Pham 282053

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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 282053 Report

This analysis was run 02/23/26 on database version 636.

Pham number 282053 has 136 members, 15 are drafts.

Phages represented in each track:
- Track 1 : WilliamBoone_59
- Track 2 : Lozinak_60, Smoothie_61
- Track 3 : Ohgeesy_29
- Track 4 : Hyzer_32
- Track 5 : Polly_28, Manasvini_31, Neobush_31, Zameen_31, Kita_31, Eudoria_31, Tayonia_31, Antonio_31, Trumpet_31, Maridalia_30, Suscepit_31
- Track 6 : Bialota_29, Zirinka_29
- Track 7 : BatStarr_29, Nymphadora_29, Eviarto_29, TimTam_29, Bosnia_29, Hugley_28, Herod_29
- Track 8 : ThankyouJordi_28, WelcomeAyanna_28
- Track 9 : Madavieve_29
- Track 10 : BoyNamedSue_30, AlumE_30
- Track 11 : Agueybana_30
- Track 12 : LordFarquaad_29, Attis_29, Yeet412_29, Bjanes7_29
- Track 13 : Jalleen_29, Sahara_28, Ebert_30, Savage_29, Haley23_29, GemG_29, Gizermo_29, Cynthia_29, Sproutie_29, Whiteclaw_29, Mocha12_29, TuertoX_29, Clap_29
- Track 14 : Nettuno_27, Lamberg_27, EdnaMode_27
- Track 15 : BaxterFox_29
- Track 16 : PantheRoc_30
- Track 17 : Sidious_31
- Track 18 : Portcullis_37, Egi03_37, Twister6_39, Danyall_39
- Track 19 : Wizard_36, TillyBobJoe_36, Halo3_37, PullumCavea_36, SmokingBunny_36, Jambalaya_36, KimmyK_38, Fireball_37, Phlop_36, CoveyB_39, Nubi_37, Salvador_36, Evamon_36, Togo_36, Savbucketdawg_36
- Track 20 : Gezellig_36
- Track 21 : ClamChowder_39, PinkCoffee_39, Barb_39, Fugax_40
- Track 22 : Arri_40, RogerDodger_40, Valary_39, CherryCola_40
- Track 23 : VanDeWege_40
- Track 24 : Shinji_37
- Track 25 : Cardigan_61
- Track 26 : Gaea_40, LilHam_38, Baumdotcom_39, Kwobi_42, Tycho_40, SchottB_39
- Track 27 : RiverRaider_41
- Track 28 : MoontowerMania_40, Geodirt_39, FuegoCuervo_43, Stultus_39
- Track 29 : ChadMasterC_41, Kewpiedoll_40
- Track 30 : Bizzy_41, Ribeye_41

- Track 31 : Barsten_41
- Track 32 : Saronaya_40, Gustavo_40
- Track 33 : JKSyngboy_38
- Track 34 : Leonard_39, Phinally_39
- Track 35 : MelBins_40
- Track 36 : EMoore_37
- Track 37 : Inspectinfecti_40
- Track 38 : Hans_41
- Track 39 : Ali17_37
- Track 40 : APunk_42, Zipp_40, Scioto_42
- Track 41 : Sampson_41, Abblin_41, BigHunkinEater_43, Natkenzie_41
- Track 42 : Delrey21_40, DoctorFroggo_40, Verity_40
- Track 43 : ViaConlectus_41
- Track 44 : Pumpkiney_42
- Track 45 : Tardus_42
- Track 46 : Lilbeanie_36
- Track 47 : GMA3_21
- Track 48 : Pupper_99, SCentae_98
- Track 49 : CherryTomatoes_99
- Track 50 : Skog_162
- Track 51 : Rabbitrun_35
- Track 52 : Neville_33, LilJank_33, Trax_33
- Track 53 : Jojo24_28
- Track 54 : Reyja_29

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

The start number called the most often in the published annotations is 18, it was called in 89 of the 121 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- APunk_42, Agueybana_30, Ali17_37, AlumE_30, Antonio_31, Arri_40, Attis_29, Barb_39, BatStarr_29, Bialota_29, Bjanes7_29, Bosnia_29, BoyNamedSue_30, CherryCola_40, ClamChowder_39, Clap_29, CoveyB_39, Cynthia_29, Danyall_39, Delrey21_40, DoctorFroggo_40, EMoore_37, Ebert_30, EdnaMode_27, Egi03_37, Eudoria_31, Evamon_36, Eviarto_29, Fireball_37, Fugax_40, GemG_29, Gezellig_36, Gizermo_29, Haley23_29, Halo3_37, Hans_41, Herod_29, Hugley_28, Hyzer_32, Inspectinfecti_40, Jalleen_29, Jambalaya_36, Jojo24_28, KimmyK_38, Kita_31, Lamberg_27, Leonard_39, Lilbeanie_36, LordFarquaad_29, Madavieve_29, Manasvini_31, Maridalia_30, MelBins_40, Mocha12_29, Neobush_31, Nettuno_27, Nubi_37, Nymphadora_29, Ohgeesy_29, Phinally_39, Phlop_36, PinkCoffee_39, Polly_28, Portcullis_37, PullumCavea_36, Pumpkiney_42, Reyja_29, RogerDodger_40, Sahara_28, Salvador_36, Savage_29, Savbucketdawg_36, Scioto_42, Shinji_37, Sidious_31, SmokingBunny_36, Sproutie_29, Suscepit_31, Tardus_42, Tayonia_31, ThankyouJordi_28, TillyBobJoe_36, TimTam_29, Togo_36, Trumpet_31, TuertoX_29, Twister6_39, Valary_39, VanDeWege_40, Verity_40, WelcomeAyanna_28, Whiteclaw_29, Wizard_36, Yeet412_29, Zameen_31, Zipp_40, Zirinka_29,

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

• Abblin_41, BigHunkinEater_43, Natkenzie_41, Sampson_41, ViaConlectus_41,

Genes that do not have the "Most Annotated" start:
• Barsten_41, Baumdotcom_39, BaxterFox_29, Bizzy_41, Cardigan_61, ChadMasterC_41, CherryTomatoes_99, FuegoCuervo_43, GMA3_21, Gaea_40, Geodirt_39, Gustavo_40, JKSyngboy_38, Kewpiedoll_40, Kwobi_42, LilHam_38, LilJank_33, Lozinak_60, MoontowerMania_40, Neville_33, PantheRoc_30, Pupper_99, Rabbitrun_35, Ribeye_41, RiverRaider_41, SCentae_98, Saronaya_40, SchottB_39, Skog_162, Smoothie_61, Stultus_39, Trax_33, Tycho_40, WilliamBoone_59,

Summary by start number:

Start 8:
• Found in 11 of 136 (8.1%) of genes in pham
• Manual Annotations of this start: 10 of 121
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CherryTomatoes_99 (DO), LilJank_33 (DU2), Lozinak_60 (CQ1), Neville_33 (DU2), Pupper_99 (DO), Rabbitrun_35 (DU2), SCentae_98 (DO), Skog_162 (DO), Smoothie_61 (CQ1), Trax_33 (DU2), WilliamBoone_59 (CQ1),

Start 14:
• Found in 31 of 136 (22.8%) of genes in pham
• Manual Annotations of this start: 1 of 121
• Called 3.2% of time when present
• Phage (with cluster) where this start called: PantheRoc_30 (CZ3),

Start 17:
• Found in 19 of 136 (14.0%) of genes in pham
• Manual Annotations of this start: 1 of 121
• Called 21.1% of time when present
• Phage (with cluster) where this start called: Abblin_41 (DE4), BigHunkinEater_43 (DE4), Natkenzie_41 (DE4), Sampson_41 (DE4),

