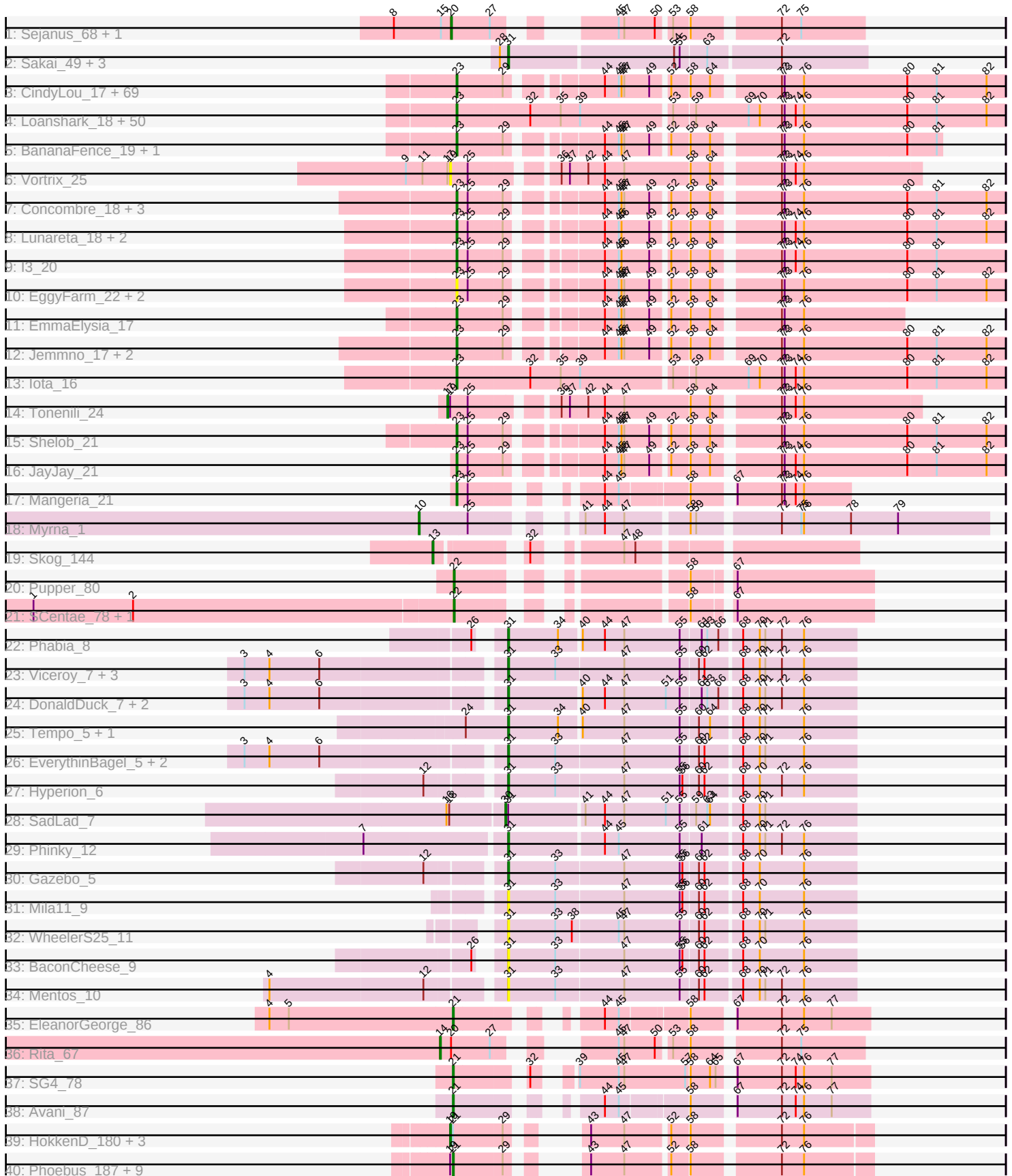


Pham 280109



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 280109 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280109 has 194 members, 26 are drafts.

Phages represented in each track:

- Track 1 : Sejanus_68, Mask_69
- Track 2 : Sakai_49, Richie_52, BlueShadow_49, Gorpy_50
- Track 3 : CindyLou_17, Shnickers_17, SilverDipper_18, Cactojaque_16, Labradorite_16, Riza_17, Fixie_16, Patter_17, JPickles_17, BackyardAgain_16, Naija_17, Ngannou_17, Matsumoto_17, Babyland_17, Atlantean_17, StubbySaigey_18, BobaPhatt_16, Audrick_19, Chargie21_17, Spec_16, Ghost_18, Catera_17, Derek_18, Rahel_17, Essence_17, ShiaLabeouf_17, LifeSavor_18, ArcherS7_17, ValleyTerrace_17, Belieber_16, Kboogie_18, Jedediah_18, InigoMontoya_19, JustHall_17, Amataga_17, Dietrick_15, Momo_17, Melpomini_17, Guwapp_17, Ablatia_17, Turret_17, Napoleon13_17, GlutenPhree_18, Willis_19, Trinitium_17, Wally_17, ErnieJ_21, Quasimodo_17, Phlegm_19, Phusco_17, McGee_18, Janiyra_17, Latch_17, Tortoise16_16, Morizzled23_17, Chomp_17, Basquiat_17, Gamgam_17, Pivoine_17, Breeniome_18, Bangla1971_17, Gabriel_18, Substance289_16, Fludd_17, Dessert_16, EasyJones_18, Teardrop_17, Adlitam_17, Ading_17, Littleton_18
- Track 4 : Loanshark_18, Asterius_20, Bread_19, EmToTheThree_21, Delylah_21, FoxtrotP1_19, Megamind_18, TinyTim_18, Zeenon_21, Zalkecks_20, Roots515_18, Bowman_18, SVoro_18, Pleione_20, Izajani_19, ChaylaJr_17, Ewok_18, MikeLiesIn_19, Bipolarisk_18, Blackbrain_17, Delilah_18, Erdmann_19, Daffodil_20, DrPhinkDaddy_18, ParkTD_18, Salacia_20, NedWong_19, Jessibeth14_18, OrediggerDelux_18, SrishMeg2525_18, ZygoTaiga_19, Norm_18, Khaleesi_18, Ava3_19, Yucca_18, Burrough_19, Issimir_18, Fongie_18, Bonray_18, YemiJoy2021_19, Capablanca_19, Maby2021_19, McWolfish_18, FudgeTart_19, YoungMoneyMata_18, Gizmo_20, ChickenPhender_17, ScottMcG_20, Lee7_18, PurduePete_18, Shrimp_18
- Track 5 : BananaFence_19, Darko_17
- Track 6 : Vortex_25
- Track 7 : Concombre_18, JigglyPuff_19, Demodog_17, Nappy_20
- Track 8 : Lunareta_18, DirtMonster_16, Montpel_18
- Track 9 : I3_20
- Track 10 : EggFarm_22, Grasshills_22, BigCity_22
- Track 11 : EmmaElysia_17
- Track 12 : Jemmno_17, SmallFry_17, Jaygup_17
- Track 13 : Iota_16
- Track 14 : Tonenili_24
- Track 15 : Shelob_21
- Track 16 : JayJay_21

- Track 17 : Mangeria_21
- Track 18 : Myrna_1
- Track 19 : Skog_144
- Track 20 : Pupper_80
- Track 21 : SCentae_78, CherryTomatoes_80
- Track 22 : Phabia_8
- Track 23 : Viceroy_7, Quammi_6, Rudy_6, Sillytadpoles_7
- Track 24 : DonaldDuck_7, Llemily_7, Wheelie_7
- Track 25 : Tempo_5, Kelcole_4
- Track 26 : EverythinBagel_5, Casend_7, Wayne3_7
- Track 27 : Hyperion_6
- Track 28 : SadLad_7
- Track 29 : Phinky_12
- Track 30 : Gazebo_5
- Track 31 : Mila11_9
- Track 32 : WheelerS25_11
- Track 33 : BaconCheese_9
- Track 34 : Mentos_10
- Track 35 : EleanorGeorge_86
- Track 36 : Rita_67
- Track 37 : SG4_78
- Track 38 : Avani_87
- Track 39 : HokkenD_180, Ejimix_176, Zelink_179, Klein_191
- Track 40 : Phoebus_187, Minerva_187, EricMillard_183, Duke13_188, Redno2_179, Wanda_184, Schatzie_181, Bagrid_194, Optimus_185, BAKA_193

