4), Ebert_78 (CZ2), EdnaMode_75 (CZ2), Eyes_65 (DB), Fairfaxidum_81 (CV), Fenry_78 (CV), GEazy_73 (DB), GemG_75 (CZ2), Guacamole_78 (CV), Haley23_75 (CZ2), HannahD_70 (DB), Hedwig_70 (DB), Hortense_80 (CZ4), Howe_80 (CZ4), Invectra_81 (CZ4), JCole_73 (CZ2), Jalammah_82 (CV), JasperJr_78 (CV), Jecs_73 (DB), Kiko_67 (DB), Lamberg_71 (CZ2), LordFarquaad_76 (CZ2), Lysidious_83 (CV), MagicMan_70 (DB), Malachai_77 (CV), Matteo_68 (CZ2), Melba_79 (CV), Mellie_76 (CV), MichaelScott_80 (CZ4), Mocha12_75 (CZ2), Moonflower_65 (DB), Murp_78 (CV), NaLuna_72 (DB), Nettuno_71 (CZ2), Obliviate_80 (CV), Ohgeesy_85 (CZ), Opie_73 (DB), Oregano_79 (CZ4), PCoral7_80 (CV), PantheRoc_87 (CZ3), PatriciaStar_65 (DB), PhriskyACE_73 (CZ4), PhrostedPhlake_88 (CV), Pickett_74 (CZ2), Powerball_76 (CZ4), PrincePatrick_80 (CV), RayTheFireFly_73 (DB), Rizz_82 (CZ4), Sahara_72 (CZ2), Samba_79 (CV), Samman98_79 (CZ4), Savage_75 (CZ2), Schnabeltier_71 (DB), Sekhmet_79 (CZ4), Shlim410_78 (CZ4), Sidious_79 (CZ7), SoilAssassin_74 (CZ2), Sproutie_75 (CZ2), Suerte_74 (CZ4), TaronosaurasRx_75 (DB), Thimann_80 (CZ4), Toast_81 (CV), Tuti_73 (CZ4), Twinkle_79 (CZ4), UmaThurman_83 (CV), Utz_71 (CV), William_83 (CV), WinkNick_80 (CZ4), Wisp_76 (CV), Wocket_79 (CV), Yeezy_87 (CZ3), ZAYM_76 (DB), Zarbodnamra_84 (CV), ZiggyZoo_80 (CV), Zilla_76 (CV),

Start 50:
• Found in 1 of 263 (0.4%) of genes in pham
• Manual Annotations of this start: 1 of 238
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Finkle_84 (singleton),

Start 51:
• Found in 60 of 263 (22.8%) of genes in pham
• Manual Annotations of this start: 53 of 238
• Called 100.0% of time when present

• Phage (with cluster) where this start called: ArchiDore_74 (DW), Arib1_78 (P1), Atcoo_78 (P1), Bartholomew_77 (P1), Bhagsy_82 (P1), BigNuz_81 (P4), Bogie_81 (P1), BronnyJr_73 (P1), Brusacoram_78 (P1), Bunnies_81 (P1), CactusJack_79 (P1), Camster_80 (P1), Chubbello_77 (P1), Donovan_78 (P1), DumpsterDude_70 (DW), Dynamo_78 (P1), Etoile_78 (P1), FirstPlacePfu_82 (P1), Fishburne_77 (P1), GaloreK_75 (P1), Gavriela_77 (P1), Glaske_78 (P1), GreaseLightnin_80 (P1), HUHilltop_81 (P1), Jebeks_77 (P1), Jung_77 (P1), Juniormint_74 (P1), Kari_80 (P1), KilKor_79 (P1), Ksquared_80 (P1), Langerak_77 (P1), Majeke_81 (P1), MakCheese_82 (DW), Malibo_75 (DW), Malithi_79 (P1), Mangethe_81 (P1), Megiddo_78 (P1), Nazo_82 (P4), Necropolis_76 (P1), PeanutPie_81 (P1), Phalm_79 (P1), Phegasus_81 (P1), Polkaroo_80 (P1), Purky_84 (P6), Pygmy_82 (P1), Ruthy_72 (DW), Shipwreck_81 (P1), Sonah_81 (P1), Sprinklemunch_79 (DW), StevieRay_81 (P1), StressBall_78 (P1), Techage_79 (P1), Thespis_78 (P1), Tortellini_75 (P2), Venti_79 (P1), Vidya_76 (P1), Willsammy_80 (P1), Xavia_71 (P3), Zilizebeth_83 (P1), Zodiariah_68 (DW),

Start 52:
• Found in 56 of 263 (21.3%) of genes in pham
• Manual Annotations of this start: 47 of 238
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ariel_4 (J), Azula_86 (CV), BAKA_4 (J), Bagrid_3 (J), Beem_4 (J), Blino_81 (CV), Blueberry_86 (CV), Bobby_5 (J), BronnyJames_4 (J), CarolAnn_80 (CV), CheeseSpider_90 (CV), Constella_3 (J), Courthouse_5 (J), DmpstrDiver_4 (J), Dove_3 (J), Duke13_4 (J), Ejimix_5 (J), EricMillard_4 (J), Frokostdame_84 (CV), Gambino_89 (CV), Gonephishing_8 (J), Halley_4 (J), Hannaconda_2 (J), Hidrated_4 (J), HokkenD_4 (J), Hughesyang_4 (J), JuJu_88 (CV), JuicyJay_5 (J), Kalah2_5 (J), KashFlow_2 (J), Klein_5 (J), LittleE_5 (J), Lucky2013_5 (J), MiaZeal_5 (J), Minerva_4 (J), MissRona_86 (CV), Nekros_6 (J), Nibley_4 (J), NihilNomen_4 (J), Omega_7 (J), Optimus_4 (J), Phoebus_4 (J), Porcelain_5 (J), Pound_4 (J), REQ2_82 (singleton), Rearden_3 (J), Schatzie_3 (J), Shaboozey_4 (J), Soilmate_84 (CV), Squint_5 (J), ThreeRngTarjay_4 (J), Walrus_84 (CV), Wanda_5 (J), Whack_76 (singleton), Yeet_3 (J), Zelink_4 (J),

Summary by clusters:

There are 21 clusters represented in this pham: P2, P3, singleton, P1, P6, P4, DI, CZ2, CZ3, J, DB, CZ7, CZ4, CZ5, Q, CZ, AH, DW, Z, CV, P5,

Info for manual annotations of cluster AH:
•Start number 44 was manually annotated 1 time for cluster AH.

Info for manual annotations of cluster CV:
•Start number 49 was manually annotated 28 times for cluster CV.
•Start number 52 was manually annotated 10 times for cluster CV.

Info for manual annotations of cluster CZ:
•Start number 49 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:
•Start number 49 was manually annotated 19 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 49 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:
•Start number 49 was manually annotated 23 times for cluster CZ4.

Info for manual annotations of cluster CZ5:
•Start number 49 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ7:
•Start number 49 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DB:
•Start number 49 was manually annotated 18 times for cluster DB.

Info for manual annotations of cluster DI:
•Start number 46 was manually annotated 15 times for cluster DI.

Info for manual annotations of cluster DW:
•Start number 51 was manually annotated 5 times for cluster DW.

Info for manual annotations of cluster J:
•Start number 52 was manually annotated 36 times for cluster J.

Info for manual annotations of cluster P1:
•Start number 51 was manually annotated 43 times for cluster P1.

Info for manual annotations of cluster P2:
•Start number 51 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:
•Start number 51 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:
•Start number 51 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 48 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:
•Start number 51 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Q:
•Start number 43 was manually annotated 1 time for cluster Q.
•Start number 45 was manually annotated 23 times for cluster Q.