Start 18:
• Found in 102 of 136 (75.0%) of genes in pham
• Manual Annotations of this start: 89 of 121
• Called 95.1% of time when present
• Phage (with cluster) where this start called: APunk_42 (DE4), Agueybana_30 (CZ1), Ali17_37 (DE2), AlumE_30 (CZ1), Antonio_31 (CZ1), Arri_40 (DC1), Attis_29 (CZ2), Barb_39 (DC1), BatStarr_29 (CZ1), Bialota_29 (CZ1), Bjanes7_29 (CZ2), Bosnia_29 (CZ1), BoyNamedSue_30 (CZ1), CherryCola_40 (DC1), ClamChowder_39 (DC1), Clap_29 (CZ2), CoveyB_39 (DC1), Cynthia_29 (CZ2), Danyall_39 (DC1), Delrey21_40 (DE4), DoctorFroggo_40 (DE4), EMoore_37 (DE2), Ebert_30 (CZ2), EdnaMode_27 (CZ2), Egi03_37 (DC1), Eudoria_31 (CZ1), Evamon_36 (DC1), Eviarto_29 (CZ1), Fireball_37 (DC1), Fugax_40 (DC1), GemG_29 (CZ2), Gezellig_36 (DC1), Gizermo_29 (CZ2), Haley23_29 (CZ2), Halo3_37 (DC1), Hans_41 (DE2), Herod_29 (CZ1), Hugley_28 (CZ1), Hyzer_32 (CZ1), Inspectinfecti_40 (DE2), Jalleen_29 (CZ2), Jambalaya_36 (DC1), Jojo24_28 (DY), KimmyK_38 (DC1), Kita_31 (CZ1), Lamberg_27 (CZ2), Leonard_39 (DE2), Lilbeanie_36 (DE5), LordFarquaad_29 (CZ2), Madavieve_29 (CZ1), Manasvini_31 (CZ1), Maridalia_30 (CZ1), MelBins_40 (DE2), Mocha12_29 (CZ2), Neobush_31 (CZ1), Nettuno_27 (CZ2), Nubi_37 (DC1),

Nymphadora_29 (CZ1), Ohgeesy_29 (CZ), Phinally_39 (DE2), Phlop_36 (DC1), PinkCoffee_39 (DC1), Polly_28 (CZ1), Portcullis_37 (DC1), PullumCavea_36 (DC1), Pumpkiney_42 (DE4), Reyja_29 (DY), RogerDodger_40 (DC1), Sahara_28 (CZ2), Salvador_36 (DC1), Savage_29 (CZ2), Savbucketdawg_36 (DC1), Scioto_42 (DE4), Shinji_37 (DC1), Sidious_31 (CZ7), SmokingBunny_36 (DC1), Sproutie_29 (CZ2), Suscepit_31 (CZ1), Tardus_42 (DE4), Tayonia_31 (CZ1), ThankyouJordi_28 (CZ1), TillyBobJoe_36 (DC1), TimTam_29 (CZ1), Togo_36 (DC1), Trumpet_31 (CZ1), TuertoX_29 (CZ2), Twister6_39 (DC1), Valary_39 (DC1), VanDeWege_40 (DC1), Verity_40 (DE4), WelcomeAyanna_28 (CZ1), Whiteclaw_29 (CZ2), Wizard_36 (DC1), Yeet412_29 (CZ2), Zameen_31 (CZ1), Zipp_40 (DE4), Zirinka_29 (CZ1),

Start 19:
• Found in 41 of 136 (30.1%) of genes in pham
• Manual Annotations of this start: 19 of 121
• Called 48.8% of time when present
• Phage (with cluster) where this start called: Barsten_41 (DE1), Baumdotcom_39 (DE1), Bizzy_41 (DE1), ChadMasterC_41 (DE1), FuegoCuervo_43 (DE1), Gaea_40 (DE1), Geodirt_39 (DE1), Gustavo_40 (DE1), JKSyngboy_38 (DE1), Kewpiedoll_40 (DE1), Kwobi_42 (DE1), LilHam_38 (DE1), MoontowerMania_40 (DE1), Ribeye_41 (DE1), RiverRaider_41 (DE1), Saronaya_40 (DE1), SchottB_39 (DE1), Stultus_39 (DE1), Tycho_40 (DE1), ViaConlectus_41 (DE4),

Start 20:
• Found in 1 of 136 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GMA3_21 (DF2),

Start 21:
• Found in 1 of 136 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cardigan_61 (DD),

Start 30:
• Found in 45 of 136 (33.1%) of genes in pham
• Manual Annotations of this start: 1 of 121
• Called 2.2% of time when present
• Phage (with cluster) where this start called: BaxterFox_29 (CZ3),

Summary by clusters:

There are 16 clusters represented in this pham: DO, CZ2, DE1, DE2, CZ1, DE4, CZ7, DD, DE5, CZ, DY, DU2, CZ3, DF2, CQ1, DC1,

Info for manual annotations of cluster CQ1:
•Start number 8 was manually annotated 3 times for cluster CQ1.

Info for manual annotations of cluster CZ:
•Start number 18 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 18 was manually annotated 24 times for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 18 was manually annotated 19 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 14 was manually annotated 1 time for cluster CZ3.
•Start number 30 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ7:
•Start number 18 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DC1:
•Start number 18 was manually annotated 28 times for cluster DC1.

Info for manual annotations of cluster DE1:
•Start number 19 was manually annotated 18 times for cluster DE1.

Info for manual annotations of cluster DE2:
•Start number 18 was manually annotated 7 times for cluster DE2.

Info for manual annotations of cluster DE4:
•Start number 17 was manually annotated 1 time for cluster DE4.
•Start number 18 was manually annotated 6 times for cluster DE4.
•Start number 19 was manually annotated 1 time for cluster DE4.

Info for manual annotations of cluster DE5:
•Start number 18 was manually annotated 1 time for cluster DE5.

Info for manual annotations of cluster DO:
•Start number 8 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DU2:
•Start number 8 was manually annotated 3 times for cluster DU2.

Info for manual annotations of cluster DY:
•Start number 18 was manually annotated 2 times for cluster DY.

Gene Information:
Gene: APunk_42 Start: 36455, Stop: 37051, Start Num: 18
Candidate Starts for APunk_42:
(Start: 14 @36431 has 1 MA's), (Start: 17 @36452 has 1 MA's), (Start: 18 @36455 has 89 MA's),
(Start: 19 @36458 has 19 MA's), (Start: 30 @36530 has 1 MA's), (35, 36569), (38, 36593), (45,
36644), (47, 36677), (52, 36707), (53, 36716), (56, 36752), (57, 36758), (59, 36776), (61, 36785), (63,
36797), (70, 36854), (83, 36929), (91, 36980), (93, 36989), (99, 37034),

Gene: Abblin_41 Start: 36995, Stop: 37594, Start Num: 17
Candidate Starts for Abblin_41:

(Start: 14 @36974 has 1 MA's), (Start: 17 @36995 has 1 MA's), (Start: 18 @36998 has 89 MA's), (Start: 19 @37001 has 19 MA's), (Start: 30 @37073 has 1 MA's), (35, 37112), (38, 37136), (45, 37187), (47, 37220), (52, 37250), (53, 37259), (56, 37295), (57, 37301), (59, 37319), (61, 37328), (63, 37340), (70, 37397), (83, 37472), (91, 37523), (93, 37532), (99, 37577),

Gene: Agueybana_30 Start: 26952, Stop: 27548, Start Num: 18
Candidate Starts for Agueybana_30:
(Start: 18 @26952 has 89 MA's), (Start: 30 @27027 has 1 MA's), (38, 27090), (45, 27141), (47, 27174), (56, 27249), (57, 27255), (59, 27273), (79, 27405),

Gene: Ali17_37 Start: 34722, Stop: 35318, Start Num: 18
Candidate Starts for Ali17_37:
(Start: 14 @34698 has 1 MA's), (Start: 17 @34719 has 1 MA's), (Start: 18 @34722 has 89 MA's), (Start: 19 @34725 has 19 MA's), (Start: 30 @34797 has 1 MA's), (38, 34860), (45, 34911), (47, 34944), (53, 34983), (58, 35028), (59, 35043), (61, 35052), (63, 35064), (91, 35247), (99, 35301), (100, 35307),