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

The start number called the most often in the published annotations is 23, it was called in 122 of the 168 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ablatia_17, Ading_17, Adlitam_17, Amataga_17, ArcherS7_17, Asterius_20, Atlantean_17, Audrick_19, Ava3_19, Babyland_17, BackyardAgain_16, BananaFence_19, Bangla1971_17, Basquiat_17, Belieber_16, BigCity_22, Bipolarisk_18, Blackbrain_17, BobaPhatt_16, Bonray_18, Bowman_18, Bread_19, Breeniome_18, Burrough_19, Cactojaque_16, Capablanca_19, Catera_17, Chargie21_17, ChaylaJr_17, ChickenPhender_17, Chomp_17, CindyLou_17, Concombre_18, Daffodil_20, Darko_17, Delilah_18, Delylah_21, Demodog_17, Derek_18, Dessert_16, Dietrick_15, DirtMonster_16, DrPhinkDaddy_18, EasyJones_18, EggyFarm_22, EmToTheThree_21, EmmaElysia_17, Erdmann_19, ErnieJ_21, Essence_17, Ewok_18, Fixie_16, Fludd_17, Fongie_18, FoxtrotP1_19, FudgeTart_19, Gabriel_18, Gangam_17, Ghost_18, Gizmo_20, GlutenPhree_18, Grasshills_22, Guwapp_17, I3_20, InigoMontoya_19, Iota_16, Issimir_18, Izajani_19, JPickles_17, Janiyra_17, JayJay_21, Jaygup_17, Jedediah_18, Jemmno_17, Jessibeth14_18, JigglyPuff_19, JustHall_17, Kboogie_18, Khaleesi_18, Labradorite_16, Latch_17, Lee7_18, LifeSavor_18, Littleton_18, Loanshark_18, Lunareta_18, Maby2021_19, Mangeria_21, Matsumoto_17, McGee_18, McWolfish_18, Megamind_18, Melpomini_17, MikeLiesIn_19, Momo_17, Montpel_18, Morizzled23_17, Naija_17, Napoleon13_17, Nappy_20, NedWong_19, Ngannou_17,

Norm_18, OrediggerDelux_18, ParkTD_18, Patter_17, Phlegm_19, Phusco_17, Pivoine_17, Pleione_20, PurduePete_18, Quasimodo_17, Rahel_17, Rizal_17, Roots515_18, SVoro_18, Salacia_20, ScottMcG_20, Shelob_21, ShiaLabeouf_17, Shnickers_17, Shrimp_18, SilverDipper_18, SmallFry_17, Spec_16, SrishMeg2525_18, StubbySaigey_18, Substance289_16, Teardrop_17, TinyTim_18, Tortoise16_16, Trinitium_17, Turret_17, ValleyTerrace_17, Wally_17, Willis_19, YemiJoy2021_19, YoungMoneyMata_18, Yucca_18, Zalkecks_20, Zeenon_21, ZygoTaiga_19,

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

-

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

- Avani_87, BAKA_193, BaconCheese_9, Bagrid_194, BlueShadow_49, Casend_7, CherryTomatoes_80, DonaldDuck_7, Duke13_188, Ejimix_176, EleanorGeorge_86, EricMillard_183, EverythinBagel_5, Gazebo_5, Gorpy_50, HokkenD_180, Hyperion_6, Kelcole_4, Klein_191, Llemily_7, Mask_69, Mentos_10, Mila11_9, Minerva_187, Myrna_1, Optimus_185, Phabia_8, Phinky_12, Phoebus_187, Pupper_80, Quamm_6, Redno2_179, Richie_52, Rita_67, Rudy_6, SCentae_78, SG4_78, SadLad_7, Sakai_49, Schatzie_181, Sejanus_68, Sillytadpoles_7, Skog_144, Tempo_5, Tonenili_24, Viceroy_7, Vortrix_25, Wanda_184, Wayne3_7, WheelerS25_11, Wheelie_7, Zelink_179,

Summary by start number:

Start 10:

- Found in 1 of 194 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 168
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Myrna_1 (C2),

Start 13:

- Found in 1 of 194 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 168
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Skog_144 (DO),

Start 14:

- Found in 1 of 194 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 168
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Rita_67 (F1),

Start 17:

- Found in 2 of 194 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 168
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Tonenili_24 (C1),

Start 19:

- Found in 16 of 194 (8.2%) of genes in pham
- Manual Annotations of this start: 4 of 168
- Called 31.2% of time when present

- Phage (with cluster) where this start called: Ejimix_176 (J), HokkenD_180 (J), Klein_191 (J), Vortex_25 (C1), Zelink_179 (J),

Start 20:

- Found in 3 of 194 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 168
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Mask_69 (AD), Sejanus_68 (AD),

Start 21:

- Found in 17 of 194 (8.8%) of genes in pham
- Manual Annotations of this start: 12 of 168
- Called 76.5% of time when present
- Phage (with cluster) where this start called: Avani_87 (F2), BAKA_193 (J), Bagrid_194 (J), Duke13_188 (J), EleanorGeorge_86 (F1), EricMillard_183 (J), Minerva_187 (J), Optimus_185 (J), Phoebus_187 (J), Redno2_179 (J), SG4_78 (F1), Schatzie_181 (J), Wanda_184 (J),

Start 22:

- Found in 3 of 194 (1.5%) of genes in pham
- Manual Annotations of this start: 3 of 168
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CherryTomatoes_80 (DO), Pupper_80 (DO), SCentae_78 (DO),

Start 23:

- Found in 142 of 194 (73.2%) of genes in pham
- Manual Annotations of this start: 122 of 168
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ablatia_17 (C1), Ading_17 (C1), Adlitam_17 (C1), Amataga_17 (C1), ArcherS7_17 (C1), Asterius_20 (C1), Atlantean_17 (C1), Audrick_19 (C1), Ava3_19 (C1), Babyland_17 (C1), BackyardAgain_16 (C1), BananaFence_19 (C1), Bangla1971_17 (C1), Basquiat_17 (C1), Belieber_16 (C1), BigCity_22 (C1), Bipolarisk_18 (C1), Blackbrain_17 (C1), BobaPhatt_16 (C1), Bonray_18 (C1), Bowman_18 (C1), Bread_19 (C1), Breeniome_18 (C1), Burrough_19 (C1), Cactojaque_16 (C1), Capablanca_19 (C1), Catera_17 (C1), Chargie21_17 (C1), ChaylaJr_17 (C1), ChickenPhender_17 (C1), Chomp_17 (C1), CindyLou_17 (C1), Concombre_18 (C1), Daffodil_20 (C1), Darko_17 (C1), Delilah_18 (C1), Delylah_21 (C1), Demodog_17 (C1), Derek_18 (C1), Dessert_16 (C1), Dietrick_15 (C1), DirtMonster_16 (C1), DrPhinkDaddy_18 (C1), EasyJones_18 (C1), EggyFarm_22 (C1), EmToTheThree_21 (C1), EmmaElysia_17 (C1), Erdmann_19 (C1), ErnieJ_21 (C1), Essence_17 (C1), Ewok_18 (C1), Fixie_16 (C1), Fludd_17 (C1), Fongie_18 (C1), FoxtrotP1_19 (C1), FudgeTart_19 (C1), Gabriel_18 (C1), Gamgam_17 (C1), Ghost_18 (C1), Gizmo_20 (C1), GlutenPhree_18 (C1), Grasshills_22 (C1), Guwapp_17 (C1), I3_20 (C1), InigoMontoya_19 (C1), Iota_16 (C1), Issimir_18 (C1), Izajani_19 (C1), JPickles_17 (C1), JaniYra_17 (C1), JayJay_21 (C1), Jaygup_17 (C1), Jedediah_18 (C1), Jemmno_17 (C1), Jessibeth14_18 (C1), JigglyPuff_19 (C1), JustHall_17 (C1), Kboogie_18 (C1), Khaleesi_18 (C1), Labradorite_16 (C1), Latch_17 (C1), Lee7_18 (C1), LifeSavor_18 (C1), Littleton_18 (C1), Loanshark_18 (C1), Lunareta_18 (C1), Maby2021_19 (C1), Mangeria_21 (C1), Matsumoto_17 (C1), McGee_18 (C1), McWolfish_18 (C1), Megamind_18 (C1), Melpomini_17 (C1), MikeLiesIn_19 (C1), Momo_17 (C1), Montpel_18 (C1), Morizzled23_17 (C1), Naija_17 (C1), Napoleon13_17 (C1),