Info for manual annotations of cluster Z:
•Start number 45 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_79 Start: 48021, Stop: 48413, Start Num: 45
Candidate Starts for 32HC_79:

(Start: 45 @48021 has 24 MA's), (47, 48024), (57, 48150), (62, 48231), (76, 48393),

Gene: Adora_77 Start: 51381, Stop: 51737, Start Num: 49
Candidate Starts for Adora_77:
(22, 51159), (Start: 49 @51381 has 94 MA's), (57, 51504),

Gene: Amochick_84 Start: 53002, Stop: 53388, Start Num: 45
Candidate Starts for Amochick_84:
(27, 52816), (Start: 45 @53002 has 24 MA's), (57, 53134),

Gene: Amymech_83 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Amymech_83:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Annalisa_77 Start: 46848, Stop: 47156, Start Num: 49
Candidate Starts for Annalisa_77:
(9, 46026), (10, 46068), (17, 46530), (20, 46575), (Start: 49 @46848 has 94 MA's), (57, 46971),

Gene: ArchiDore_74 Start: 50880, Stop: 51233, Start Num: 51
Candidate Starts for ArchiDore_74:
(Start: 51 @50880 has 53 MA's), (57, 51000), (80, 51216),

Gene: Archis_82 Start: 48570, Stop: 48932, Start Num: 49
Candidate Starts for Archis_82:
(Start: 49 @48570 has 94 MA's), (57, 48690),

Gene: Arib1_78 Start: 46141, Stop: 46524, Start Num: 51
Candidate Starts for Arib1_78:
(Start: 51 @46141 has 53 MA's), (57, 46258), (83, 46513),

Gene: Ariel_4 Start: 1612, Stop: 1986, Start Num: 52
Candidate Starts for Ariel_4:
(Start: 52 @1612 has 47 MA's), (57, 1729), (60, 1747), (65, 1840), (66, 1861), (67, 1879), (75, 1963),

Gene: Atcoo_78 Start: 48483, Stop: 48866, Start Num: 51
Candidate Starts for Atcoo_78:
(Start: 51 @48483 has 53 MA's), (57, 48600), (83, 48855),

Gene: Attis_74 Start: 47514, Stop: 47822, Start Num: 49
Candidate Starts for Attis_74:
(Start: 49 @47514 has 94 MA's), (57, 47637),

Gene: Ayotoya_74 Start: 50124, Stop: 50486, Start Num: 46
Candidate Starts for Ayotoya_74:
(Start: 46 @50124 has 15 MA's), (57, 50247), (78, 50460), (80, 50469),

Gene: Azula_86 Start: 53170, Stop: 53538, Start Num: 52
Candidate Starts for Azula_86:
(Start: 52 @53170 has 47 MA's), (57, 53287),

Gene: BAKA_4 Start: 1934, Stop: 2308, Start Num: 52
Candidate Starts for BAKA_4:
(Start: 52 @1934 has 47 MA's), (57, 2051), (60, 2069), (61, 2120), (67, 2201), (68, 2219), (75, 2285),

Gene: BBQValindra_67 Start: 46445, Stop: 46783, Start Num: 49
Candidate Starts for BBQValindra_67:
(Start: 49 @46445 has 94 MA's), (57, 46559), (59, 46574), (78, 46766),

Gene: BackstagePass_68 Start: 45793, Stop: 46131, Start Num: 49
Candidate Starts for BackstagePass_68:
(Start: 49 @45793 has 94 MA's), (57, 45907), (59, 45922), (78, 46114),

Gene: Bagrid_3 Start: 1116, Stop: 1490, Start Num: 52
Candidate Starts for Bagrid_3:
(Start: 52 @1116 has 47 MA's), (57, 1233), (60, 1251), (61, 1302), (67, 1383), (68, 1401), (75, 1467),

Gene: Barco_77 Start: 48475, Stop: 48837, Start Num: 49
Candidate Starts for Barco_77:
(25, 48286), (32, 48346), (37, 48400), (Start: 49 @48475 has 94 MA's), (57, 48595),

Gene: Bartholomew_77 Start: 45893, Stop: 46276, Start Num: 51
Candidate Starts for Bartholomew_77:
(Start: 51 @45893 has 53 MA's), (57, 46010), (83, 46265),

Gene: BaxterFox_85 Start: 53261, Stop: 53617, Start Num: 49
Candidate Starts for BaxterFox_85:
(Start: 49 @53261 has 94 MA's), (57, 53384),

Gene: Beem_4 Start: 1577, Stop: 1951, Start Num: 52
Candidate Starts for Beem_4:
(Start: 52 @1577 has 47 MA's), (57, 1694), (60, 1712), (61, 1763), (65, 1805), (66, 1826), (67, 1844), (75, 1928),

Gene: Beenie_73 Start: 47518, Stop: 47826, Start Num: 49
Candidate Starts for Beenie_73:
(Start: 49 @47518 has 94 MA's), (57, 47641),

Gene: BetterKatz_74 Start: 49906, Stop: 50268, Start Num: 46
Candidate Starts for BetterKatz_74:
(Start: 46 @49906 has 15 MA's), (57, 50029), (78, 50242), (80, 50251),

Gene: Bhagsy_82 Start: 47604, Stop: 47987, Start Num: 51
Candidate Starts for Bhagsy_82:
(Start: 51 @47604 has 53 MA's), (57, 47721), (83, 47976),

Gene: BigNuz_81 Start: 48028, Stop: 48417, Start Num: 51
Candidate Starts for BigNuz_81:
(Start: 51 @48028 has 53 MA's), (57, 48145), (70, 48304), (83, 48406),

Gene: Bjanes7_72 Start: 45675, Stop: 45983, Start Num: 49
Candidate Starts for Bjanes7_72:
(Start: 49 @45675 has 94 MA's), (57, 45798),

Gene: BlingBling_76 Start: 48316, Stop: 48678, Start Num: 49
Candidate Starts for BlingBling_76:
(34, 48214), (Start: 49 @48316 has 94 MA's), (57, 48436),

Gene: Blino_81 Start: 53716, Stop: 54084, Start Num: 52
Candidate Starts for Blino_81:
(36, 53626), (37, 53629), (Start: 52 @53716 has 47 MA's), (57, 53833),

Gene: BloominB_82 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for BloominB_82:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Blueberry_86 Start: 54538, Stop: 54906, Start Num: 52
Candidate Starts for Blueberry_86:
(Start: 52 @54538 has 47 MA's), (57, 54655),

Gene: Bobby_5 Start: 2312, Stop: 2686, Start Num: 52
Candidate Starts for Bobby_5:
(Start: 52 @2312 has 47 MA's), (57, 2429), (60, 2447), (61, 2498), (65, 2540), (66, 2561), (67, 2579), (75, 2663),

Gene: Bock_75 Start: 49490, Stop: 49852, Start Num: 46
Candidate Starts for Bock_75:
(Start: 46 @49490 has 15 MA's), (57, 49613), (78, 49826), (80, 49835),

Gene: Bogie_81 Start: 48048, Stop: 48431, Start Num: 51
Candidate Starts for Bogie_81:
(Start: 51 @48048 has 53 MA's), (57, 48165), (83, 48420),

Gene: Bowser_67 Start: 46139, Stop: 46477, Start Num: 49
Candidate Starts for Bowser_67:
(Start: 49 @46139 has 94 MA's), (57, 46253), (59, 46268), (64, 46310), (78, 46460),

Gene: BronnyJames_4 Start: 1492, Stop: 1857, Start Num: 52
Candidate Starts for BronnyJames_4:
(Start: 52 @1492 has 47 MA's), (57, 1606), (59, 1621), (60, 1624), (65, 1711), (66, 1732), (67, 1750), (75, 1834),

Gene: BronnyJr_73 Start: 46548, Stop: 46931, Start Num: 51
Candidate Starts for BronnyJr_73:
(Start: 51 @46548 has 53 MA's), (57, 46665), (83, 46920),

Gene: Brusacoram_78 Start: 47026, Stop: 47409, Start Num: 51
Candidate Starts for Brusacoram_78:
(Start: 51 @47026 has 53 MA's), (57, 47143), (83, 47398),

Gene: Brylie_73 Start: 49140, Stop: 49502, Start Num: 46
Candidate Starts for Brylie_73:
(Start: 46 @49140 has 15 MA's), (57, 49263), (78, 49476), (80, 49485),