Gene: AlumE_30 Start: 26930, Stop: 27526, Start Num: 18
Candidate Starts for AlumE_30:
(Start: 18 @26930 has 89 MA's), (38, 27068), (45, 27119), (47, 27152), (56, 27227), (57, 27233), (59, 27251), (72, 27338), (79, 27383), (93, 27464), (99, 27509),

Gene: Antonio_31 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Antonio_31:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: Arri_40 Start: 32893, Stop: 33489, Start Num: 18
Candidate Starts for Arri_40:
(Start: 18 @32893 has 89 MA's), (38, 33031), (45, 33082), (47, 33115), (57, 33196), (79, 33346), (99, 33472),

Gene: Attis_29 Start: 24850, Stop: 25446, Start Num: 18
Candidate Starts for Attis_29:
(Start: 14 @24817 has 1 MA's), (Start: 18 @24850 has 89 MA's), (31, 24928), (38, 24988), (45, 25039), (47, 25072), (53, 25111), (56, 25147), (57, 25153), (79, 25303), (99, 25429),

Gene: Barb_39 Start: 32911, Stop: 33507, Start Num: 18
Candidate Starts for Barb_39:
(Start: 18 @32911 has 89 MA's), (31, 32989), (38, 33049), (44, 33094), (45, 33100), (47, 33133), (53, 33172), (56, 33208), (57, 33214), (79, 33364), (99, 33490),

Gene: Barsten_41 Start: 35914, Stop: 36504, Start Num: 19
Candidate Starts for Barsten_41:
(Start: 19 @35914 has 19 MA's), (38, 36049), (45, 36100), (47, 36133), (53, 36172), (56, 36208), (59, 36232), (61, 36241), (78, 36361), (81, 36376), (83, 36385), (87, 36418), (93, 36445), (99, 36490),

Gene: BatStarr_29 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for BatStarr_29:
(Start: 18 @27051 has 89 MA's), (Start: 30 @27126 has 1 MA's), (38, 27189), (45, 27240), (47, 27273), (53, 27312), (56, 27348), (57, 27354), (92, 27579), (99, 27630), (100, 27636),

Gene: Baumdotcom_39 Start: 35393, Stop: 35986, Start Num: 19

Candidate Starts for Baumdotcom_39:
(Start: 19 @35393 has 19 MA's), (Start: 30 @35465 has 1 MA's), (38, 35531), (45, 35582), (47, 35615), (55, 35660), (56, 35690), (58, 35699), (67, 35762), (69, 35789), (86, 35894), (88, 35900), (99, 35969),

Gene: BaxterFox_29 Start: 26326, Stop: 26847, Start Num: 30
Candidate Starts for BaxterFox_29:
(Start: 30 @26326 has 1 MA's), (38, 26389), (45, 26440), (47, 26473), (61, 26581), (79, 26704), (82, 26719), (92, 26779), (93, 26785), (99, 26830),

Gene: Bialota_29 Start: 27074, Stop: 27670, Start Num: 18
Candidate Starts for Bialota_29:
(Start: 14 @27047 has 1 MA's), (Start: 18 @27074 has 89 MA's), (Start: 30 @27149 has 1 MA's), (32, 27176), (38, 27212), (45, 27263), (47, 27296), (57, 27377), (61, 27404), (79, 27527), (99, 27653),

Gene: BigHunkinEater_43 Start: 36233, Stop: 36832, Start Num: 17
Candidate Starts for BigHunkinEater_43:
(Start: 14 @36212 has 1 MA's), (Start: 17 @36233 has 1 MA's), (Start: 18 @36236 has 89 MA's), (Start: 19 @36239 has 19 MA's), (Start: 30 @36311 has 1 MA's), (35, 36350), (38, 36374), (45, 36425), (47, 36458), (52, 36488), (53, 36497), (56, 36533), (57, 36539), (59, 36557), (61, 36566), (63, 36578), (70, 36635), (83, 36710), (91, 36761), (93, 36770), (99, 36815),

Gene: Bizzy_41 Start: 35684, Stop: 36280, Start Num: 19
Candidate Starts for Bizzy_41:
(Start: 19 @35684 has 19 MA's), (32, 35783), (35, 35795), (38, 35819), (45, 35870), (47, 35903), (56, 35978), (58, 35987), (59, 36002), (62, 36014), (75, 36107), (78, 36131), (93, 36215), (101, 36269),

Gene: Bjanes7_29 Start: 24850, Stop: 25446, Start Num: 18
Candidate Starts for Bjanes7_29:
(Start: 14 @24817 has 1 MA's), (Start: 18 @24850 has 89 MA's), (31, 24928), (38, 24988), (45, 25039), (47, 25072), (53, 25111), (56, 25147), (57, 25153), (79, 25303), (99, 25429),

Gene: Bosnia_29 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Bosnia_29:
(Start: 18 @27051 has 89 MA's), (Start: 30 @27126 has 1 MA's), (38, 27189), (45, 27240), (47, 27273), (53, 27312), (56, 27348), (57, 27354), (92, 27579), (99, 27630), (100, 27636),

Gene: BoyNamedSue_30 Start: 26930, Stop: 27526, Start Num: 18
Candidate Starts for BoyNamedSue_30:
(Start: 18 @26930 has 89 MA's), (38, 27068), (45, 27119), (47, 27152), (56, 27227), (57, 27233), (59, 27251), (72, 27338), (79, 27383), (93, 27464), (99, 27509),

Gene: Cardigan_61 Start: 43366, Stop: 43941, Start Num: 21
Candidate Starts for Cardigan_61:
(6, 43135), (21, 43366), (45, 43537), (47, 43570), (56, 43645), (57, 43651), (89, 43861), (95, 43897),

Gene: ChadMasterC_41 Start: 37313, Stop: 37903, Start Num: 19
Candidate Starts for ChadMasterC_41:
(Start: 19 @37313 has 19 MA's), (32, 37412), (38, 37448), (45, 37499), (47, 37532), (53, 37571), (56, 37607), (59, 37631), (61, 37640), (78, 37760), (81, 37775), (83, 37784), (87, 37817), (93, 37844), (99, 37889),

Gene: CherryCola_40 Start: 33666, Stop: 34262, Start Num: 18
Candidate Starts for CherryCola_40:

(Start: 18 @33666 has 89 MA's), (38, 33804), (45, 33855), (47, 33888), (57, 33969), (79, 34119), (99, 34245),

Gene: CherryTomatoes_99 Start: 56131, Stop: 56844, Start Num: 8
Candidate Starts for CherryTomatoes_99:
(Start: 8 @56131 has 10 MA's), (10, 56140), (23, 56266), (37, 56368), (42, 56407), (43, 56413), (46, 56449), (48, 56473), (49, 56479), (51, 56491), (54, 56515), (55, 56518), (56, 56545), (57, 56551), (59, 56569), (66, 56614), (71, 56653), (74, 56662), (75, 56677), (90, 56767), (97, 56815), (99, 56830),

Gene: ClamChowder_39 Start: 32911, Stop: 33507, Start Num: 18
Candidate Starts for ClamChowder_39:
(Start: 18 @32911 has 89 MA's), (31, 32989), (38, 33049), (44, 33094), (45, 33100), (47, 33133), (53, 33172), (56, 33208), (57, 33214), (79, 33364), (99, 33490),

Gene: Clap_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Clap_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: CoveyB_39 Start: 32711, Stop: 33307, Start Num: 18
Candidate Starts for CoveyB_39:
(Start: 18 @32711 has 89 MA's), (31, 32789), (38, 32849), (45, 32900), (47, 32933), (53, 32972), (56, 33008), (57, 33014), (79, 33164), (99, 33290),

Gene: Cynthia_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Cynthia_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Danyall_39 Start: 32713, Stop: 33309, Start Num: 18
Candidate Starts for Danyall_39:
(Start: 18 @32713 has 89 MA's), (31, 32791), (38, 32851), (44, 32896), (45, 32902), (47, 32935), (50, 32944), (56, 33010), (57, 33016), (79, 33166), (99, 33292),