Nappy_20 (C1), NedWong_19 (C1), Ngannou_17 (C1), Norm_18 (C1), OrediggerDelux_18 (C1), ParkTD_18 (C1), Patter_17 (C1), Phlegm_19 (C1), Phusco_17 (C1), Pivoine_17 (C1), Pleione_20 (C1), PurduePete_18 (C1), Quasimodo_17 (C1), Rahel_17 (C1), Rizal_17 (C1), Roots515_18 (C1), SVoro_18 (C1), Salacia_20 (C1), ScottMcG_20 (C1), Shelob_21 (C1), ShiaLabeouf_17 (C1), Shnickers_17 (C1), Shrimp_18 (C1), SilverDipper_18 (C1), SmallFry_17 (C1), Spec_16 (C1), SrishMeg2525_18 (C1), StubbySaigey_18 (C1), Substance289_16 (C1), Teardrop_17 (C1), TinyTim_18 (C1), Tortoise16_16 (C1), Trinitium_17 (C1), Turret_17 (C1), ValleyTerrace_17 (C1), Wally_17 (C1), Willis_19 (C1), YemiJoy2021_19 (C1), YoungMoneyMata_18 (C1), Yucca_18 (C1), Zalkecks_20 (C1), Zeenon_21 (C1), ZygoTaiga_19 (C1),

Start 30:

- Found in 1 of 194 (0.5%) of genes in pham
- Manual Annotations of this start: 1 of 168
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SadLad_7 (EG),

Start 31:

- Found in 25 of 194 (12.9%) of genes in pham
- Manual Annotations of this start: 20 of 168
- Called 96.0% of time when present
- Phage (with cluster) where this start called: BaconCheese_9 (EG), BlueShadow_49 (AY), Casend_7 (EG), DonaldDuck_7 (EG), EverythinBagel_5 (EG), Gazebo_5 (EG), Gorpy_50 (AY), Hyperion_6 (EG), Kelcole_4 (EG), Llemily_7 (EG), Mentos_10 (EG), Mila11_9 (EG), Phabia_8 (EG), Phinky_12 (EG), Quammi_6 (EG), Richie_52 (AY), Rudy_6 (EG), Sakai_49 (AY), Sillytadpoles_7 (EG), Tempo_5 (EG), Viceroy_7 (EG), Wayne3_7 (EG), WheelerS25_11 (EG), Wheelie_7 (EG),

Summary by clusters:

There are 9 clusters represented in this pham: F1, F2, AD, DO, EG, J, AY, C2, C1,

Info for manual annotations of cluster AD:

- Start number 20 was manually annotated 2 times for cluster AD.

Info for manual annotations of cluster AY:

- Start number 31 was manually annotated 4 times for cluster AY.

Info for manual annotations of cluster C1:

- Start number 17 was manually annotated 1 time for cluster C1.
- Start number 23 was manually annotated 122 times for cluster C1.

Info for manual annotations of cluster C2:

- Start number 10 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster DO:

- Start number 13 was manually annotated 1 time for cluster DO.
- Start number 22 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster EG:

- Start number 30 was manually annotated 1 time for cluster EG.
- Start number 31 was manually annotated 16 times for cluster EG.

Info for manual annotations of cluster F1:

- Start number 14 was manually annotated 1 time for cluster F1.
- Start number 21 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 21 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster J:

- Start number 19 was manually annotated 4 times for cluster J.
- Start number 21 was manually annotated 9 times for cluster J.

Gene Information:

Gene: Ablatia_17 Start: 5217, Stop: 5750, Start Num: 23

Candidate Starts for Ablatia_17:

(Start: 23 @5217 has 122 MA's), (29, 5265), (44, 5346), (45, 5361), (46, 5364), (47, 5367), (49, 5394), (52, 5409), (58, 5427), (64, 5448), (72, 5511), (73, 5514), (76, 5535), (80, 5646), (81, 5676), (82, 5730),

Gene: Ading_17 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Ading_17:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: Adlitam_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Adlitam_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Amataga_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Amataga_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: ArcherS7_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for ArcherS7_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Asterius_20 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Asterius_20:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Atlantean_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Atlantean_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Audrick_19 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Audrick_19:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: Ava3_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Ava3_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Avani_87 Start: 46430, Stop: 46795, Start Num: 21

Candidate Starts for Avani_87:

(Start: 21 @46430 has 12 MA's), (44, 46535), (45, 46550), (58, 46616), (67, 46652), (72, 46700), (74, 46715), (76, 46724), (77, 46754),

Gene: BAKA_193 Start: 96785, Stop: 97141, Start Num: 21

Candidate Starts for BAKA_193:

(Start: 19 @96782 has 4 MA's), (Start: 21 @96785 has 12 MA's), (29, 96836), (43, 96866), (47, 96902), (52, 96944), (58, 96962), (72, 97046), (76, 97070),

Gene: Babyland_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Babyland_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: BackyardAgain_16 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for BackyardAgain_16:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: BaconCheese_9 Start: 2704, Stop: 2339, Start Num: 31

Candidate Starts for BaconCheese_9:

(26, 2722), (Start: 31 @2704 has 20 MA's), (33, 2653), (47, 2581), (55, 2521), (56, 2518), (60, 2503), (62, 2497), (68, 2461), (70, 2443), (76, 2395),

Gene: Bagrid_194 Start: 97090, Stop: 97446, Start Num: 21

Candidate Starts for Bagrid_194:

(Start: 19 @97087 has 4 MA's), (Start: 21 @97090 has 12 MA's), (29, 97141), (43, 97171), (47, 97207), (52, 97249), (58, 97267), (72, 97351), (76, 97375),

Gene: BananaFence_19 Start: 6216, Stop: 6680, Start Num: 23

Candidate Starts for BananaFence_19:

(Start: 23 @6216 has 122 MA's), (29, 6264), (44, 6345), (45, 6360), (46, 6363), (47, 6366), (49, 6393), (52, 6408), (58, 6426), (64, 6447), (72, 6510), (73, 6513), (76, 6534), (80, 6645), (81, 6675),

Gene: Bangla1971_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Bangla1971_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Basquiat_17 Start: 5196, Stop: 5729, Start Num: 23

Candidate Starts for Basquiat_17:

(Start: 23 @5196 has 122 MA's), (29, 5244), (44, 5325), (45, 5340), (46, 5343), (47, 5346), (49, 5373), (52, 5388), (58, 5406), (64, 5427), (72, 5490), (73, 5493), (76, 5514), (80, 5625), (81, 5655), (82, 5709),

Gene: Belieber_16 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Belieber_16:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: BigCity_22 Start: 7585, Stop: 8118, Start Num: 23

Candidate Starts for BigCity_22:

(Start: 23 @7585 has 122 MA's), (25, 7597), (29, 7633), (44, 7714), (45, 7729), (46, 7732), (47, 7735), (49, 7762), (52, 7777), (58, 7795), (64, 7816), (72, 7879), (73, 7882), (76, 7903), (80, 8014), (81, 8044), (82, 8098),

Gene: Bipolarisk_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Bipolarisk_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Blackbrain_17 Start: 5211, Stop: 5789, Start Num: 23

Candidate Starts for Blackbrain_17:

(Start: 23 @5211 has 122 MA's), (32, 5289), (35, 5322), (39, 5343), (53, 5436), (59, 5457), (69, 5514), (70, 5526), (72, 5550), (73, 5553), (74, 5565), (76, 5574), (80, 5685), (81, 5715), (82, 5769),

Gene: BlueShadow_49 Start: 30672, Stop: 31046, Start Num: 31

Candidate Starts for BlueShadow_49:

(28, 30663), (Start: 31 @30672 has 20 MA's), (54, 30846), (55, 30852), (63, 30879), (72, 30954),