Gene: Bunker_61 Start: 45078, Stop: 45416, Start Num: 49
Candidate Starts for Bunker_61:
(Start: 49 @45078 has 94 MA's), (57, 45192), (59, 45207), (78, 45399),

Gene: Bunnies_81 Start: 48231, Stop: 48614, Start Num: 51
Candidate Starts for Bunnies_81:

(Start: 51 @48231 has 53 MA's), (57, 48348), (83, 48603),

Gene: CactusJack_79 Start: 47630, Stop: 48013, Start Num: 51
Candidate Starts for CactusJack_79:
(Start: 51 @47630 has 53 MA's), (57, 47747), (83, 48002),

Gene: Camster_80 Start: 46558, Stop: 46941, Start Num: 51
Candidate Starts for Camster_80:
(Start: 51 @46558 has 53 MA's), (57, 46675), (83, 46930),

Gene: CaptainKirk2_79 Start: 47468, Stop: 47830, Start Num: 49
Candidate Starts for CaptainKirk2_79:
(22, 47237), (26, 47282), (34, 47366), (Start: 49 @47468 has 94 MA's), (57, 47588),

Gene: CarolAnn_80 Start: 53715, Stop: 54083, Start Num: 52
Candidate Starts for CarolAnn_80:
(36, 53625), (37, 53628), (Start: 52 @53715 has 47 MA's), (57, 53832),

Gene: CheeseSpider_90 Start: 52957, Stop: 53325, Start Num: 52
Candidate Starts for CheeseSpider_90:
(25, 52756), (32, 52816), (Start: 52 @52957 has 47 MA's), (57, 53074),

Gene: Chipko_70 Start: 45208, Stop: 45558, Start Num: 49
Candidate Starts for Chipko_70:
(Start: 49 @45208 has 94 MA's), (57, 45331), (60, 45349), (78, 45541),

Gene: Chop_75 Start: 50189, Stop: 50551, Start Num: 46
Candidate Starts for Chop_75:
(Start: 46 @50189 has 15 MA's), (57, 50312), (78, 50525), (80, 50534),

Gene: Chubbello_77 Start: 45752, Stop: 46135, Start Num: 51
Candidate Starts for Chubbello_77:
(Start: 51 @45752 has 53 MA's), (57, 45869), (83, 46124),

Gene: Clap_75 Start: 45854, Stop: 46162, Start Num: 49
Candidate Starts for Clap_75:
(Start: 49 @45854 has 94 MA's), (57, 45977),

Gene: Clark_78 Start: 47281, Stop: 47589, Start Num: 49
Candidate Starts for Clark_78:
(Start: 49 @47281 has 94 MA's), (57, 47404),

Gene: Constella_3 Start: 1115, Stop: 1489, Start Num: 52
Candidate Starts for Constella_3:
(Start: 52 @1115 has 47 MA's), (57, 1232), (60, 1250), (61, 1301), (67, 1382), (68, 1400), (75, 1466),

Gene: Coriander_66 Start: 43793, Stop: 44143, Start Num: 49
Candidate Starts for Coriander_66:
(29, 43616), (31, 43646), (Start: 49 @43793 has 94 MA's), (57, 43916), (60, 43934), (78, 44126),

Gene: Courthouse_5 Start: 2411, Stop: 2785, Start Num: 52
Candidate Starts for Courthouse_5:
(Start: 52 @2411 has 47 MA's), (57, 2528), (60, 2546), (65, 2639), (66, 2660), (67, 2678), (75, 2762),

Gene: Cynthia_75 Start: 45852, Stop: 46160, Start Num: 49
Candidate Starts for Cynthia_75:
(Start: 49 @45852 has 94 MA's), (57, 45975),

Gene: Daegal_84 Start: 53717, Stop: 54103, Start Num: 45
Candidate Starts for Daegal_84:
(Start: 45 @53717 has 24 MA's), (57, 53849),

Gene: DeepSoil15_83 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for DeepSoil15_83:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: DelRio_74 Start: 50231, Stop: 50593, Start Num: 46
Candidate Starts for DelRio_74:
(Start: 46 @50231 has 15 MA's), (57, 50354), (78, 50567), (80, 50576),

Gene: Denise_78 Start: 44676, Stop: 44984, Start Num: 49
Candidate Starts for Denise_78:
(Start: 49 @44676 has 94 MA's), (57, 44799),

Gene: Dewey_76 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Dewey_76:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: DirtyBoi_68 Start: 43434, Stop: 43784, Start Num: 49
Candidate Starts for DirtyBoi_68:
(Start: 49 @43434 has 94 MA's), (57, 43557), (60, 43575), (78, 43767),

Gene: Dmitri_63 Start: 45337, Stop: 45687, Start Num: 49
Candidate Starts for Dmitri_63:
(Start: 49 @45337 has 94 MA's), (57, 45460), (60, 45478), (78, 45670),

Gene: DmpstrDiver_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for DmpstrDiver_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: DobbysSock_73 Start: 47763, Stop: 48071, Start Num: 49
Candidate Starts for DobbysSock_73:
(1, 46299), (2, 46383), (3, 46671), (4, 46707), (5, 46719), (6, 46755), (7, 46791), (8, 46845), (9, 46941), (10, 46983), (17, 47445), (20, 47490), (Start: 49 @47763 has 94 MA's), (57, 47886),

Gene: Doggs_64 Start: 44986, Stop: 45336, Start Num: 49
Candidate Starts for Doggs_64:
(29, 44809), (31, 44839), (Start: 49 @44986 has 94 MA's), (57, 45109), (58, 45115), (60, 45127), (78, 45319),

Gene: Dolores_80 Start: 46901, Stop: 47209, Start Num: 49
Candidate Starts for Dolores_80:
(9, 46079), (10, 46121), (17, 46583), (20, 46628), (Start: 49 @46901 has 94 MA's), (57, 47024),

Gene: Donovan_78 Start: 46571, Stop: 46954, Start Num: 51
Candidate Starts for Donovan_78:

(Start: 51 @46571 has 53 MA's), (57, 46688), (83, 46943),

Gene: Dorito_75 Start: 46349, Stop: 46657, Start Num: 49
Candidate Starts for Dorito_75:
(38, 46286), (Start: 49 @46349 has 94 MA's), (57, 46472),

Gene: Dove_3 Start: 1115, Stop: 1489, Start Num: 52
Candidate Starts for Dove_3:
(Start: 52 @1115 has 47 MA's), (57, 1232), (60, 1250), (61, 1301), (67, 1382), (68, 1400), (75, 1466),

Gene: Duke13_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for Duke13_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: DumpsterDude_70 Start: 51346, Stop: 51699, Start Num: 51
Candidate Starts for DumpsterDude_70:
(Start: 51 @51346 has 53 MA's), (57, 51466), (80, 51682),

Gene: Dynamo_78 Start: 46082, Stop: 46465, Start Num: 51
Candidate Starts for Dynamo_78:
(Start: 51 @46082 has 53 MA's), (57, 46199), (83, 46454),

Gene: Easley_77 Start: 46282, Stop: 46590, Start Num: 49
Candidate Starts for Easley_77:
(Start: 49 @46282 has 94 MA's), (57, 46405),

Gene: Ebert_78 Start: 46286, Stop: 46594, Start Num: 49
Candidate Starts for Ebert_78:
(Start: 49 @46286 has 94 MA's), (57, 46409),

Gene: EdnaMode_75 Start: 46208, Stop: 46516, Start Num: 49
Candidate Starts for EdnaMode_75:
(Start: 49 @46208 has 94 MA's), (57, 46331),

Gene: Ein37_83 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Ein37_83:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Ejimix_5 Start: 2327, Stop: 2701, Start Num: 52
Candidate Starts for Ejimix_5:
(Start: 52 @2327 has 47 MA's), (57, 2444), (60, 2462), (61, 2513), (65, 2555), (66, 2576), (67, 2594), (75, 2678),