Gene: Delrey21_40 Start: 37185, Stop: 37781, Start Num: 18
Candidate Starts for Delrey21_40:
(Start: 14 @37161 has 1 MA's), (Start: 17 @37182 has 1 MA's), (Start: 18 @37185 has 89 MA's), (Start: 19 @37188 has 19 MA's), (Start: 30 @37260 has 1 MA's), (38, 37323), (45, 37374), (47, 37407), (53, 37446), (58, 37491), (59, 37506), (61, 37515), (63, 37527), (79, 37638), (84, 37662), (91, 37710),

Gene: DoctorFroggo_40 Start: 37185, Stop: 37781, Start Num: 18
Candidate Starts for DoctorFroggo_40:
(Start: 14 @37161 has 1 MA's), (Start: 17 @37182 has 1 MA's), (Start: 18 @37185 has 89 MA's), (Start: 19 @37188 has 19 MA's), (Start: 30 @37260 has 1 MA's), (38, 37323), (45, 37374), (47, 37407), (53, 37446), (58, 37491), (59, 37506), (61, 37515), (63, 37527), (79, 37638), (84, 37662), (91, 37710),

Gene: EMoore_37 Start: 35897, Stop: 36493, Start Num: 18
Candidate Starts for EMoore_37:
(Start: 14 @35873 has 1 MA's), (Start: 17 @35894 has 1 MA's), (Start: 18 @35897 has 89 MA's), (Start: 19 @35900 has 19 MA's), (Start: 30 @35972 has 1 MA's), (35, 36011), (38, 36035), (45, 36086), (47, 36119), (52, 36149), (53, 36158), (56, 36194), (58, 36203), (61, 36227), (75, 36323), (79,

36350), (84, 36374), (93, 36431), (99, 36476),

Gene: Ebert_30 Start: 24776, Stop: 25375, Start Num: 18
Candidate Starts for Ebert_30:
(Start: 18 @24776 has 89 MA's), (38, 24917), (39, 24923), (45, 24968), (47, 25001), (50, 25010), (56, 25076), (57, 25082), (61, 25109), (77, 25220), (79, 25232), (99, 25358),

Gene: EdnaMode_27 Start: 23538, Stop: 24134, Start Num: 18
Candidate Starts for EdnaMode_27:
(Start: 14 @23505 has 1 MA's), (Start: 18 @23538 has 89 MA's), (31, 23616), (38, 23676), (45, 23727), (47, 23760), (53, 23799), (56, 23835), (57, 23841), (79, 23991), (99, 24117),

Gene: Egi03_37 Start: 32391, Stop: 32987, Start Num: 18
Candidate Starts for Egi03_37:
(Start: 18 @32391 has 89 MA's), (31, 32469), (38, 32529), (44, 32574), (45, 32580), (47, 32613), (50, 32622), (56, 32688), (57, 32694), (79, 32844), (99, 32970),

Gene: Eudoria_31 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Eudoria_31:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: Evamon_36 Start: 32732, Stop: 33328, Start Num: 18
Candidate Starts for Evamon_36:
(Start: 18 @32732 has 89 MA's), (31, 32810), (38, 32870), (45, 32921), (47, 32954), (53, 32993), (56, 33029), (57, 33035), (79, 33185), (99, 33311),

Gene: Eviarto_29 Start: 27027, Stop: 27623, Start Num: 18
Candidate Starts for Eviarto_29:
(Start: 18 @27027 has 89 MA's), (Start: 30 @27102 has 1 MA's), (38, 27165), (45, 27216), (47, 27249), (53, 27288), (56, 27324), (57, 27330), (92, 27555), (99, 27606), (100, 27612),

Gene: Fireball_37 Start: 32855, Stop: 33451, Start Num: 18
Candidate Starts for Fireball_37:
(Start: 18 @32855 has 89 MA's), (31, 32933), (38, 32993), (45, 33044), (47, 33077), (53, 33116), (56, 33152), (57, 33158), (79, 33308), (99, 33434),

Gene: FuegoCuervo_43 Start: 35010, Stop: 35603, Start Num: 19
Candidate Starts for FuegoCuervo_43:
(Start: 19 @35010 has 19 MA's), (32, 35109), (38, 35145), (45, 35196), (47, 35229), (77, 35448), (79, 35460), (85, 35508),

Gene: Fugax_40 Start: 32903, Stop: 33499, Start Num: 18
Candidate Starts for Fugax_40:
(Start: 18 @32903 has 89 MA's), (31, 32981), (38, 33041), (44, 33086), (45, 33092), (47, 33125), (53, 33164), (56, 33200), (57, 33206), (79, 33356), (99, 33482),

Gene: GMA3_21 Start: 33213, Stop: 33800, Start Num: 20
Candidate Starts for GMA3_21:
(7, 33027), (20, 33213), (26, 33252),

Gene: Gaea_40 Start: 35289, Stop: 35882, Start Num: 19
Candidate Starts for Gaea_40:

(Start: 19 @35289 has 19 MA's), (Start: 30 @35361 has 1 MA's), (38, 35427), (45, 35478), (47, 35511), (55, 35556), (56, 35586), (58, 35595), (67, 35658), (69, 35685), (86, 35790), (88, 35796), (99, 35865),

Gene: GemG_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for GemG_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Geodirt_39 Start: 36549, Stop: 37142, Start Num: 19
Candidate Starts for Geodirt_39:
(Start: 19 @36549 has 19 MA's), (32, 36648), (38, 36684), (45, 36735), (47, 36768), (77, 36987), (79, 36999), (85, 37047),

Gene: Gezellig_36 Start: 32864, Stop: 33460, Start Num: 18
Candidate Starts for Gezellig_36:
(Start: 18 @32864 has 89 MA's), (31, 32942), (38, 33002), (45, 33053), (47, 33086), (53, 33125), (56, 33161), (57, 33167), (79, 33317), (86, 33368), (99, 33443),

Gene: Gizermo_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Gizermo_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Gustavo_40 Start: 35444, Stop: 36034, Start Num: 19
Candidate Starts for Gustavo_40:
(Start: 19 @35444 has 19 MA's), (26, 35498), (Start: 30 @35516 has 1 MA's), (35, 35555), (38, 35579), (45, 35630), (47, 35663), (54, 35705), (55, 35708), (56, 35738), (58, 35747), (67, 35810), (69, 35837), (83, 35912), (88, 35948), (99, 36017),

Gene: Haley23_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Haley23_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Halo3_37 Start: 33157, Stop: 33753, Start Num: 18
Candidate Starts for Halo3_37:
(Start: 18 @33157 has 89 MA's), (31, 33235), (38, 33295), (45, 33346), (47, 33379), (53, 33418), (56, 33454), (57, 33460), (79, 33610), (99, 33736),

Gene: Hans_41 Start: 35362, Stop: 35958, Start Num: 18
Candidate Starts for Hans_41:
(Start: 14 @35338 has 1 MA's), (Start: 17 @35359 has 1 MA's), (Start: 18 @35362 has 89 MA's), (Start: 19 @35365 has 19 MA's), (Start: 30 @35437 has 1 MA's), (38, 35500), (45, 35551), (47, 35584), (53, 35623), (58, 35668), (59, 35683), (61, 35692), (79, 35815), (91, 35887), (99, 35941),

Gene: Herod_29 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Herod_29:
(Start: 18 @27051 has 89 MA's), (Start: 30 @27126 has 1 MA's), (38, 27189), (45, 27240), (47, 27273), (53, 27312), (56, 27348), (57, 27354), (92, 27579), (99, 27630), (100, 27636),

Gene: Hugley_28 Start: 27050, Stop: 27646, Start Num: 18
Candidate Starts for Hugley_28:

(Start: 18 @27050 has 89 MA's), (Start: 30 @27125 has 1 MA's), (38, 27188), (45, 27239), (47, 27272), (53, 27311), (56, 27347), (57, 27353), (92, 27578), (99, 27629), (100, 27635),