Gene: BobaPhatt_16 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for BobaPhatt_16:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Bonray_18 Start: 6274, Stop: 6852, Start Num: 23

Candidate Starts for Bonray_18:

(Start: 23 @6274 has 122 MA's), (32, 6352), (35, 6385), (39, 6406), (53, 6499), (59, 6520), (69, 6577), (70, 6589), (72, 6613), (73, 6616), (74, 6628), (76, 6637), (80, 6748), (81, 6778), (82, 6832),

Gene: Bowman_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Bowman_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Bread_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Bread_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Breeniome_18 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Breeniome_18:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Burrough_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Burrough_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Cactojaque_16 Start: 5145, Stop: 5678, Start Num: 23

Candidate Starts for Cactojaque_16:

(Start: 23 @5145 has 122 MA's), (29, 5193), (44, 5274), (45, 5289), (46, 5292), (47, 5295), (49, 5322), (52, 5337), (58, 5355), (64, 5376), (72, 5439), (73, 5442), (76, 5463), (80, 5574), (81, 5604), (82, 5658),

Gene: Capablanca_19 Start: 6295, Stop: 6873, Start Num: 23

Candidate Starts for Capablanca_19:

(Start: 23 @6295 has 122 MA's), (32, 6373), (35, 6406), (39, 6427), (53, 6520), (59, 6541), (69, 6598), (70, 6610), (72, 6634), (73, 6637), (74, 6649), (76, 6658), (80, 6769), (81, 6799), (82, 6853),

Gene: Casend_7 Start: 2333, Stop: 1968, Start Num: 31

Candidate Starts for Casend_7:

(3, 2597), (4, 2570), (6, 2516), (Start: 31 @2333 has 20 MA's), (33, 2282), (47, 2210), (55, 2150), (60, 2132), (62, 2126), (68, 2090), (70, 2072), (71, 2066), (76, 2024),

Gene: Catera_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Catera_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Chargie21_17 Start: 5196, Stop: 5729, Start Num: 23

Candidate Starts for Chargie21_17:

(Start: 23 @5196 has 122 MA's), (29, 5244), (44, 5325), (45, 5340), (46, 5343), (47, 5346), (49, 5373), (52, 5388), (58, 5406), (64, 5427), (72, 5490), (73, 5493), (76, 5514), (80, 5625), (81, 5655), (82, 5709),

Gene: ChaylaJr_17 Start: 5238, Stop: 5816, Start Num: 23

Candidate Starts for ChaylaJr_17:

(Start: 23 @5238 has 122 MA's), (32, 5316), (35, 5349), (39, 5370), (53, 5463), (59, 5484), (69, 5541), (70, 5553), (72, 5577), (73, 5580), (74, 5592), (76, 5601), (80, 5712), (81, 5742), (82, 5796),

Gene: CherryTomatoes_80 Start: 30585, Stop: 30956, Start Num: 22

Candidate Starts for CherryTomatoes_80:

(1, 30135), (2, 30243), (Start: 22 @30585 has 3 MA's), (58, 30774), (67, 30810),

Gene: ChickenPhender_17 Start: 5196, Stop: 5774, Start Num: 23

Candidate Starts for ChickenPhender_17:

(Start: 23 @5196 has 122 MA's), (32, 5274), (35, 5307), (39, 5328), (53, 5421), (59, 5442), (69, 5499), (70, 5511), (72, 5535), (73, 5538), (74, 5550), (76, 5559), (80, 5670), (81, 5700), (82, 5754),

Gene: Chomp_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Chomp_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: CindyLou_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for CindyLou_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Concombre_18 Start: 6281, Stop: 6814, Start Num: 23

Candidate Starts for Concombres_18:

(Start: 23 @6281 has 122 MA's), (25, 6293), (29, 6329), (44, 6410), (45, 6425), (46, 6428), (47, 6431), (49, 6458), (52, 6473), (58, 6491), (64, 6512), (72, 6575), (73, 6578), (76, 6599), (80, 6710), (81, 6740), (82, 6794),

Gene: Daffodil_20 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Daffodil_20:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Darko_17 Start: 6185, Stop: 6649, Start Num: 23

Candidate Starts for Darko_17:

(Start: 23 @6185 has 122 MA's), (29, 6233), (44, 6314), (45, 6329), (46, 6332), (47, 6335), (49, 6362), (52, 6377), (58, 6395), (64, 6416), (72, 6479), (73, 6482), (76, 6503), (80, 6614), (81, 6644),

Gene: Delilah_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Delilah_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Delylah_21 Start: 6307, Stop: 6885, Start Num: 23

Candidate Starts for Delylah_21:

(Start: 23 @6307 has 122 MA's), (32, 6385), (35, 6418), (39, 6439), (53, 6532), (59, 6553), (69, 6610), (70, 6622), (72, 6646), (73, 6649), (74, 6661), (76, 6670), (80, 6781), (81, 6811), (82, 6865),

Gene: Demodog_17 Start: 6281, Stop: 6814, Start Num: 23

Candidate Starts for Demodog_17:

(Start: 23 @6281 has 122 MA's), (25, 6293), (29, 6329), (44, 6410), (45, 6425), (46, 6428), (47, 6431), (49, 6458), (52, 6473), (58, 6491), (64, 6512), (72, 6575), (73, 6578), (76, 6599), (80, 6710), (81, 6740), (82, 6794),

Gene: Derek_18 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Derek_18:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Dessert_16 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Dessert_16:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Dietrick_15 Start: 5213, Stop: 5746, Start Num: 23

Candidate Starts for Dietrick_15:

(Start: 23 @5213 has 122 MA's), (29, 5261), (44, 5342), (45, 5357), (46, 5360), (47, 5363), (49, 5390), (52, 5405), (58, 5423), (64, 5444), (72, 5507), (73, 5510), (76, 5531), (80, 5642), (81, 5672), (82, 5726),

Gene: DirtMonster_16 Start: 6340, Stop: 6873, Start Num: 23

Candidate Starts for DirtMonster_16:

(Start: 23 @6340 has 122 MA's), (25, 6352), (29, 6388), (44, 6469), (45, 6484), (46, 6487), (49, 6517), (52, 6532), (58, 6550), (64, 6571), (72, 6634), (73, 6637), (74, 6649), (76, 6658), (80, 6769), (81, 6799), (82, 6853),

Gene: DonaldDuck_7 Start: 2085, Stop: 1723, Start Num: 31

Candidate Starts for DonaldDuck_7:

(3, 2349), (4, 2322), (6, 2268), (Start: 31 @2085 has 20 MA's), (40, 2010), (44, 1986), (47, 1965), (51, 1920), (55, 1905), (61, 1884), (63, 1878), (66, 1866), (68, 1845), (70, 1827), (71, 1821), (72, 1803), (76, 1779),

Gene: DrPhinkDaddy_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for DrPhinkDaddy_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Duke13_188 Start: 95119, Stop: 95475, Start Num: 21

Candidate Starts for Duke13_188:

(Start: 19 @95116 has 4 MA's), (Start: 21 @95119 has 12 MA's), (29, 95170), (43, 95200), (47, 95236), (52, 95278), (58, 95296), (72, 95380), (76, 95404),

Gene: EasyJones_18 Start: 5196, Stop: 5729, Start Num: 23

Candidate Starts for EasyJones_18:

(Start: 23 @5196 has 122 MA's), (29, 5244), (44, 5325), (45, 5340), (46, 5343), (47, 5346), (49, 5373), (52, 5388), (58, 5406), (64, 5427), (72, 5490), (73, 5493), (76, 5514), (80, 5625), (81, 5655), (82, 5709),

Gene: EggyFarm_22 Start: 7585, Stop: 8118, Start Num: 23

Candidate Starts for EggyFarm_22:

(Start: 23 @7585 has 122 MA's), (25, 7597), (29, 7633), (44, 7714), (45, 7729), (46, 7732), (47, 7735), (49, 7762), (52, 7777), (58, 7795), (64, 7816), (72, 7879), (73, 7882), (76, 7903), (80, 8014), (81, 8044), (82, 8098),

Gene: Ejimix_176 Start: 94148, Stop: 94507, Start Num: 19

Candidate Starts for Ejimix_176:

(Start: 19 @94148 has 4 MA's), (Start: 21 @94151 has 12 MA's), (29, 94202), (43, 94232), (47, 94268), (52, 94310), (58, 94328), (72, 94412), (76, 94436),

Gene: EleanorGeorge_86 Start: 50747, Stop: 51112, Start Num: 21

Candidate Starts for EleanorGeorge_86:

(4, 50549), (5, 50570), (Start: 21 @50747 has 12 MA's), (44, 50852), (45, 50867), (58, 50933), (67, 50969), (72, 51017), (76, 51041), (77, 51071),

Gene: EmToTheThree_21 Start: 7694, Stop: 8272, Start Num: 23

Candidate Starts for EmToTheThree_21:

(Start: 23 @7694 has 122 MA's), (32, 7772), (35, 7805), (39, 7826), (53, 7919), (59, 7940), (69, 7997), (70, 8009), (72, 8033), (73, 8036), (74, 8048), (76, 8057), (80, 8168), (81, 8198), (82, 8252),

Gene: EmmaElysia_17 Start: 5211, Stop: 5636, Start Num: 23

Candidate Starts for EmmaElysia_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529),

Gene: Erdmann_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Erdmann_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: EricMillard_183 Start: 95861, Stop: 96217, Start Num: 21

Candidate Starts for EricMillard_183:

(Start: 19 @95858 has 4 MA's), (Start: 21 @95861 has 12 MA's), (29, 95912), (43, 95942), (47, 95978), (52, 96020), (58, 96038), (72, 96122), (76, 96146),

Gene: ErnieJ_21 Start: 6386, Stop: 6919, Start Num: 23

Candidate Starts for ErnieJ_21:

(Start: 23 @6386 has 122 MA's), (29, 6434), (44, 6515), (45, 6530), (46, 6533), (47, 6536), (49, 6563), (52, 6578), (58, 6596), (64, 6617), (72, 6680), (73, 6683), (76, 6704), (80, 6815), (81, 6845), (82, 6899),

Gene: Essence_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Essence_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: EverythinBagel_5 Start: 2184, Stop: 1819, Start Num: 31

Candidate Starts for EverythinBagel_5:

(3, 2448), (4, 2421), (6, 2367), (Start: 31 @2184 has 20 MA's), (33, 2133), (47, 2061), (55, 2001), (60, 1983), (62, 1977), (68, 1941), (70, 1923), (71, 1917), (76, 1875),

Gene: Ewok_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Ewok_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Fixie_16 Start: 5196, Stop: 5729, Start Num: 23

Candidate Starts for Fixie_16:

(Start: 23 @5196 has 122 MA's), (29, 5244), (44, 5325), (45, 5340), (46, 5343), (47, 5346), (49, 5373), (52, 5388), (58, 5406), (64, 5427), (72, 5490), (73, 5493), (76, 5514), (80, 5625), (81, 5655), (82, 5709),

Gene: Fludd_17 Start: 5197, Stop: 5730, Start Num: 23

Candidate Starts for Fludd_17:

(Start: 23 @5197 has 122 MA's), (29, 5245), (44, 5326), (45, 5341), (46, 5344), (47, 5347), (49, 5374), (52, 5389), (58, 5407), (64, 5428), (72, 5491), (73, 5494), (76, 5515), (80, 5626), (81, 5656), (82, 5710),

Gene: Fongie_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Fongie_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: FoxtrotP1_19 Start: 6839, Stop: 7417, Start Num: 23

Candidate Starts for FoxtrotP1_19:

(Start: 23 @6839 has 122 MA's), (32, 6917), (35, 6950), (39, 6971), (53, 7064), (59, 7085), (69, 7142), (70, 7154), (72, 7178), (73, 7181), (74, 7193), (76, 7202), (80, 7313), (81, 7343), (82, 7397),

Gene: FudgeTart_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for FudgeTart_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Gabriel_18 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Gabriel_18:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Gamgam_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Gamgam_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Gazebo_5 Start: 2065, Stop: 1700, Start Num: 31

Candidate Starts for Gazebo_5:

(12, 2137), (Start: 31 @2065 has 20 MA's), (33, 2014), (47, 1942), (55, 1882), (56, 1879), (60, 1864), (62, 1858), (68, 1822), (70, 1804), (76, 1756),

Gene: Ghost_18 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Ghost_18:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Gizmo_20 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Gizmo_20:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: GlutenPhree_18 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for GlutenPhree_18:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Gorpy_50 Start: 31667, Stop: 32041, Start Num: 31

Candidate Starts for Gorpy_50:

(28, 31658), (Start: 31 @31667 has 20 MA's), (54, 31841), (55, 31847), (63, 31874), (72, 31949),

Gene: Grasshills_22 Start: 7585, Stop: 8118, Start Num: 23

Candidate Starts for Grasshills_22:

(Start: 23 @7585 has 122 MA's), (25, 7597), (29, 7633), (44, 7714), (45, 7729), (46, 7732), (47, 7735), (49, 7762), (52, 7777), (58, 7795), (64, 7816), (72, 7879), (73, 7882), (76, 7903), (80, 8014), (81, 8044), (82, 8098),

Gene: Guwapp_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Guwapp_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: HokkenD_180 Start: 96244, Stop: 96603, Start Num: 19

Candidate Starts for HokkenD_180:

(Start: 19 @96244 has 4 MA's), (Start: 21 @96247 has 12 MA's), (29, 96298), (43, 96328), (47, 96364), (52, 96406), (58, 96424), (72, 96508), (76, 96532),

Gene: Hyperion_6 Start: 2102, Stop: 1737, Start Num: 31

Candidate Starts for Hyperion_6:

(12, 2174), (Start: 31 @2102 has 20 MA's), (33, 2051), (47, 1979), (55, 1919), (56, 1916), (60, 1901), (62, 1895), (68, 1859), (70, 1841), (72, 1817), (76, 1793),

Gene: I3_20 Start: 6874, Stop: 7407, Start Num: 23

Candidate Starts for I3_20:

(Start: 23 @6874 has 122 MA's), (25, 6886), (29, 6922), (44, 7003), (45, 7018), (46, 7021), (49, 7051), (52, 7066), (58, 7084), (64, 7105), (72, 7168), (73, 7171), (74, 7183), (76, 7192), (80, 7303), (81, 7333),

Gene: InigoMontoya_19 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for InigoMontoya_19:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Iota_16 Start: 6059, Stop: 6637, Start Num: 23

Candidate Starts for Iota_16:

(Start: 23 @6059 has 122 MA's), (32, 6137), (35, 6170), (39, 6191), (53, 6284), (59, 6305), (69, 6362), (70, 6374), (72, 6398), (73, 6401), (74, 6413), (76, 6422), (80, 6533), (81, 6563), (82, 6617),

Gene: Issimir_18 Start: 6274, Stop: 6852, Start Num: 23

Candidate Starts for Issimir_18:

(Start: 23 @6274 has 122 MA's), (32, 6352), (35, 6385), (39, 6406), (53, 6499), (59, 6520), (69, 6577), (70, 6589), (72, 6613), (73, 6616), (74, 6628), (76, 6637), (80, 6748), (81, 6778), (82, 6832),

Gene: Izajani_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Izajani_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: JPickles_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for JPickles_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Janiyra_17 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Janiyra_17:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: JayJay_21 Start: 6302, Stop: 6835, Start Num: 23

Candidate Starts for JayJay_21:

(Start: 23 @6302 has 122 MA's), (25, 6314), (29, 6350), (44, 6431), (45, 6446), (46, 6449), (47, 6452), (49, 6479), (52, 6494), (58, 6512), (64, 6533), (72, 6596), (73, 6599), (74, 6611), (76, 6620), (80, 6731), (81, 6761), (82, 6815),

Gene: Jaygup_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Jaygup_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Jedediah_18 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Jedediah_18:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Jemmno_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Jemmno_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Jessibeth14_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Jessibeth14_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: JigglyPuff_19 Start: 6330, Stop: 6863, Start Num: 23

Candidate Starts for JigglyPuff_19:

(Start: 23 @6330 has 122 MA's), (25, 6342), (29, 6378), (44, 6459), (45, 6474), (46, 6477), (47, 6480), (49, 6507), (52, 6522), (58, 6540), (64, 6561), (72, 6624), (73, 6627), (76, 6648), (80, 6759), (81, 6789), (82, 6843),