Gene: EricMillard_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for EricMillard_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: Etoile_78 Start: 46936, Stop: 47319, Start Num: 51
Candidate Starts for Etoile_78:
(Start: 51 @46936 has 53 MA's), (57, 47053), (83, 47308),

Gene: Evanesce_82 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Evanesce_82:

(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Eyes_65 Start: 46342, Stop: 46680, Start Num: 49
Candidate Starts for Eyes_65:
(Start: 49 @46342 has 94 MA's), (57, 46456), (59, 46471), (78, 46663),

Gene: Fairfaxidum_81 Start: 49748, Stop: 50098, Start Num: 49
Candidate Starts for Fairfaxidum_81:
(Start: 49 @49748 has 94 MA's), (57, 49868),

Gene: Fenry_78 Start: 49536, Stop: 49898, Start Num: 49
Candidate Starts for Fenry_78:
(Start: 49 @49536 has 94 MA's), (57, 49656),

Gene: Finkle_84 Start: 47378, Stop: 47758, Start Num: 50
Candidate Starts for Finkle_84:
(Start: 50 @47378 has 1 MA's), (55, 47447), (57, 47513), (81, 47738),

Gene: FirstPlacePfu_82 Start: 45089, Stop: 45472, Start Num: 51
Candidate Starts for FirstPlacePfu_82:
(Start: 51 @45089 has 53 MA's), (57, 45206), (83, 45461),

Gene: Fishburne_77 Start: 46518, Stop: 46901, Start Num: 51
Candidate Starts for Fishburne_77:
(Start: 51 @46518 has 53 MA's), (57, 46635), (83, 46890),

Gene: Forge_76 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Forge_76:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Francois_74 Start: 49804, Stop: 50169, Start Num: 46
Candidate Starts for Francois_74:
(Start: 46 @49804 has 15 MA's), (57, 49927), (80, 50152),

Gene: Frokostdame_84 Start: 52079, Stop: 52447, Start Num: 52
Candidate Starts for Frokostdame_84:
(Start: 52 @52079 has 47 MA's), (57, 52196),

Gene: GEazy_73 Start: 46298, Stop: 46636, Start Num: 49
Candidate Starts for GEazy_73:
(Start: 49 @46298 has 94 MA's), (57, 46412), (59, 46427), (78, 46619),

Gene: GaloreK_75 Start: 46422, Stop: 46805, Start Num: 51
Candidate Starts for GaloreK_75:
(Start: 51 @46422 has 53 MA's), (57, 46539), (83, 46794),

Gene: Gambino_89 Start: 53170, Stop: 53538, Start Num: 52
Candidate Starts for Gambino_89:
(Start: 52 @53170 has 47 MA's), (57, 53287),

Gene: Gancho_83 Start: 52980, Stop: 53369, Start Num: 45
Candidate Starts for Gancho_83:
(Start: 45 @52980 has 24 MA's), (57, 53112),

Gene: Gavriela_77 Start: 47324, Stop: 47707, Start Num: 51
Candidate Starts for Gavriela_77:
(Start: 51 @47324 has 53 MA's), (57, 47441), (83, 47696),

Gene: GemG_75 Start: 45858, Stop: 46166, Start Num: 49
Candidate Starts for GemG_75:
(Start: 49 @45858 has 94 MA's), (57, 45981),

Gene: Giles_76 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Giles_76:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Glaske_78 Start: 47630, Stop: 48013, Start Num: 51
Candidate Starts for Glaske_78:
(Start: 51 @47630 has 53 MA's), (57, 47747), (83, 48002),

Gene: Gonephishing_8 Start: 3463, Stop: 3834, Start Num: 52
Candidate Starts for Gonephishing_8:
(Start: 52 @3463 has 47 MA's), (57, 3577), (59, 3592), (60, 3595), (65, 3688), (66, 3709), (67, 3727), (75, 3811),

Gene: GrandSlam_75 Start: 50189, Stop: 50551, Start Num: 46
Candidate Starts for GrandSlam_75:
(Start: 46 @50189 has 15 MA's), (57, 50312), (78, 50525), (80, 50534),

Gene: Gravaillia_77 Start: 52782, Stop: 53168, Start Num: 45
Candidate Starts for Gravaillia_77:
(33, 52671), (Start: 45 @52782 has 24 MA's), (57, 52914),

Gene: GreaseLightnin_80 Start: 47833, Stop: 48216, Start Num: 51
Candidate Starts for GreaseLightnin_80:
(Start: 51 @47833 has 53 MA's), (57, 47950), (83, 48205),

Gene: Guacamole_78 Start: 49464, Stop: 49826, Start Num: 49
Candidate Starts for Guacamole_78:
(Start: 49 @49464 has 94 MA's), (57, 49584),

Gene: HH92_82 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for HH92_82:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: HUHilltop_81 Start: 46305, Stop: 46688, Start Num: 51
Candidate Starts for HUHilltop_81:
(Start: 51 @46305 has 53 MA's), (57, 46422), (83, 46677),

Gene: Hadrien_80 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Hadrien_80:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Hail_76 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Hail_76:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Haley23_75 Start: 45854, Stop: 46162, Start Num: 49
Candidate Starts for Haley23_75:
(Start: 49 @45854 has 94 MA's), (57, 45977),

Gene: Halley_4 Start: 1577, Stop: 1951, Start Num: 52
Candidate Starts for Halley_4:
(Start: 52 @1577 has 47 MA's), (57, 1694), (60, 1712), (61, 1763), (65, 1805), (66, 1826), (67, 1844), (75, 1928),

Gene: Hamood_75 Start: 50189, Stop: 50551, Start Num: 46
Candidate Starts for Hamood_75:
(Start: 46 @50189 has 15 MA's), (57, 50312), (78, 50525), (80, 50534),

Gene: Hannaconda_2 Start: 1094, Stop: 1465, Start Num: 52
Candidate Starts for Hannaconda_2:
(42, 1052), (Start: 52 @1094 has 47 MA's), (57, 1208), (59, 1223), (60, 1226), (65, 1319), (66, 1340), (67, 1358), (75, 1442),

Gene: HannahD_70 Start: 45665, Stop: 46003, Start Num: 49
Candidate Starts for HannahD_70:
(Start: 49 @45665 has 94 MA's), (57, 45779), (59, 45794), (78, 45986),

Gene: Hedwig_70 Start: 44137, Stop: 44487, Start Num: 49
Candidate Starts for Hedwig_70:
(31, 43990), (Start: 49 @44137 has 94 MA's), (57, 44260), (58, 44266), (60, 44278), (78, 44470),

Gene: Hidrated_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for Hidrated_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: HokkenD_4 Start: 1865, Stop: 2239, Start Num: 52
Candidate Starts for HokkenD_4:
(Start: 52 @1865 has 47 MA's), (57, 1982), (60, 2000), (61, 2051), (67, 2132), (68, 2150), (75, 2216),

Gene: Hortense_80 Start: 52736, Stop: 53092, Start Num: 49
Candidate Starts for Hortense_80:
(22, 52514), (Start: 49 @52736 has 94 MA's), (57, 52859),

Gene: Howe_80 Start: 52736, Stop: 53092, Start Num: 49
Candidate Starts for Howe_80:
(22, 52514), (Start: 49 @52736 has 94 MA's), (57, 52859),

Gene: Hughesyang_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for Hughesyang_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: Invectra_81 Start: 48583, Stop: 48891, Start Num: 49
Candidate Starts for Invectra_81:
(20, 48310), (Start: 49 @48583 has 94 MA's), (57, 48706),

Gene: JCole_73 Start: 44770, Stop: 45078, Start Num: 49
Candidate Starts for JCole_73:

(Start: 49 @44770 has 94 MA's), (57, 44893),

Gene: Jalammah_82 Start: 51123, Stop: 51485, Start Num: 49
Candidate Starts for Jalammah_82:
(Start: 49 @51123 has 94 MA's), (57, 51243),

Gene: JasperJr_78 Start: 49464, Stop: 49826, Start Num: 49
Candidate Starts for JasperJr_78:
(Start: 49 @49464 has 94 MA's), (57, 49584),