Gene: Hyzer_32 Start: 28151, Stop: 28747, Start Num: 18
Candidate Starts for Hyzer_32:
(Start: 18 @28151 has 89 MA's), (Start: 30 @28226 has 1 MA's), (38, 28289), (45, 28340), (47, 28373), (56, 28448), (57, 28454), (59, 28472), (68, 28535), (79, 28604), (99, 28730),

Gene: Inspectinfecti_40 Start: 35808, Stop: 36404, Start Num: 18
Candidate Starts for Inspectinfecti_40:
(Start: 14 @35784 has 1 MA's), (Start: 17 @35805 has 1 MA's), (Start: 18 @35808 has 89 MA's), (Start: 19 @35811 has 19 MA's), (Start: 30 @35883 has 1 MA's), (38, 35946), (44, 35991), (45, 35997), (47, 36030), (53, 36069), (56, 36105), (57, 36111), (59, 36129), (61, 36138), (63, 36150), (79, 36261), (91, 36333), (99, 36387),

Gene: JKSyngboy_38 Start: 36019, Stop: 36615, Start Num: 19
Candidate Starts for JKSyngboy_38:
(Start: 19 @36019 has 19 MA's), (35, 36130), (38, 36154), (45, 36205), (47, 36238), (56, 36313), (58, 36322), (59, 36337), (62, 36349), (75, 36442), (78, 36466), (93, 36550), (101, 36604),

Gene: Jalleen_29 Start: 24491, Stop: 25090, Start Num: 18
Candidate Starts for Jalleen_29:
(Start: 18 @24491 has 89 MA's), (38, 24632), (39, 24638), (45, 24683), (47, 24716), (50, 24725), (56, 24791), (57, 24797), (61, 24824), (77, 24935), (79, 24947), (99, 25073),

Gene: Jambalaya_36 Start: 32511, Stop: 33107, Start Num: 18
Candidate Starts for Jambalaya_36:
(Start: 18 @32511 has 89 MA's), (31, 32589), (38, 32649), (45, 32700), (47, 32733), (53, 32772), (56, 32808), (57, 32814), (79, 32964), (99, 33090),

Gene: Jojo24_28 Start: 23774, Stop: 24370, Start Num: 18
Candidate Starts for Jojo24_28:
(Start: 18 @23774 has 89 MA's), (29, 23846), (38, 23912), (44, 23957), (45, 23963), (47, 23996), (53, 24035), (57, 24077), (78, 24224), (79, 24227), (82, 24242), (84, 24251), (92, 24302),

Gene: Kewpiedoll_40 Start: 35851, Stop: 36441, Start Num: 19
Candidate Starts for Kewpiedoll_40:
(Start: 19 @35851 has 19 MA's), (32, 35950), (38, 35986), (45, 36037), (47, 36070), (53, 36109), (56, 36145), (59, 36169), (61, 36178), (78, 36298), (81, 36313), (83, 36322), (87, 36355), (93, 36382), (99, 36427),

Gene: KimmyK_38 Start: 33446, Stop: 34042, Start Num: 18
Candidate Starts for KimmyK_38:
(Start: 18 @33446 has 89 MA's), (31, 33524), (38, 33584), (45, 33635), (47, 33668), (53, 33707), (56, 33743), (57, 33749), (79, 33899), (99, 34025),

Gene: Kita_31 Start: 27060, Stop: 27656, Start Num: 18
Candidate Starts for Kita_31:
(Start: 18 @27060 has 89 MA's), (32, 27162), (38, 27198), (44, 27243), (45, 27249), (47, 27282), (50, 27291), (57, 27363), (59, 27381), (99, 27639),

Gene: Kwobi_42 Start: 36183, Stop: 36776, Start Num: 19
Candidate Starts for Kwobi_42:

(Start: 19 @36183 has 19 MA's), (Start: 30 @36255 has 1 MA's), (38, 36321), (45, 36372), (47, 36405), (55, 36450), (56, 36480), (58, 36489), (67, 36552), (69, 36579), (86, 36684), (88, 36690), (99, 36759),

Gene: Lamberg_27 Start: 23538, Stop: 24134, Start Num: 18
Candidate Starts for Lamberg_27:
(Start: 14 @23505 has 1 MA's), (Start: 18 @23538 has 89 MA's), (31, 23616), (38, 23676), (45, 23727), (47, 23760), (53, 23799), (56, 23835), (57, 23841), (79, 23991), (99, 24117),

Gene: Leonard_39 Start: 35447, Stop: 36043, Start Num: 18
Candidate Starts for Leonard_39:
(Start: 14 @35423 has 1 MA's), (Start: 17 @35444 has 1 MA's), (Start: 18 @35447 has 89 MA's), (Start: 19 @35450 has 19 MA's), (Start: 30 @35522 has 1 MA's), (38, 35585), (45, 35636), (47, 35669), (53, 35708), (57, 35750), (59, 35768), (61, 35777), (63, 35789), (91, 35972), (99, 36026), (100, 36032),

Gene: LilHam_38 Start: 34786, Stop: 35379, Start Num: 19
Candidate Starts for LilHam_38:
(Start: 19 @34786 has 19 MA's), (Start: 30 @34858 has 1 MA's), (38, 34924), (45, 34975), (47, 35008), (55, 35053), (56, 35083), (58, 35092), (67, 35155), (69, 35182), (86, 35287), (88, 35293), (99, 35362),

Gene: LilJank_33 Start: 29125, Stop: 29817, Start Num: 8
Candidate Starts for LilJank_33:
(Start: 8 @29125 has 10 MA's), (9, 29131), (13, 29179), (24, 29260), (25, 29278), (27, 29287), (33, 29326), (37, 29350), (43, 29398), (54, 29494), (55, 29497), (56, 29524), (65, 29578), (74, 29641), (82, 29689), (94, 29761), (97, 29788), (98, 29794),

Gene: Lilbeanie_36 Start: 30442, Stop: 31050, Start Num: 18
Candidate Starts for Lilbeanie_36:
(11, 30373), (Start: 18 @30442 has 89 MA's), (32, 30553), (34, 30562), (43, 30631), (46, 30664), (49, 30694), (56, 30757), (65, 30811), (66, 30826), (80, 30913), (97, 31021),

Gene: LordFarquaad_29 Start: 24850, Stop: 25446, Start Num: 18
Candidate Starts for LordFarquaad_29:
(Start: 14 @24817 has 1 MA's), (Start: 18 @24850 has 89 MA's), (31, 24928), (38, 24988), (45, 25039), (47, 25072), (53, 25111), (56, 25147), (57, 25153), (79, 25303), (99, 25429),

Gene: Lozinak_60 Start: 40445, Stop: 41149, Start Num: 8
Candidate Starts for Lozinak_60:
(Start: 8 @40445 has 10 MA's), (12, 40496), (16, 40535), (25, 40595), (36, 40652), (43, 40712), (49, 40775), (50, 40778), (55, 40814), (56, 40841), (59, 40865), (66, 40910), (82, 41021), (90, 41072), (96, 41114), (99, 41135),

Gene: Madavieve_29 Start: 27334, Stop: 27999, Start Num: 18
Candidate Starts for Madavieve_29:
(Start: 18 @27334 has 89 MA's), (32, 27436), (38, 27475), (45, 27526), (47, 27559), (56, 27634), (57, 27640),

Gene: Manasvini_31 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Manasvini_31:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: Maridalia_30 Start: 27051, Stop: 27647, Start Num: 18

Candidate Starts for Maridalia_30:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: MelBins_40 Start: 35593, Stop: 36189, Start Num: 18
Candidate Starts for MelBins_40:
(Start: 14 @35569 has 1 MA's), (Start: 17 @35590 has 1 MA's), (Start: 18 @35593 has 89 MA's), (Start: 19 @35596 has 19 MA's), (Start: 30 @35668 has 1 MA's), (38, 35731), (45, 35782), (47, 35815), (53, 35854), (56, 35890), (57, 35896), (59, 35914), (61, 35923), (63, 35935), (79, 36046), (86, 36097), (91, 36118), (99, 36172),