Gene: JustHall_17 Start: 6210, Stop: 6743, Start Num: 23

Candidate Starts for JustHall_17:

(Start: 23 @6210 has 122 MA's), (29, 6258), (44, 6339), (45, 6354), (46, 6357), (47, 6360), (49, 6387), (52, 6402), (58, 6420), (64, 6441), (72, 6504), (73, 6507), (76, 6528), (80, 6639), (81, 6669), (82, 6723),

Gene: Kboogie_18 Start: 5213, Stop: 5746, Start Num: 23

Candidate Starts for Kboogie_18:

(Start: 23 @5213 has 122 MA's), (29, 5261), (44, 5342), (45, 5357), (46, 5360), (47, 5363), (49, 5390), (52, 5405), (58, 5423), (64, 5444), (72, 5507), (73, 5510), (76, 5531), (80, 5642), (81, 5672), (82, 5726),

Gene: Kelcole_4 Start: 1820, Stop: 1458, Start Num: 31

Candidate Starts for Kelcole_4:

(24, 1865), (Start: 31 @1820 has 20 MA's), (34, 1766), (40, 1745), (47, 1700), (55, 1640), (60, 1622), (64, 1610), (68, 1580), (70, 1562), (71, 1556), (76, 1514),

Gene: Khaleesi_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Khaleesi_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Klein_191 Start: 94673, Stop: 95032, Start Num: 19

Candidate Starts for Klein_191:

(Start: 19 @94673 has 4 MA's), (Start: 21 @94676 has 12 MA's), (29, 94727), (43, 94757), (47, 94793), (52, 94835), (58, 94853), (72, 94937), (76, 94961),

Gene: Labradorite_16 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Labradorite_16:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Latch_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Latch_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Lee7_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Lee7_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: LifeSavor_18 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for LifeSavor_18:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Littleton_18 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Littleton_18:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Llemily_7 Start: 2086, Stop: 1724, Start Num: 31

Candidate Starts for Llemily_7:

(3, 2350), (4, 2323), (6, 2269), (Start: 31 @2086 has 20 MA's), (40, 2011), (44, 1987), (47, 1966), (51, 1921), (55, 1906), (61, 1885), (63, 1879), (66, 1867), (68, 1846), (70, 1828), (71, 1822), (72, 1804), (76, 1780),

Gene: Loanshark_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Loanshark_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Lunareta_18 Start: 6007, Stop: 6540, Start Num: 23

Candidate Starts for Lunareta_18:

(Start: 23 @6007 has 122 MA's), (25, 6019), (29, 6055), (44, 6136), (45, 6151), (46, 6154), (49, 6184), (52, 6199), (58, 6217), (64, 6238), (72, 6301), (73, 6304), (74, 6316), (76, 6325), (80, 6436), (81, 6466), (82, 6520),

Gene: Maby2021_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Maby2021_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Mangeria_21 Start: 6912, Stop: 7253, Start Num: 23

Candidate Starts for Mangeria_21:

(Start: 23 @6912 has 122 MA's), (25, 6924), (44, 7014), (45, 7029), (58, 7095), (67, 7131), (72, 7179), (73, 7182), (74, 7194), (76, 7203),

Gene: Mask_69 Start: 53936, Stop: 54289, Start Num: 20

Candidate Starts for Mask_69:

(8, 53876), (15, 53927), (Start: 20 @53936 has 2 MA's), (27, 53978), (45, 54050), (47, 54056), (50, 54089), (53, 54101), (58, 54116), (72, 54200), (75, 54221),

Gene: Matsumoto_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Matsumoto_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: McGee_18 Start: 5213, Stop: 5746, Start Num: 23

Candidate Starts for McGee_18:

(Start: 23 @5213 has 122 MA's), (29, 5261), (44, 5342), (45, 5357), (46, 5360), (47, 5363), (49, 5390), (52, 5405), (58, 5423), (64, 5444), (72, 5507), (73, 5510), (76, 5531), (80, 5642), (81, 5672), (82, 5726),

Gene: McWolfish_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for McWolfish_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Megamind_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Megamind_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Melpomini_17 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Melpomini_17:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: Mentos_10 Start: 2847, Stop: 2482, Start Num: 31

Candidate Starts for Mentos_10:

(4, 3084), (12, 2919), (Start: 31 @2847 has 20 MA's), (33, 2796), (47, 2724), (55, 2664), (60, 2646), (62, 2640), (68, 2604), (70, 2586), (71, 2580), (72, 2562), (76, 2538),

Gene: MikeLiesIn_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for MikeLiesIn_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Mila11_9 Start: 2689, Stop: 2324, Start Num: 31

Candidate Starts for Mila11_9:

(Start: 31 @2689 has 20 MA's), (33, 2638), (47, 2566), (55, 2506), (56, 2503), (60, 2488), (62, 2482), (68, 2446), (70, 2428), (76, 2380),

Gene: Minerva_187 Start: 94312, Stop: 94668, Start Num: 21

Candidate Starts for Minerva_187:

(Start: 19 @94309 has 4 MA's), (Start: 21 @94312 has 12 MA's), (29, 94363), (43, 94393), (47, 94429), (52, 94471), (58, 94489), (72, 94573), (76, 94597),

Gene: Momo_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Momo_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Montpel_18 Start: 6007, Stop: 6540, Start Num: 23

Candidate Starts for Montpel_18:

(Start: 23 @6007 has 122 MA's), (25, 6019), (29, 6055), (44, 6136), (45, 6151), (46, 6154), (49, 6184), (52, 6199), (58, 6217), (64, 6238), (72, 6301), (73, 6304), (74, 6316), (76, 6325), (80, 6436), (81, 6466), (82, 6520),

Gene: Morizzled23_17 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Morizzled23_17:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: Myrna_1 Start: 1, Stop: 540, Start Num: 10

Candidate Starts for Myrna_1:

(Start: 10 @1 has 1 MA's), (25, 52), (41, 124), (44, 145), (47, 166), (58, 229), (59, 235), (72, 316), (75, 337), (76, 340), (78, 391), (79, 442),

Gene: Naija_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Naija_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Napoleon13_17 Start: 5213, Stop: 5746, Start Num: 23

Candidate Starts for Napoleon13_17:

(Start: 23 @5213 has 122 MA's), (29, 5261), (44, 5342), (45, 5357), (46, 5360), (47, 5363), (49, 5390), (52, 5405), (58, 5423), (64, 5444), (72, 5507), (73, 5510), (76, 5531), (80, 5642), (81, 5672), (82, 5726),

Gene: Nappy_20 Start: 6498, Stop: 7031, Start Num: 23

Candidate Starts for Nappy_20:

(Start: 23 @6498 has 122 MA's), (25, 6510), (29, 6546), (44, 6627), (45, 6642), (46, 6645), (47, 6648), (49, 6675), (52, 6690), (58, 6708), (64, 6729), (72, 6792), (73, 6795), (76, 6816), (80, 6927), (81, 6957), (82, 7011),

Gene: NedWong_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for NedWong_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Ngannou_17 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Ngannou_17:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: Norm_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Norm_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Optimus_185 Start: 95228, Stop: 95584, Start Num: 21

Candidate Starts for Optimus_185:

(Start: 19 @95225 has 4 MA's), (Start: 21 @95228 has 12 MA's), (29, 95279), (43, 95309), (47, 95345), (52, 95387), (58, 95405), (72, 95489), (76, 95513),

Gene: OrediggerDelux_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for OrediggerDelux_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: ParkTD_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for ParkTD_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Patter_17 Start: 5232, Stop: 5765, Start Num: 23

Candidate Starts for Patter_17:

(Start: 23 @5232 has 122 MA's), (29, 5280), (44, 5361), (45, 5376), (46, 5379), (47, 5382), (49, 5409), (52, 5424), (58, 5442), (64, 5463), (72, 5526), (73, 5529), (76, 5550), (80, 5661), (81, 5691), (82, 5745),

Gene: Phabia_8 Start: 2516, Stop: 2154, Start Num: 31

Candidate Starts for Phabia_8:

(26, 2534), (Start: 31 @2516 has 20 MA's), (34, 2462), (40, 2441), (44, 2417), (47, 2396), (55, 2336), (61, 2315), (63, 2309), (66, 2297), (68, 2276), (70, 2258), (71, 2252), (72, 2234), (76, 2210),

Gene: Phinky_12 Start: 3235, Stop: 2873, Start Num: 31

Candidate Starts for Phinky_12:

(7, 3382), (Start: 31 @3235 has 20 MA's), (44, 3136), (45, 3121), (55, 3055), (61, 3034), (68, 2995), (70, 2977), (71, 2971), (72, 2953), (76, 2929),

Gene: Phlegm_19 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Phlegm_19:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Phoebus_187 Start: 97707, Stop: 98063, Start Num: 21

Candidate Starts for Phoebus_187:

(Start: 19 @97704 has 4 MA's), (Start: 21 @97707 has 12 MA's), (29, 97758), (43, 97788), (47, 97824), (52, 97866), (58, 97884), (72, 97968), (76, 97992),

Gene: Phusco_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Phusco_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Pivoine_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Pivoine_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Pleione_20 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Pleione_20:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Pupper_80 Start: 30770, Stop: 31141, Start Num: 22

Candidate Starts for Pupper_80:

(Start: 22 @30770 has 3 MA's), (58, 30959), (67, 30995),

Gene: PurduePete_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for PurduePete_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Quammi_6 Start: 2093, Stop: 1728, Start Num: 31

Candidate Starts for Quammi_6:

(3, 2357), (4, 2330), (6, 2276), (Start: 31 @2093 has 20 MA's), (33, 2042), (47, 1970), (55, 1910), (60, 1892), (62, 1886), (68, 1850), (70, 1832), (71, 1826), (72, 1808), (76, 1784),

Gene: Quasimodo_17 Start: 6214, Stop: 6747, Start Num: 23

Candidate Starts for Quasimodo_17:

(Start: 23 @6214 has 122 MA's), (29, 6262), (44, 6343), (45, 6358), (46, 6361), (47, 6364), (49, 6391), (52, 6406), (58, 6424), (64, 6445), (72, 6508), (73, 6511), (76, 6532), (80, 6643), (81, 6673), (82, 6727),

Gene: Rahel_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Rahel_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Redno2_179 Start: 91820, Stop: 92176, Start Num: 21

Candidate Starts for Redno2_179:

(Start: 19 @91817 has 4 MA's), (Start: 21 @91820 has 12 MA's), (29, 91871), (43, 91901), (47, 91937), (52, 91979), (58, 91997), (72, 92081), (76, 92105),

Gene: Richie_52 Start: 31345, Stop: 31719, Start Num: 31

Candidate Starts for Richie_52:

(28, 31336), (Start: 31 @31345 has 20 MA's), (54, 31519), (55, 31525), (63, 31552), (72, 31627),

Gene: Rita_67 Start: 40872, Stop: 41237, Start Num: 14

Candidate Starts for Rita_67:

(Start: 14 @40872 has 1 MA's), (Start: 20 @40884 has 2 MA's), (27, 40926), (45, 40998), (47, 41004), (50, 41037), (53, 41049), (58, 41064), (72, 41148), (75, 41169),

Gene: Rizal_17 Start: 5210, Stop: 5743, Start Num: 23

Candidate Starts for Rizal_17:

(Start: 23 @5210 has 122 MA's), (29, 5258), (44, 5339), (45, 5354), (46, 5357), (47, 5360), (49, 5387), (52, 5402), (58, 5420), (64, 5441), (72, 5504), (73, 5507), (76, 5528), (80, 5639), (81, 5669), (82, 5723),

Gene: Roots515_18 Start: 6279, Stop: 6857, Start Num: 23

Candidate Starts for Roots515_18:

(Start: 23 @6279 has 122 MA's), (32, 6357), (35, 6390), (39, 6411), (53, 6504), (59, 6525), (69, 6582), (70, 6594), (72, 6618), (73, 6621), (74, 6633), (76, 6642), (80, 6753), (81, 6783), (82, 6837),

Gene: Rudy_6 Start: 2093, Stop: 1728, Start Num: 31

Candidate Starts for Rudy_6:

(3, 2357), (4, 2330), (6, 2276), (Start: 31 @2093 has 20 MA's), (33, 2042), (47, 1970), (55, 1910), (60, 1892), (62, 1886), (68, 1850), (70, 1832), (71, 1826), (72, 1808), (76, 1784),

Gene: SCentae_78 Start: 30443, Stop: 30814, Start Num: 22

Candidate Starts for SCentae_78:

(1, 29993), (2, 30101), (Start: 22 @30443 has 3 MA's), (58, 30632), (67, 30668),

Gene: SG4_78 Start: 48359, Stop: 48742, Start Num: 21

Candidate Starts for SG4_78:

(Start: 21 @48359 has 12 MA's), (32, 48422), (39, 48446), (45, 48488), (47, 48494), (57, 48560), (58, 48563), (64, 48584), (65, 48590), (67, 48599), (72, 48647), (74, 48662), (76, 48671), (77, 48701),

Gene: SVoro_18 Start: 6274, Stop: 6852, Start Num: 23

Candidate Starts for SVoro_18:

(Start: 23 @6274 has 122 MA's), (32, 6352), (35, 6385), (39, 6406), (53, 6499), (59, 6520), (69, 6577), (70, 6589), (72, 6613), (73, 6616), (74, 6628), (76, 6637), (80, 6748), (81, 6778), (82, 6832),

Gene: SadLad_7 Start: 2504, Stop: 2139, Start Num: 30

Candidate Starts for SadLad_7:

(16, 2564), (18, 2561), (Start: 30 @2504 has 1 MA's), (Start: 31 @2501 has 20 MA's), (41, 2423), (44, 2402), (47, 2381), (51, 2336), (55, 2321), (59, 2306), (63, 2294), (64, 2291), (68, 2261), (70, 2243), (71, 2237),

Gene: Sakai_49 Start: 30378, Stop: 30752, Start Num: 31

Candidate Starts for Sakai_49:

(28, 30369), (Start: 31 @30378 has 20 MA's), (54, 30552), (55, 30558), (63, 30585), (72, 30660),

Gene: Salacia_20 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Salacia_20:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Schatzie_181 Start: 94754, Stop: 95110, Start Num: 21

Candidate Starts for Schatzie_181:

(Start: 19 @94751 has 4 MA's), (Start: 21 @94754 has 12 MA's), (29, 94805), (43, 94835), (47, 94871), (52, 94913), (58, 94931), (72, 95015), (76, 95039),

Gene: ScottMcG_20 Start: 6836, Stop: 7414, Start Num: 23

Candidate Starts for ScottMcG_20:

(Start: 23 @6836 has 122 MA's), (32, 6914), (35, 6947), (39, 6968), (53, 7061), (59, 7082), (69, 7139), (70, 7151), (72, 7175), (73, 7178), (74, 7190), (76, 7199), (80, 7310), (81, 7340), (82, 7394),

Gene: Sejanus_68 Start: 52397, Stop: 52750, Start Num: 20

Candidate Starts for Sejanus_68:

(8, 52337), (15, 52388), (Start: 20 @52397 has 2 MA's), (27, 52439), (45, 52511), (47, 52517), (50, 52550), (53, 52562), (58, 52577), (72, 52661), (75, 52682),

Gene: Shelob_21 Start: 7454, Stop: 7987, Start Num: 23

Candidate Starts for Shelob_21:

(Start: 23 @7454 has 122 MA's), (25, 7466), (29, 7502), (44, 7583), (45, 7598), (46, 7601), (47, 7604), (49, 7631), (52, 7646), (58, 7664), (64, 7685), (72, 7748), (73, 7751), (76, 7772), (80, 7883), (81, 7913), (82, 7967),

Gene: ShiaLabeouf_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for ShiaLabeouf_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Shnickers_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Shnickers_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Shrimp_18 Start: 6284, Stop: 6862, Start Num: 23

Candidate Starts for Shrimp_18:

(Start: 23 @6284 has 122 MA's), (32, 6362), (35, 6395), (39, 6416), (53, 6509), (59, 6530), (69, 6587), (70, 6599), (72, 6623), (73, 6626), (74, 6638), (76, 6647), (80, 6758), (81, 6788), (82, 6842),