Gene: Jebeks_77 Start: 44989, Stop: 45372, Start Num: 51
Candidate Starts for Jebeks_77:
(Start: 51 @44989 has 53 MA's), (57, 45106), (83, 45361),

Gene: Jecs_73 Start: 47859, Stop: 48197, Start Num: 49
Candidate Starts for Jecs_73:
(Start: 49 @47859 has 94 MA's), (57, 47973), (59, 47988), (78, 48180),

Gene: JuJu_88 Start: 53549, Stop: 53917, Start Num: 52
Candidate Starts for JuJu_88:
(Start: 52 @53549 has 47 MA's), (57, 53666), (78, 53900),

Gene: JuicyJay_5 Start: 2410, Stop: 2784, Start Num: 52
Candidate Starts for JuicyJay_5:
(Start: 52 @2410 has 47 MA's), (57, 2527), (60, 2545), (65, 2638), (66, 2659), (67, 2677), (75, 2761),

Gene: Jung_77 Start: 45968, Stop: 46351, Start Num: 51
Candidate Starts for Jung_77:
(Start: 51 @45968 has 53 MA's), (57, 46085), (83, 46340),

Gene: Juniormint_74 Start: 44984, Stop: 45367, Start Num: 51
Candidate Starts for Juniormint_74:
(Start: 51 @44984 has 53 MA's), (57, 45101), (83, 45356),

Gene: JustASigh_89 Start: 52239, Stop: 52625, Start Num: 44
Candidate Starts for JustASigh_89:
(Start: 44 @52239 has 1 MA's), (57, 52371),

Gene: Kalah2_5 Start: 2406, Stop: 2780, Start Num: 52
Candidate Starts for Kalah2_5:
(Start: 52 @2406 has 47 MA's), (57, 2523), (60, 2541), (61, 2592), (67, 2673), (68, 2691), (75, 2757),

Gene: Kari_80 Start: 46932, Stop: 47315, Start Num: 51
Candidate Starts for Kari_80:
(Start: 51 @46932 has 53 MA's), (57, 47049), (83, 47304),

Gene: KashFlow_2 Start: 1184, Stop: 1552, Start Num: 52
Candidate Starts for KashFlow_2:
(47, 1175), (Start: 52 @1184 has 47 MA's), (54, 1241), (57, 1301), (59, 1316), (65, 1406), (66, 1427), (67, 1445), (75, 1529),

Gene: Kiko_67 Start: 43864, Stop: 44214, Start Num: 49
Candidate Starts for Kiko_67:

(Start: 49 @43864 has 94 MA's), (53, 43876), (57, 43987), (63, 44026), (64, 44044), (71, 44143), (77, 44194), (78, 44197),

Gene: KilKor_79 Start: 48323, Stop: 48706, Start Num: 51
Candidate Starts for KilKor_79:
(Start: 51 @48323 has 53 MA's), (57, 48440), (83, 48695),

Gene: Kinbote_81 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Kinbote_81:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Klein_5 Start: 2410, Stop: 2778, Start Num: 52
Candidate Starts for Klein_5:
(Start: 52 @2410 has 47 MA's), (57, 2527), (59, 2542), (65, 2632), (66, 2653), (67, 2671), (75, 2755),

Gene: Ksquared_80 Start: 48108, Stop: 48491, Start Num: 51
Candidate Starts for Ksquared_80:
(Start: 51 @48108 has 53 MA's), (57, 48225), (83, 48480),

Gene: Lamberg_71 Start: 44363, Stop: 44671, Start Num: 49
Candidate Starts for Lamberg_71:
(Start: 49 @44363 has 94 MA's), (57, 44486),

Gene: Langerak_77 Start: 46496, Stop: 46879, Start Num: 51
Candidate Starts for Langerak_77:
(Start: 51 @46496 has 53 MA's), (57, 46613), (83, 46868),

Gene: LilHazelnut_83 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for LilHazelnut_83:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: LittleE_5 Start: 1974, Stop: 2345, Start Num: 52
Candidate Starts for LittleE_5:
(Start: 52 @1974 has 47 MA's), (57, 2088), (59, 2103), (60, 2106), (65, 2199), (66, 2220), (67, 2238), (69, 2286), (75, 2322),

Gene: LordFarquaad_76 Start: 47496, Stop: 47804, Start Num: 49
Candidate Starts for LordFarquaad_76:
(Start: 49 @47496 has 94 MA's), (57, 47619),

Gene: Lucky2013_5 Start: 2039, Stop: 2410, Start Num: 52
Candidate Starts for Lucky2013_5:
(Start: 52 @2039 has 47 MA's), (57, 2153), (59, 2168), (60, 2171), (65, 2264), (66, 2285), (67, 2303), (75, 2387),

Gene: Luke_80 Start: 52558, Stop: 52947, Start Num: 45
Candidate Starts for Luke_80:
(Start: 45 @52558 has 24 MA's), (57, 52690),

Gene: Luna22_76 Start: 52587, Stop: 52976, Start Num: 45
Candidate Starts for Luna22_76:
(Start: 45 @52587 has 24 MA's), (57, 52719),

Gene: Lysidious_83 Start: 50525, Stop: 50887, Start Num: 49
Candidate Starts for Lysidious_83:
(34, 50423), (Start: 49 @50525 has 94 MA's), (57, 50645),

Gene: MagicMan_70 Start: 47168, Stop: 47506, Start Num: 49
Candidate Starts for MagicMan_70:
(Start: 49 @47168 has 94 MA's), (57, 47282), (59, 47297), (78, 47489),

Gene: Majeke_81 Start: 47020, Stop: 47403, Start Num: 51
Candidate Starts for Majeke_81:
(Start: 51 @47020 has 53 MA's), (57, 47137), (83, 47392),

Gene: MakCheese_82 Start: 50597, Stop: 50950, Start Num: 51
Candidate Starts for MakCheese_82:
(41, 50549), (Start: 51 @50597 has 53 MA's), (57, 50717), (74, 50894), (79, 50930), (80, 50933),

Gene: Malachai_77 Start: 50437, Stop: 50799, Start Num: 49
Candidate Starts for Malachai_77:
(28, 50254), (36, 50356), (37, 50359), (Start: 49 @50437 has 94 MA's), (57, 50557),

Gene: Malibo_75 Start: 49012, Stop: 49365, Start Num: 51
Candidate Starts for Malibo_75:
(Start: 51 @49012 has 53 MA's), (57, 49132), (80, 49348),

Gene: Malithi_79 Start: 46278, Stop: 46661, Start Num: 51
Candidate Starts for Malithi_79:
(Start: 51 @46278 has 53 MA's), (57, 46395), (83, 46650),

Gene: Mangethe_81 Start: 47020, Stop: 47403, Start Num: 51
Candidate Starts for Mangethe_81:
(Start: 51 @47020 has 53 MA's), (57, 47137), (83, 47392),

Gene: Matteo_68 Start: 43712, Stop: 44020, Start Num: 49
Candidate Starts for Matteo_68:
(Start: 49 @43712 has 94 MA's), (57, 43835),

Gene: Megiddo_78 Start: 48191, Stop: 48574, Start Num: 51
Candidate Starts for Megiddo_78:
(Start: 51 @48191 has 53 MA's), (57, 48308), (83, 48563),

Gene: Melba_79 Start: 47920, Stop: 48282, Start Num: 49
Candidate Starts for Melba_79:
(28, 47734), (Start: 49 @47920 has 94 MA's), (57, 48040),

Gene: Mellie_76 Start: 47585, Stop: 47947, Start Num: 49
Candidate Starts for Mellie_76:
(25, 47396), (32, 47456), (36, 47507), (37, 47510), (Start: 49 @47585 has 94 MA's), (57, 47705),

Gene: MiaZeal_5 Start: 2108, Stop: 2479, Start Num: 52
Candidate Starts for MiaZeal_5:
(Start: 52 @2108 has 47 MA's), (57, 2222), (59, 2237), (60, 2240), (65, 2333), (66, 2354), (67, 2372), (75, 2456),