Gene: Mocha12_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Mocha12_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: MoontowerMania_40 Start: 36310, Stop: 36903, Start Num: 19
Candidate Starts for MoontowerMania_40:
(Start: 19 @36310 has 19 MA's), (32, 36409), (38, 36445), (45, 36496), (47, 36529), (77, 36748), (79, 36760), (85, 36808),

Gene: Natkenzie_41 Start: 36995, Stop: 37594, Start Num: 17
Candidate Starts for Natkenzie_41:
(Start: 14 @36974 has 1 MA's), (Start: 17 @36995 has 1 MA's), (Start: 18 @36998 has 89 MA's), (Start: 19 @37001 has 19 MA's), (Start: 30 @37073 has 1 MA's), (35, 37112), (38, 37136), (45, 37187), (47, 37220), (52, 37250), (53, 37259), (56, 37295), (57, 37301), (59, 37319), (61, 37328), (63, 37340), (70, 37397), (83, 37472), (91, 37523), (93, 37532), (99, 37577),

Gene: Neobush_31 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Neobush_31:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: Nettuno_27 Start: 23538, Stop: 24134, Start Num: 18
Candidate Starts for Nettuno_27:
(Start: 14 @23505 has 1 MA's), (Start: 18 @23538 has 89 MA's), (31, 23616), (38, 23676), (45, 23727), (47, 23760), (53, 23799), (56, 23835), (57, 23841), (79, 23991), (99, 24117),

Gene: Neville_33 Start: 28765, Stop: 29457, Start Num: 8
Candidate Starts for Neville_33:
(Start: 8 @28765 has 10 MA's), (9, 28771), (13, 28819), (24, 28900), (25, 28918), (27, 28927), (33, 28966), (37, 28990), (43, 29038), (54, 29134), (55, 29137), (56, 29164), (65, 29218), (74, 29281), (82, 29329), (94, 29401), (97, 29428), (98, 29434),

Gene: Nubi_37 Start: 32735, Stop: 33331, Start Num: 18
Candidate Starts for Nubi_37:
(Start: 18 @32735 has 89 MA's), (31, 32813), (38, 32873), (45, 32924), (47, 32957), (53, 32996), (56, 33032), (57, 33038), (79, 33188), (99, 33314),

Gene: Nymphadora_29 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Nymphadora_29:
(Start: 18 @27051 has 89 MA's), (Start: 30 @27126 has 1 MA's), (38, 27189), (45, 27240), (47, 27273), (53, 27312), (56, 27348), (57, 27354), (92, 27579), (99, 27630), (100, 27636),

Gene: Ohgeesy_29 Start: 26673, Stop: 27269, Start Num: 18
Candidate Starts for Ohgeesy_29:
(3, 25836), (Start: 14 @26646 has 1 MA's), (Start: 18 @26673 has 89 MA's), (Start: 19 @26676 has 19 MA's), (Start: 30 @26748 has 1 MA's), (32, 26775), (38, 26811), (40, 26829), (45, 26862), (47, 26895), (56, 26970), (57, 26976), (59, 26994), (79, 27126),

Gene: PantheRoc_30 Start: 26218, Stop: 26844, Start Num: 14
Candidate Starts for PantheRoc_30:
(3, 25408), (Start: 14 @26218 has 1 MA's), (24, 26287), (38, 26386), (40, 26404), (45, 26437), (47, 26470), (56, 26545), (57, 26551), (59, 26569), (79, 26701), (99, 26827),

Gene: Phinally_39 Start: 35444, Stop: 36040, Start Num: 18
Candidate Starts for Phinally_39:
(Start: 14 @35420 has 1 MA's), (Start: 17 @35441 has 1 MA's), (Start: 18 @35444 has 89 MA's), (Start: 19 @35447 has 19 MA's), (Start: 30 @35519 has 1 MA's), (38, 35582), (45, 35633), (47, 35666), (53, 35705), (57, 35747), (59, 35765), (61, 35774), (63, 35786), (91, 35969), (99, 36023), (100, 36029),

Gene: Phlop_36 Start: 32816, Stop: 33412, Start Num: 18
Candidate Starts for Phlop_36:
(Start: 18 @32816 has 89 MA's), (31, 32894), (38, 32954), (45, 33005), (47, 33038), (53, 33077), (56, 33113), (57, 33119), (79, 33269), (99, 33395),

Gene: PinkCoffee_39 Start: 32920, Stop: 33516, Start Num: 18
Candidate Starts for PinkCoffee_39:
(Start: 18 @32920 has 89 MA's), (31, 32998), (38, 33058), (44, 33103), (45, 33109), (47, 33142), (53, 33181), (56, 33217), (57, 33223), (79, 33373), (99, 33499),

Gene: Polly_28 Start: 26494, Stop: 27090, Start Num: 18
Candidate Starts for Polly_28:
(Start: 18 @26494 has 89 MA's), (32, 26596), (38, 26632), (44, 26677), (45, 26683), (47, 26716), (50, 26725), (57, 26797), (59, 26815), (99, 27073),

Gene: Portcullis_37 Start: 32232, Stop: 32828, Start Num: 18
Candidate Starts for Portcullis_37:
(Start: 18 @32232 has 89 MA's), (31, 32310), (38, 32370), (44, 32415), (45, 32421), (47, 32454), (50, 32463), (56, 32529), (57, 32535), (79, 32685), (99, 32811),

Gene: PullumCavea_36 Start: 32816, Stop: 33412, Start Num: 18
Candidate Starts for PullumCavea_36:
(Start: 18 @32816 has 89 MA's), (31, 32894), (38, 32954), (45, 33005), (47, 33038), (53, 33077), (56, 33113), (57, 33119), (79, 33269), (99, 33395),

Gene: Pumpkiney_42 Start: 34313, Stop: 34909, Start Num: 18
Candidate Starts for Pumpkiney_42:
(Start: 18 @34313 has 89 MA's), (Start: 19 @34316 has 19 MA's), (Start: 30 @34388 has 1 MA's), (38, 34451), (45, 34502), (47, 34535), (53, 34574), (57, 34616), (59, 34634), (61, 34643), (63, 34655), (84, 34790), (91, 34838), (99, 34892),

Gene: Pupper_99 Start: 56252, Stop: 56965, Start Num: 8
Candidate Starts for Pupper_99:

(Start: 8 @56252 has 10 MA's), (10, 56261), (23, 56387), (42, 56528), (43, 56534), (46, 56570), (48, 56594), (49, 56600), (51, 56612), (54, 56636), (55, 56639), (57, 56672), (59, 56690), (66, 56735), (71, 56774), (74, 56783), (75, 56798), (97, 56936), (99, 56951),

Gene: Rabbitrun_35 Start: 29229, Stop: 29918, Start Num: 8
Candidate Starts for Rabbitrun_35:
(Start: 8 @29229 has 10 MA's), (9, 29235), (13, 29283), (22, 29346), (24, 29364), (25, 29382), (27, 29391), (28, 29397), (32, 29424), (33, 29430), (43, 29499), (46, 29532), (49, 29562), (50, 29565), (56, 29625), (66, 29694), (70, 29727), (73, 29739), (76, 29754), (80, 29781), (97, 29889), (98, 29895),

Gene: Reyja_29 Start: 24134, Stop: 24733, Start Num: 18
Candidate Starts for Reyja_29:
(1, 22841), (2, 23072), (3, 23297), (Start: 14 @24107 has 1 MA's), (Start: 18 @24134 has 89 MA's), (Start: 19 @24137 has 19 MA's), (Start: 30 @24209 has 1 MA's), (38, 24275), (45, 24326), (47, 24359), (50, 24368), (53, 24398), (57, 24440), (59, 24458), (60, 24464), (63, 24479), (79, 24590), (82, 24605), (93, 24671), (99, 24716), (100, 24722),