Gene: MichaelScott_80 Start: 47962, Stop: 48270, Start Num: 49
Candidate Starts for MichaelScott_80:
(Start: 49 @47962 has 94 MA's), (57, 48085),

Gene: Minerva_4 Start: 1866, Stop: 2240, Start Num: 52
Candidate Starts for Minerva_4:
(Start: 52 @1866 has 47 MA's), (57, 1983), (60, 2001), (61, 2052), (67, 2133), (68, 2151), (75, 2217),

Gene: MissRona_86 Start: 53171, Stop: 53539, Start Num: 52
Candidate Starts for MissRona_86:
(Start: 52 @53171 has 47 MA's), (57, 53288),

Gene: Mocha12_75 Start: 45854, Stop: 46162, Start Num: 49
Candidate Starts for Mocha12_75:
(Start: 49 @45854 has 94 MA's), (57, 45977),

Gene: Moonflower_65 Start: 44889, Stop: 45239, Start Num: 49
Candidate Starts for Moonflower_65:
(29, 44712), (31, 44742), (Start: 49 @44889 has 94 MA's), (57, 45012), (60, 45030), (78, 45222),

Gene: Mulch_73 Start: 49179, Stop: 49541, Start Num: 46
Candidate Starts for Mulch_73:
(Start: 46 @49179 has 15 MA's), (57, 49302), (78, 49515), (80, 49524),

Gene: Murp_78 Start: 51067, Stop: 51432, Start Num: 49
Candidate Starts for Murp_78:
(Start: 49 @51067 has 94 MA's), (57, 51187),

Gene: NaLuna_72 Start: 45665, Stop: 46003, Start Num: 49
Candidate Starts for NaLuna_72:
(Start: 49 @45665 has 94 MA's), (57, 45779), (59, 45794), (78, 45986),

Gene: Nadeem_73 Start: 49167, Stop: 49529, Start Num: 46
Candidate Starts for Nadeem_73:
(Start: 46 @49167 has 15 MA's), (57, 49290), (78, 49503), (80, 49512),

Gene: NancyRae_72 Start: 49045, Stop: 49407, Start Num: 46
Candidate Starts for NancyRae_72:
(Start: 46 @49045 has 15 MA's), (57, 49168), (78, 49381), (80, 49390),

Gene: Nazo_82 Start: 47914, Stop: 48303, Start Num: 51
Candidate Starts for Nazo_82:
(Start: 51 @47914 has 53 MA's), (57, 48031), (70, 48190), (83, 48292),

Gene: Necropolis_76 Start: 45672, Stop: 46055, Start Num: 51
Candidate Starts for Necropolis_76:
(Start: 51 @45672 has 53 MA's), (57, 45789), (83, 46044),

Gene: Nekros_6 Start: 2802, Stop: 3173, Start Num: 52
Candidate Starts for Nekros_6:
(Start: 52 @2802 has 47 MA's), (57, 2916), (59, 2931), (60, 2934), (65, 3027), (66, 3048), (67, 3066), (69, 3114), (75, 3150),

Gene: Nettuno_71 Start: 44161, Stop: 44469, Start Num: 49
Candidate Starts for Nettuno_71:
(Start: 49 @44161 has 94 MA's), (57, 44284),

Gene: Nibley_4 Start: 1492, Stop: 1857, Start Num: 52
Candidate Starts for Nibley_4:
(Start: 52 @1492 has 47 MA's), (57, 1606), (59, 1621), (60, 1624), (65, 1711), (66, 1732), (67, 1750), (75, 1834),

Gene: NihilNomen_4 Start: 1866, Stop: 2240, Start Num: 52
Candidate Starts for NihilNomen_4:
(Start: 52 @1866 has 47 MA's), (57, 1983), (60, 2001), (61, 2052), (67, 2133), (68, 2151), (75, 2217),

Gene: NovoPizza_90 Start: 55525, Stop: 55917, Start Num: 43
Candidate Starts for NovoPizza_90:
(Start: 43 @55525 has 1 MA's), (57, 55663), (67, 55768), (72, 55834), (73, 55837), (82, 55888),

Gene: OBUpride_82 Start: 52647, Stop: 53036, Start Num: 45
Candidate Starts for OBUpride_82:
(Start: 45 @52647 has 24 MA's), (57, 52779),

Gene: Obliviate_80 Start: 48856, Stop: 49218, Start Num: 49
Candidate Starts for Obliviate_80:
(28, 48673), (34, 48754), (Start: 49 @48856 has 94 MA's), (57, 48976),

Gene: Ohgeesy_85 Start: 53016, Stop: 53372, Start Num: 49
Candidate Starts for Ohgeesy_85:
(39, 52962), (40, 52965), (Start: 49 @53016 has 94 MA's), (57, 53139),

Gene: Omega_7 Start: 3319, Stop: 3690, Start Num: 52
Candidate Starts for Omega_7:
(Start: 52 @3319 has 47 MA's), (57, 3433), (59, 3448), (60, 3451), (65, 3544), (66, 3565), (67, 3583), (69, 3631), (75, 3667),

Gene: Opie_73 Start: 47283, Stop: 47621, Start Num: 49
Candidate Starts for Opie_73:
(Start: 49 @47283 has 94 MA's), (57, 47397), (59, 47412), (78, 47604),

Gene: Optimus_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for Optimus_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: Oregano_79 Start: 47140, Stop: 47448, Start Num: 49
Candidate Starts for Oregano_79:
(9, 46318), (10, 46360), (17, 46822), (20, 46867), (Start: 49 @47140 has 94 MA's), (57, 47263),

Gene: PCoral7_80 Start: 49167, Stop: 49517, Start Num: 49
Candidate Starts for PCoral7_80:
(Start: 49 @49167 has 94 MA's), (57, 49287),

Gene: PantheRoc_87 Start: 53085, Stop: 53441, Start Num: 49
Candidate Starts for PantheRoc_87:
(Start: 49 @53085 has 94 MA's), (57, 53208),

Gene: Parada_73 Start: 49179, Stop: 49541, Start Num: 46
Candidate Starts for Parada_73:
(Start: 46 @49179 has 15 MA's), (57, 49302), (78, 49515), (80, 49524),

Gene: PatriciaStar_65 Start: 45264, Stop: 45614, Start Num: 49
Candidate Starts for PatriciaStar_65:
(29, 45087), (31, 45117), (Start: 49 @45264 has 94 MA's), (57, 45387), (60, 45405), (78, 45597),

Gene: PeanutPie_81 Start: 47608, Stop: 47991, Start Num: 51
Candidate Starts for PeanutPie_81:
(Start: 51 @47608 has 53 MA's), (57, 47725), (83, 47980),

Gene: Phalm_79 Start: 47621, Stop: 48004, Start Num: 51
Candidate Starts for Phalm_79:
(Start: 51 @47621 has 53 MA's), (57, 47738), (83, 47993),

Gene: Phayonce_76 Start: 48244, Stop: 48636, Start Num: 48
Candidate Starts for Phayonce_76:
(Start: 48 @48244 has 2 MA's), (57, 48370), (83, 48625),

Gene: Phegasus_81 Start: 46987, Stop: 47370, Start Num: 51
Candidate Starts for Phegasus_81:
(Start: 51 @46987 has 53 MA's), (57, 47104), (83, 47359),

Gene: Phoebus_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for Phoebus_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: PhriskyACE_73 Start: 46797, Stop: 47105, Start Num: 49
Candidate Starts for PhriskyACE_73:
(20, 46524), (Start: 49 @46797 has 94 MA's), (57, 46920),

Gene: PhrostedPhlake_88 Start: 51612, Stop: 51974, Start Num: 49
Candidate Starts for PhrostedPhlake_88:
(25, 51417), (32, 51477), (34, 51507), (Start: 49 @51612 has 94 MA's), (57, 51732),

Gene: Pickett_74 Start: 45046, Stop: 45354, Start Num: 49
Candidate Starts for Pickett_74:
(Start: 49 @45046 has 94 MA's), (57, 45169),

Gene: Pimento_76 Start: 49264, Stop: 49626, Start Num: 46
Candidate Starts for Pimento_76:
(Start: 46 @49264 has 15 MA's), (57, 49387), (78, 49600), (80, 49609),

Gene: Polkaroo_80 Start: 48493, Stop: 48876, Start Num: 51
Candidate Starts for Polkaroo_80:
(Start: 51 @48493 has 53 MA's), (57, 48610), (83, 48865),

Gene: Porcelain_5 Start: 2108, Stop: 2479, Start Num: 52
Candidate Starts for Porcelain_5:
(Start: 52 @2108 has 47 MA's), (57, 2222), (59, 2237), (60, 2240), (65, 2333), (66, 2354), (67, 2372), (75, 2456),

Gene: Pound_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for Pound_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: Powerball_76 Start: 47248, Stop: 47556, Start Num: 49
Candidate Starts for Powerball_76:
(Start: 49 @47248 has 94 MA's), (57, 47371),

Gene: PrincePatrick_80 Start: 48397, Stop: 48747, Start Num: 49
Candidate Starts for PrincePatrick_80:
(Start: 49 @48397 has 94 MA's), (57, 48517),

Gene: Purky_84 Start: 49951, Stop: 50334, Start Num: 51
Candidate Starts for Purky_84:
(Start: 51 @49951 has 53 MA's), (57, 50068), (83, 50323),

Gene: Pygmy_82 Start: 48021, Stop: 48404, Start Num: 51
Candidate Starts for Pygmy_82:
(Start: 51 @48021 has 53 MA's), (57, 48138), (83, 48393),

Gene: REQ2_82 Start: 48914, Stop: 49288, Start Num: 52
Candidate Starts for REQ2_82:
(13, 48503), (18, 48596), (30, 48737), (Start: 52 @48914 has 47 MA's), (57, 49031),

Gene: RayTheFireFly_73 Start: 45355, Stop: 45705, Start Num: 49
Candidate Starts for RayTheFireFly_73:
(29, 45178), (31, 45208), (Start: 49 @45355 has 94 MA's), (57, 45478), (60, 45496), (78, 45688),

Gene: Rearden_3 Start: 1244, Stop: 1615, Start Num: 52
Candidate Starts for Rearden_3:
(Start: 52 @1244 has 47 MA's), (57, 1358), (59, 1373), (60, 1376), (65, 1469), (66, 1490), (67, 1508), (69, 1556), (75, 1592),

Gene: Rem711_78 Start: 47971, Stop: 48363, Start Num: 45
Candidate Starts for Rem711_78:
(Start: 45 @47971 has 24 MA's), (47, 47974), (57, 48100), (62, 48181), (76, 48343),

Gene: Rizz_82 Start: 48857, Stop: 49165, Start Num: 49
Candidate Starts for Rizz_82:
(Start: 49 @48857 has 94 MA's), (57, 48980),

Gene: Ruthy_72 Start: 50444, Stop: 50797, Start Num: 51
Candidate Starts for Ruthy_72:
(Start: 51 @50444 has 53 MA's), (57, 50564), (80, 50780),

Gene: Sahara_72 Start: 44705, Stop: 45013, Start Num: 49
Candidate Starts for Sahara_72:
(Start: 49 @44705 has 94 MA's), (57, 44828),

Gene: Samba_79 Start: 51070, Stop: 51432, Start Num: 49
Candidate Starts for Samba_79:
(15, 50740), (22, 50836), (26, 50881), (34, 50968), (Start: 49 @51070 has 94 MA's), (57, 51190),

Gene: Samman98_79 Start: 47113, Stop: 47421, Start Num: 49
Candidate Starts for Samman98_79:
(20, 46840), (Start: 49 @47113 has 94 MA's), (57, 47236),

Gene: Savage_75 Start: 45854, Stop: 46162, Start Num: 49
Candidate Starts for Savage_75:
(Start: 49 @45854 has 94 MA's), (57, 45977),

Gene: Schatzie_3 Start: 1116, Stop: 1490, Start Num: 52
Candidate Starts for Schatzie_3:
(Start: 52 @1116 has 47 MA's), (57, 1233), (60, 1251), (61, 1302), (67, 1383), (68, 1401), (75, 1467),

Gene: Schnabeltier_71 Start: 46465, Stop: 46803, Start Num: 49
Candidate Starts for Schnabeltier_71:
(Start: 49 @46465 has 94 MA's), (57, 46579), (59, 46594), (78, 46786),

Gene: Sekhmet_79 Start: 47300, Stop: 47608, Start Num: 49
Candidate Starts for Sekhmet_79:
(9, 46478), (10, 46520), (17, 46982), (20, 47027), (Start: 49 @47300 has 94 MA's), (57, 47423),

Gene: Shaboozey_4 Start: 1492, Stop: 1857, Start Num: 52
Candidate Starts for Shaboozey_4:
(Start: 52 @1492 has 47 MA's), (57, 1606), (59, 1621), (60, 1624), (65, 1711), (66, 1732), (67, 1750),
(75, 1834),

Gene: Shipwreck_81 Start: 48079, Stop: 48462, Start Num: 51
Candidate Starts for Shipwreck_81:
(Start: 51 @48079 has 53 MA's), (57, 48196), (83, 48451),

Gene: Shlim410_78 Start: 52736, Stop: 53092, Start Num: 49
Candidate Starts for Shlim410_78:
(22, 52514), (Start: 49 @52736 has 94 MA's), (57, 52859),

Gene: Sidious_79 Start: 51297, Stop: 51653, Start Num: 49
Candidate Starts for Sidious_79:
(20, 51024), (Start: 49 @51297 has 94 MA's), (57, 51420),

Gene: SoilAssassin_74 Start: 47513, Stop: 47821, Start Num: 49
Candidate Starts for SoilAssassin_74:
(Start: 49 @47513 has 94 MA's), (57, 47636),

Gene: Soilmate_84 Start: 53715, Stop: 54083, Start Num: 52
Candidate Starts for Soilmate_84:
(36, 53625), (37, 53628), (Start: 52 @53715 has 47 MA's), (57, 53832),

Gene: Sonah_81 Start: 45823, Stop: 46206, Start Num: 51
Candidate Starts for Sonah_81:
(Start: 51 @45823 has 53 MA's), (57, 45940), (83, 46195),

Gene: Sprinklemunch_79 Start: 50458, Stop: 50811, Start Num: 51
Candidate Starts for Sprinklemunch_79:
(Start: 48 @50449 has 2 MA's), (Start: 51 @50458 has 53 MA's), (57, 50578), (79, 50791), (80, 50794),

Gene: Sproutie_75 Start: 45854, Stop: 46162, Start Num: 49
Candidate Starts for Sproutie_75:
(Start: 49 @45854 has 94 MA's), (57, 45977),

Gene: Squint_5 Start: 2039, Stop: 2410, Start Num: 52
Candidate Starts for Squint_5:
(Start: 52 @2039 has 47 MA's), (57, 2153), (59, 2168), (60, 2171), (65, 2264), (66, 2285), (67, 2303), (75, 2387),

Gene: StevieRay_81 Start: 48224, Stop: 48607, Start Num: 51
Candidate Starts for StevieRay_81:
(Start: 51 @48224 has 53 MA's), (57, 48341), (83, 48596),

Gene: StressBall_78 Start: 47323, Stop: 47706, Start Num: 51
Candidate Starts for StressBall_78:
(Start: 51 @47323 has 53 MA's), (57, 47440), (83, 47695),

Gene: Suerte_74 Start: 46871, Stop: 47179, Start Num: 49
Candidate Starts for Suerte_74:
(17, 46553), (20, 46598), (Start: 49 @46871 has 94 MA's), (57, 46994),

Gene: SussRoloMann_74 Start: 49179, Stop: 49541, Start Num: 46
Candidate Starts for SussRoloMann_74:
(Start: 46 @49179 has 15 MA's), (57, 49302), (78, 49515), (80, 49524),