Gene: Ribeye_41 Start: 36601, Stop: 37197, Start Num: 19
Candidate Starts for Ribeye_41:
(Start: 19 @36601 has 19 MA's), (32, 36700), (35, 36712), (38, 36736), (45, 36787), (47, 36820), (56, 36895), (58, 36904), (59, 36919), (62, 36931), (75, 37024), (78, 37048), (93, 37132), (101, 37186),

Gene: RiverRaider_41 Start: 34818, Stop: 35408, Start Num: 19
Candidate Starts for RiverRaider_41:
(Start: 19 @34818 has 19 MA's), (Start: 30 @34890 has 1 MA's), (35, 34929), (38, 34953), (45, 35004), (47, 35037), (53, 35076), (55, 35082), (58, 35121), (61, 35145), (63, 35157), (64, 35160), (71, 35220), (87, 35322), (88, 35325), (99, 35394),

Gene: RogerDodger_40 Start: 33061, Stop: 33657, Start Num: 18
Candidate Starts for RogerDodger_40:
(Start: 18 @33061 has 89 MA's), (38, 33199), (45, 33250), (47, 33283), (57, 33364), (79, 33514), (99, 33640),

Gene: SCentae_98 Start: 56398, Stop: 57111, Start Num: 8
Candidate Starts for SCentae_98:
(Start: 8 @56398 has 10 MA's), (10, 56407), (23, 56533), (42, 56674), (43, 56680), (46, 56716), (48, 56740), (49, 56746), (51, 56758), (54, 56782), (55, 56785), (57, 56818), (59, 56836), (66, 56881), (71, 56920), (74, 56929), (75, 56944), (97, 57082), (99, 57097),

Gene: Sahara_28 Start: 24522, Stop: 25121, Start Num: 18
Candidate Starts for Sahara_28:
(Start: 18 @24522 has 89 MA's), (38, 24663), (39, 24669), (45, 24714), (47, 24747), (50, 24756), (56, 24822), (57, 24828), (61, 24855), (77, 24966), (79, 24978), (99, 25104),

Gene: Salvador_36 Start: 32730, Stop: 33326, Start Num: 18
Candidate Starts for Salvador_36:
(Start: 18 @32730 has 89 MA's), (31, 32808), (38, 32868), (45, 32919), (47, 32952), (53, 32991), (56, 33027), (57, 33033), (79, 33183), (99, 33309),

Gene: Sampson_41 Start: 36940, Stop: 37539, Start Num: 17
Candidate Starts for Sampson_41:
(Start: 14 @36919 has 1 MA's), (Start: 17 @36940 has 1 MA's), (Start: 18 @36943 has 89 MA's), (Start: 19 @36946 has 19 MA's), (Start: 30 @37018 has 1 MA's), (35, 37057), (38, 37081), (45,

37132), (47, 37165), (52, 37195), (53, 37204), (56, 37240), (57, 37246), (59, 37264), (61, 37273), (63, 37285), (70, 37342), (83, 37417), (91, 37468), (93, 37477), (99, 37522),

Gene: Saronaya_40 Start: 35444, Stop: 36034, Start Num: 19
Candidate Starts for Saronaya_40:
(Start: 19 @35444 has 19 MA's), (26, 35498), (Start: 30 @35516 has 1 MA's), (35, 35555), (38, 35579), (45, 35630), (47, 35663), (54, 35705), (55, 35708), (56, 35738), (58, 35747), (67, 35810), (69, 35837), (83, 35912), (88, 35948), (99, 36017),

Gene: Savage_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Savage_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Savbucketdawg_36 Start: 32511, Stop: 33107, Start Num: 18
Candidate Starts for Savbucketdawg_36:
(Start: 18 @32511 has 89 MA's), (31, 32589), (38, 32649), (45, 32700), (47, 32733), (53, 32772), (56, 32808), (57, 32814), (79, 32964), (99, 33090),

Gene: SchottB_39 Start: 36459, Stop: 37052, Start Num: 19
Candidate Starts for SchottB_39:
(Start: 19 @36459 has 19 MA's), (Start: 30 @36531 has 1 MA's), (38, 36597), (45, 36648), (47, 36681), (55, 36726), (56, 36756), (58, 36765), (67, 36828), (69, 36855), (86, 36960), (88, 36966), (99, 37035),

Gene: Scioto_42 Start: 36999, Stop: 37595, Start Num: 18
Candidate Starts for Scioto_42:
(Start: 14 @36975 has 1 MA's), (Start: 17 @36996 has 1 MA's), (Start: 18 @36999 has 89 MA's), (Start: 19 @37002 has 19 MA's), (Start: 30 @37074 has 1 MA's), (35, 37113), (38, 37137), (45, 37188), (47, 37221), (52, 37251), (53, 37260), (56, 37296), (57, 37302), (59, 37320), (61, 37329), (63, 37341), (70, 37398), (83, 37473), (91, 37524), (93, 37533), (99, 37578),

Gene: Shinji_37 Start: 32173, Stop: 32769, Start Num: 18
Candidate Starts for Shinji_37:
(Start: 18 @32173 has 89 MA's), (31, 32251), (38, 32311), (45, 32362), (47, 32395), (56, 32470), (57, 32476), (79, 32626), (99, 32752),

Gene: Sidious_31 Start: 27479, Stop: 28075, Start Num: 18
Candidate Starts for Sidious_31:
(Start: 18 @27479 has 89 MA's), (32, 27581), (38, 27617), (45, 27668), (47, 27701), (56, 27776), (57, 27782), (79, 27932), (99, 28058),

Gene: Skog_162 Start: 86948, Stop: 87661, Start Num: 8
Candidate Starts for Skog_162:
(4, 86723), (5, 86792), (Start: 8 @86948 has 10 MA's), (10, 86957), (23, 87083), (43, 87230), (46, 87266), (48, 87290), (49, 87296), (55, 87335), (57, 87368), (59, 87386), (66, 87431), (71, 87470), (74, 87479), (75, 87494), (90, 87584), (97, 87632), (99, 87647),

Gene: SmokingBunny_36 Start: 32721, Stop: 33317, Start Num: 18
Candidate Starts for SmokingBunny_36:
(Start: 18 @32721 has 89 MA's), (31, 32799), (38, 32859), (45, 32910), (47, 32943), (53, 32982), (56, 33018), (57, 33024), (79, 33174), (99, 33300),

Gene: Smoothie_61 Start: 40445, Stop: 41149, Start Num: 8

Candidate Starts for Smoothie_61:
(Start: 8 @40445 has 10 MA's), (12, 40496), (16, 40535), (25, 40595), (36, 40652), (43, 40712), (49, 40775), (50, 40778), (55, 40814), (56, 40841), (59, 40865), (66, 40910), (82, 41021), (90, 41072), (96, 41114), (99, 41135),

Gene: Sproutie_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Sproutie_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Stultus_39 Start: 35616, Stop: 36209, Start Num: 19
Candidate Starts for Stultus_39:
(Start: 19 @35616 has 19 MA's), (32, 35715), (38, 35751), (45, 35802), (47, 35835), (77, 36054), (79, 36066), (85, 36114),

Gene: Suscepit_31 Start: 27052, Stop: 27648, Start Num: 18
Candidate Starts for Suscepit_31:
(Start: 18 @27052 has 89 MA's), (32, 27154), (38, 27190), (44, 27235), (45, 27241), (47, 27274), (50, 27283), (57, 27355), (59, 27373), (99, 27631),

Gene: Tardus_42 Start: 36353, Stop: 36949, Start Num: 18
Candidate Starts for Tardus_42:
(Start: 14 @36329 has 1 MA's), (Start: 17 @36350 has 1 MA's), (Start: 18 @36353 has 89 MA's), (Start: 19 @36356 has 19 MA's), (Start: 30 @36428 has 1 MA's), (38, 36491), (45, 36542), (47, 36575), (53, 36614), (58, 36659), (59, 36674), (61, 36683), (63, 36695), (84, 36830), (91, 36878), (99, 36932),