Gene: TaronosaurasRx_75 Start: 46841, Stop: 47179, Start Num: 49
Candidate Starts for TaronosaurasRx_75:
(Start: 49 @46841 has 94 MA's), (57, 46955), (59, 46970), (78, 47162),

Gene: Techage_79 Start: 46503, Stop: 46886, Start Num: 51
Candidate Starts for Techage_79:
(Start: 51 @46503 has 53 MA's), (57, 46620), (83, 46875),

Gene: Thespis_78 Start: 47026, Stop: 47409, Start Num: 51
Candidate Starts for Thespis_78:
(Start: 51 @47026 has 53 MA's), (57, 47143), (83, 47398),

Gene: Thimann_80 Start: 47611, Stop: 47919, Start Num: 49
Candidate Starts for Thimann_80:
(14, 47275), (20, 47338), (Start: 49 @47611 has 94 MA's), (57, 47734),

Gene: ThreeRngTarjay_4 Start: 1862, Stop: 2236, Start Num: 52
Candidate Starts for ThreeRngTarjay_4:
(Start: 52 @1862 has 47 MA's), (57, 1979), (60, 1997), (61, 2048), (67, 2129), (68, 2147), (75, 2213),

Gene: ThulaThula_79 Start: 49453, Stop: 49845, Start Num: 48
Candidate Starts for ThulaThula_79:
(Start: 48 @49453 has 2 MA's), (57, 49579), (83, 49834),

Gene: Toast_81 Start: 49167, Stop: 49517, Start Num: 49
Candidate Starts for Toast_81:
(Start: 49 @49167 has 94 MA's), (57, 49287),

Gene: Tortellini_75 Start: 48723, Stop: 49103, Start Num: 51
Candidate Starts for Tortellini_75:
(Start: 51 @48723 has 53 MA's), (57, 48840), (71, 49002), (83, 49092),

Gene: Tuti_73 Start: 47820, Stop: 48128, Start Num: 49
Candidate Starts for Tuti_73:
(Start: 49 @47820 has 94 MA's), (57, 47943),

Gene: Twinkle_79 Start: 53795, Stop: 54151, Start Num: 49
Candidate Starts for Twinkle_79:
(22, 53573), (Start: 49 @53795 has 94 MA's), (57, 53918),

Gene: Ubuntu_83 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Ubuntu_83:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: UmaThurman_83 Start: 49697, Stop: 50059, Start Num: 49
Candidate Starts for UmaThurman_83:
(28, 49514), (34, 49595), (Start: 49 @49697 has 94 MA's), (57, 49817),

Gene: Utz_71 Start: 49339, Stop: 49701, Start Num: 49
Candidate Starts for Utz_71:
(28, 49156), (34, 49237), (Start: 49 @49339 has 94 MA's), (57, 49459),

Gene: Venti_79 Start: 45893, Stop: 46276, Start Num: 51
Candidate Starts for Venti_79:
(Start: 51 @45893 has 53 MA's), (57, 46010), (83, 46265),

Gene: Vidya_76 Start: 45911, Stop: 46294, Start Num: 51
Candidate Starts for Vidya_76:
(Start: 51 @45911 has 53 MA's), (57, 46028), (83, 46283),

Gene: Walrus_84 Start: 51572, Stop: 51940, Start Num: 52
Candidate Starts for Walrus_84:
(22, 51332), (26, 51377), (34, 51461), (Start: 52 @51572 has 47 MA's), (57, 51689),

Gene: Wanda_5 Start: 2410, Stop: 2778, Start Num: 52
Candidate Starts for Wanda_5:
(Start: 52 @2410 has 47 MA's), (57, 2527), (59, 2542), (65, 2632), (66, 2653), (67, 2671), (75, 2755),

Gene: Webster2_83 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Webster2_83:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Whack_76 Start: 48575, Stop: 48946, Start Num: 52
Candidate Starts for Whack_76:
(Start: 52 @48575 has 47 MA's), (56, 48680), (57, 48689), (59, 48704), (79, 48929), (80, 48932),

Gene: WheatThin_73 Start: 49167, Stop: 49529, Start Num: 46
Candidate Starts for WheatThin_73:
(Start: 46 @49167 has 15 MA's), (57, 49290), (78, 49503), (80, 49512),

Gene: William_83 Start: 50248, Stop: 50646, Start Num: 49
Candidate Starts for William_83:
(24, 50053), (34, 50149), (35, 50158), (Start: 49 @50248 has 94 MA's), (57, 50368),

Gene: Willsammy_80 Start: 47807, Stop: 48190, Start Num: 51
Candidate Starts for Willsammy_80:
(Start: 51 @47807 has 53 MA's), (57, 47924), (83, 48179),

Gene: WinkNick_80 Start: 46824, Stop: 47132, Start Num: 49
Candidate Starts for WinkNick_80:
(9, 46002), (10, 46044), (17, 46506), (20, 46551), (Start: 49 @46824 has 94 MA's), (57, 46947),

Gene: Wishmaker_76 Start: 52603, Stop: 52992, Start Num: 45
Candidate Starts for Wishmaker_76:
(Start: 45 @52603 has 24 MA's), (57, 52735),

Gene: Wisp_76 Start: 49191, Stop: 49553, Start Num: 49
Candidate Starts for Wisp_76:
(11, 48594), (12, 48654), (19, 48906), (23, 48963), (32, 49056), (Start: 49 @49191 has 94 MA's), (57, 49311),

Gene: Wocket_79 Start: 49336, Stop: 49698, Start Num: 49
Candidate Starts for Wocket_79:
(Start: 49 @49336 has 94 MA's), (57, 49456),

Gene: Xavia_71 Start: 49232, Stop: 49621, Start Num: 51
Candidate Starts for Xavia_71:
(Start: 51 @49232 has 53 MA's), (57, 49349), (70, 49508), (83, 49610),

Gene: Yeet_3 Start: 1116, Stop: 1490, Start Num: 52
Candidate Starts for Yeet_3:
(Start: 52 @1116 has 47 MA's), (57, 1233), (60, 1251), (61, 1302), (67, 1383), (68, 1401), (75, 1467),

Gene: Yeezy_87 Start: 51428, Stop: 51784, Start Num: 49
Candidate Starts for Yeezy_87:
(39, 51374), (40, 51377), (Start: 49 @51428 has 94 MA's), (57, 51551),

Gene: ZAYM_76 Start: 46682, Stop: 47020, Start Num: 49
Candidate Starts for ZAYM_76:
(Start: 49 @46682 has 94 MA's), (57, 46796), (59, 46811), (64, 46853), (78, 47003),

Gene: Zarbodnamra_84 Start: 49299, Stop: 49661, Start Num: 49
Candidate Starts for Zarbodnamra_84:
(16, 48975), (21, 49035), (22, 49068), (26, 49113), (34, 49197), (Start: 49 @49299 has 94 MA's), (57, 49419),

Gene: Zelink_4 Start: 1660, Stop: 2034, Start Num: 52
Candidate Starts for Zelink_4:
(Start: 52 @1660 has 47 MA's), (57, 1777), (60, 1795), (65, 1888), (66, 1909), (67, 1927), (75, 2011),

Gene: ZiggyZoo_80 Start: 50561, Stop: 50923, Start Num: 49
Candidate Starts for ZiggyZoo_80:
(25, 50369), (32, 50429), (34, 50459), (Start: 49 @50561 has 94 MA's), (57, 50681),

Gene: Zilizebeth_83 Start: 47465, Stop: 47848, Start Num: 51
Candidate Starts for Zilizebeth_83:
(Start: 51 @47465 has 53 MA's), (57, 47582), (83, 47837),

Gene: Zilla_76 Start: 47650, Stop: 48012, Start Num: 49
Candidate Starts for Zilla_76:
(Start: 49 @47650 has 94 MA's), (57, 47770),

Gene: Zodiariah_68 Start: 49979, Stop: 50332, Start Num: 51
Candidate Starts for Zodiariah_68:
(41, 49931), (Start: 46 @49970 has 15 MA's), (Start: 51 @49979 has 53 MA's), (57, 50099), (80, 50315),