Gene: Tayonia_31 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Tayonia_31:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: ThankyouJordi_28 Start: 26876, Stop: 27472, Start Num: 18
Candidate Starts for ThankyouJordi_28:
(Start: 18 @26876 has 89 MA's), (Start: 30 @26951 has 1 MA's), (32, 26978), (38, 27014), (45, 27065), (47, 27098), (57, 27179), (61, 27206), (79, 27329), (84, 27353), (99, 27455),

Gene: TillyBobJoe_36 Start: 32525, Stop: 33121, Start Num: 18
Candidate Starts for TillyBobJoe_36:
(Start: 18 @32525 has 89 MA's), (31, 32603), (38, 32663), (45, 32714), (47, 32747), (53, 32786), (56, 32822), (57, 32828), (79, 32978), (99, 33104),

Gene: TimTam_29 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for TimTam_29:
(Start: 18 @27051 has 89 MA's), (Start: 30 @27126 has 1 MA's), (38, 27189), (45, 27240), (47, 27273), (53, 27312), (56, 27348), (57, 27354), (92, 27579), (99, 27630), (100, 27636),

Gene: Togo_36 Start: 32721, Stop: 33317, Start Num: 18
Candidate Starts for Togo_36:
(Start: 18 @32721 has 89 MA's), (31, 32799), (38, 32859), (45, 32910), (47, 32943), (53, 32982), (56, 33018), (57, 33024), (79, 33174), (99, 33300),

Gene: Trax_33 Start: 29071, Stop: 29763, Start Num: 8

Candidate Starts for Trax_33:
(Start: 8 @29071 has 10 MA's), (9, 29077), (13, 29125), (24, 29206), (25, 29224), (27, 29233), (33, 29272), (37, 29296), (43, 29344), (54, 29440), (55, 29443), (56, 29470), (65, 29524), (74, 29587), (82, 29635), (94, 29707), (97, 29734), (98, 29740),

Gene: Trumpet_31 Start: 27052, Stop: 27648, Start Num: 18
Candidate Starts for Trumpet_31:
(Start: 18 @27052 has 89 MA's), (32, 27154), (38, 27190), (44, 27235), (45, 27241), (47, 27274), (50, 27283), (57, 27355), (59, 27373), (99, 27631),

Gene: TuertoX_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for TuertoX_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: Twister6_39 Start: 32624, Stop: 33220, Start Num: 18
Candidate Starts for Twister6_39:
(Start: 18 @32624 has 89 MA's), (31, 32702), (38, 32762), (44, 32807), (45, 32813), (47, 32846), (50, 32855), (56, 32921), (57, 32927), (79, 33077), (99, 33203),

Gene: Tycho_40 Start: 35418, Stop: 36011, Start Num: 19
Candidate Starts for Tycho_40:
(Start: 19 @35418 has 19 MA's), (Start: 30 @35490 has 1 MA's), (38, 35556), (45, 35607), (47, 35640), (55, 35685), (56, 35715), (58, 35724), (67, 35787), (69, 35814), (86, 35919), (88, 35925), (99, 35994),

Gene: Valary_39 Start: 33666, Stop: 34262, Start Num: 18
Candidate Starts for Valary_39:
(Start: 18 @33666 has 89 MA's), (38, 33804), (45, 33855), (47, 33888), (57, 33969), (79, 34119), (99, 34245),

Gene: VanDeWege_40 Start: 32958, Stop: 33554, Start Num: 18
Candidate Starts for VanDeWege_40:
(Start: 18 @32958 has 89 MA's), (31, 33036), (38, 33096), (45, 33147), (47, 33180), (57, 33261), (79, 33411), (99, 33537),

Gene: Verity_40 Start: 37185, Stop: 37781, Start Num: 18
Candidate Starts for Verity_40:
(Start: 14 @37161 has 1 MA's), (Start: 17 @37182 has 1 MA's), (Start: 18 @37185 has 89 MA's), (Start: 19 @37188 has 19 MA's), (Start: 30 @37260 has 1 MA's), (38, 37323), (45, 37374), (47, 37407), (53, 37446), (58, 37491), (59, 37506), (61, 37515), (63, 37527), (79, 37638), (84, 37662), (91, 37710),

Gene: ViaConlectus_41 Start: 35637, Stop: 36230, Start Num: 19
Candidate Starts for ViaConlectus_41:
(Start: 14 @35610 has 1 MA's), (Start: 17 @35631 has 1 MA's), (Start: 18 @35634 has 89 MA's), (Start: 19 @35637 has 19 MA's), (Start: 30 @35709 has 1 MA's), (38, 35772), (45, 35823), (47, 35856), (53, 35895), (58, 35940), (59, 35955), (61, 35964), (63, 35976), (79, 36087), (91, 36159), (99, 36213),

Gene: WelcomeAyanna_28 Start: 27023, Stop: 27619, Start Num: 18
Candidate Starts for WelcomeAyanna_28:
(Start: 18 @27023 has 89 MA's), (Start: 30 @27098 has 1 MA's), (32, 27125), (38, 27161), (45, 27212), (47, 27245), (57, 27326), (61, 27353), (79, 27476), (84, 27500), (99, 27602),

Gene: Whiteclaw_29 Start: 24852, Stop: 25451, Start Num: 18
Candidate Starts for Whiteclaw_29:
(Start: 18 @24852 has 89 MA's), (38, 24993), (39, 24999), (45, 25044), (47, 25077), (50, 25086), (56, 25152), (57, 25158), (61, 25185), (77, 25296), (79, 25308), (99, 25434),

Gene: WilliamBoone_59 Start: 39116, Stop: 39814, Start Num: 8
Candidate Starts for WilliamBoone_59:
(Start: 8 @39116 has 10 MA's), (9, 39122), (13, 39170), (15, 39191), (16, 39206), (22, 39233), (25, 39272), (32, 39314), (41, 39380), (43, 39392), (46, 39425), (48, 39449), (49, 39455), (56, 39521), (59, 39545), (65, 39575), (74, 39638), (80, 39677), (82, 39686), (94, 39758), (97, 39785), (99, 39800),

Gene: Wizard_36 Start: 32864, Stop: 33460, Start Num: 18
Candidate Starts for Wizard_36:
(Start: 18 @32864 has 89 MA's), (31, 32942), (38, 33002), (45, 33053), (47, 33086), (53, 33125), (56, 33161), (57, 33167), (79, 33317), (99, 33443),

Gene: Yeet412_29 Start: 24850, Stop: 25446, Start Num: 18
Candidate Starts for Yeet412_29:
(Start: 14 @24817 has 1 MA's), (Start: 18 @24850 has 89 MA's), (31, 24928), (38, 24988), (45, 25039), (47, 25072), (53, 25111), (56, 25147), (57, 25153), (79, 25303), (99, 25429),

Gene: Zameen_31 Start: 27051, Stop: 27647, Start Num: 18
Candidate Starts for Zameen_31:
(Start: 18 @27051 has 89 MA's), (32, 27153), (38, 27189), (44, 27234), (45, 27240), (47, 27273), (50, 27282), (57, 27354), (59, 27372), (99, 27630),

Gene: Zipp_40 Start: 37088, Stop: 37684, Start Num: 18
Candidate Starts for Zipp_40:
(Start: 14 @37064 has 1 MA's), (Start: 17 @37085 has 1 MA's), (Start: 18 @37088 has 89 MA's), (Start: 19 @37091 has 19 MA's), (Start: 30 @37163 has 1 MA's), (35, 37202), (38, 37226), (45, 37277), (47, 37310), (52, 37340), (53, 37349), (56, 37385), (57, 37391), (59, 37409), (61, 37418), (63, 37430), (70, 37487), (83, 37562), (91, 37613), (93, 37622), (99, 37667),

Gene: Zirinka_29 Start: 27062, Stop: 27658, Start Num: 18
Candidate Starts for Zirinka_29:
(Start: 14 @27035 has 1 MA's), (Start: 18 @27062 has 89 MA's), (Start: 30 @27137 has 1 MA's), (32, 27164), (38, 27200), (45, 27251), (47, 27284), (57, 27365), (61, 27392), (79, 27515), (99, 27641),