Gene: Sillytadpoles_7 Start: 2091, Stop: 1726, Start Num: 31

Candidate Starts for Sillytadpoles_7:

(3, 2355), (4, 2328), (6, 2274), (Start: 31 @2091 has 20 MA's), (33, 2040), (47, 1968), (55, 1908), (60, 1890), (62, 1884), (68, 1848), (70, 1830), (71, 1824), (72, 1806), (76, 1782),

Gene: SilverDipper_18 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for SilverDipper_18:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Skog_144 Start: 60432, Stop: 60806, Start Num: 13

Candidate Starts for Skog_144:

(Start: 13 @60432 has 1 MA's), (32, 60507), (47, 60576), (48, 60588),

Gene: SmallFry_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for SmallFry_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Spec_16 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Spec_16:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: SrishMeg2525_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for SrishMeg2525_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: StubbySaigey_18 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for StubbySaigey_18:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Substance289_16 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Substance289_16:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Teardrop_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Teardrop_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Tempo_5 Start: 1841, Stop: 1479, Start Num: 31

Candidate Starts for Tempo_5:

(24, 1886), (Start: 31 @1841 has 20 MA's), (34, 1787), (40, 1766), (47, 1721), (55, 1661), (60, 1643), (64, 1631), (68, 1601), (70, 1583), (71, 1577), (76, 1535),

Gene: TinyTim_18 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for TinyTim_18:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Tonenili_24 Start: 7642, Stop: 8109, Start Num: 17

Candidate Starts for Tonenili_24:

(Start: 17 @7642 has 1 MA's), (Start: 19 @7645 has 4 MA's), (25, 7663), (36, 7741), (37, 7750), (42, 7768), (44, 7786), (47, 7807), (58, 7876), (64, 7897), (72, 7960), (73, 7963), (74, 7975), (76, 7984),

Gene: Tortoise16_16 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Tortoise16_16:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Trinitium_17 Start: 5211, Stop: 5744, Start Num: 23

Candidate Starts for Trinitium_17:

(Start: 23 @5211 has 122 MA's), (29, 5259), (44, 5340), (45, 5355), (46, 5358), (47, 5361), (49, 5388), (52, 5403), (58, 5421), (64, 5442), (72, 5505), (73, 5508), (76, 5529), (80, 5640), (81, 5670), (82, 5724),

Gene: Turret_17 Start: 5194, Stop: 5727, Start Num: 23

Candidate Starts for Turret_17:

(Start: 23 @5194 has 122 MA's), (29, 5242), (44, 5323), (45, 5338), (46, 5341), (47, 5344), (49, 5371), (52, 5386), (58, 5404), (64, 5425), (72, 5488), (73, 5491), (76, 5512), (80, 5623), (81, 5653), (82, 5707),

Gene: ValleyTerrace_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for ValleyTerrace_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Viceroy_7 Start: 2093, Stop: 1728, Start Num: 31

Candidate Starts for Viceroy_7:

(3, 2357), (4, 2330), (6, 2276), (Start: 31 @2093 has 20 MA's), (33, 2042), (47, 1970), (55, 1910), (60, 1892), (62, 1886), (68, 1850), (70, 1832), (71, 1826), (72, 1808), (76, 1784),

Gene: Vortrix_25 Start: 7832, Stop: 8296, Start Num: 19

Candidate Starts for Vortrix_25:

(9, 7784), (11, 7802), (Start: 17 @7829 has 1 MA's), (Start: 19 @7832 has 4 MA's), (25, 7850), (36, 7928), (37, 7937), (42, 7955), (44, 7973), (47, 7994), (58, 8063), (64, 8084), (72, 8147), (73, 8150), (74, 8162), (76, 8171),

Gene: Wally_17 Start: 5215, Stop: 5748, Start Num: 23

Candidate Starts for Wally_17:

(Start: 23 @5215 has 122 MA's), (29, 5263), (44, 5344), (45, 5359), (46, 5362), (47, 5365), (49, 5392), (52, 5407), (58, 5425), (64, 5446), (72, 5509), (73, 5512), (76, 5533), (80, 5644), (81, 5674), (82, 5728),

Gene: Wanda_184 Start: 92325, Stop: 92681, Start Num: 21

Candidate Starts for Wanda_184:

(Start: 19 @92322 has 4 MA's), (Start: 21 @92325 has 12 MA's), (29, 92376), (43, 92406), (47, 92442), (52, 92484), (58, 92502), (72, 92586), (76, 92610),

Gene: Wayne3_7 Start: 2328, Stop: 1963, Start Num: 31

Candidate Starts for Wayne3_7:

(3, 2592), (4, 2565), (6, 2511), (Start: 31 @2328 has 20 MA's), (33, 2277), (47, 2205), (55, 2145), (60, 2127), (62, 2121), (68, 2085), (70, 2067), (71, 2061), (76, 2019),

Gene: WheelerS25_11 Start: 3476, Stop: 3111, Start Num: 31

Candidate Starts for WheelerS25_11:

(Start: 31 @3476 has 20 MA's), (33, 3425), (38, 3407), (45, 3359), (47, 3353), (55, 3293), (60, 3275), (62, 3269), (68, 3233), (70, 3215), (71, 3209), (76, 3167),

Gene: Wheelie_7 Start: 2085, Stop: 1723, Start Num: 31

Candidate Starts for Wheelie_7:

(3, 2349), (4, 2322), (6, 2268), (Start: 31 @2085 has 20 MA's), (40, 2010), (44, 1986), (47, 1965), (51, 1920), (55, 1905), (61, 1884), (63, 1878), (66, 1866), (68, 1845), (70, 1827), (71, 1821), (72, 1803), (76, 1779),

Gene: Willis_19 Start: 6220, Stop: 6753, Start Num: 23

Candidate Starts for Willis_19:

(Start: 23 @6220 has 122 MA's), (29, 6268), (44, 6349), (45, 6364), (46, 6367), (47, 6370), (49, 6397), (52, 6412), (58, 6430), (64, 6451), (72, 6514), (73, 6517), (76, 6538), (80, 6649), (81, 6679), (82, 6733),

Gene: YemiJoy2021_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for YemiJoy2021_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: YoungMoneyMata_18 Start: 5213, Stop: 5791, Start Num: 23

Candidate Starts for YoungMoneyMata_18:

(Start: 23 @5213 has 122 MA's), (32, 5291), (35, 5324), (39, 5345), (53, 5438), (59, 5459), (69, 5516), (70, 5528), (72, 5552), (73, 5555), (74, 5567), (76, 5576), (80, 5687), (81, 5717), (82, 5771),

Gene: Yucca_18 Start: 6202, Stop: 6780, Start Num: 23

Candidate Starts for Yucca_18:

(Start: 23 @6202 has 122 MA's), (32, 6280), (35, 6313), (39, 6334), (53, 6427), (59, 6448), (69, 6505), (70, 6517), (72, 6541), (73, 6544), (74, 6556), (76, 6565), (80, 6676), (81, 6706), (82, 6760),

Gene: Zalkecks_20 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for Zalkecks_20:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),

Gene: Zeenon_21 Start: 6281, Stop: 6859, Start Num: 23

Candidate Starts for Zeenon_21:

(Start: 23 @6281 has 122 MA's), (32, 6359), (35, 6392), (39, 6413), (53, 6506), (59, 6527), (69, 6584), (70, 6596), (72, 6620), (73, 6623), (74, 6635), (76, 6644), (80, 6755), (81, 6785), (82, 6839),

Gene: Zelink_179 Start: 93941, Stop: 94300, Start Num: 19

Candidate Starts for Zelink_179:

(Start: 19 @93941 has 4 MA's), (Start: 21 @93944 has 12 MA's), (29, 93995), (43, 94025), (47, 94061), (52, 94103), (58, 94121), (72, 94205), (76, 94229),

Gene: ZygoTaiga_19 Start: 6280, Stop: 6858, Start Num: 23

Candidate Starts for ZygoTaiga_19:

(Start: 23 @6280 has 122 MA's), (32, 6358), (35, 6391), (39, 6412), (53, 6505), (59, 6526), (69, 6583), (70, 6595), (72, 6619), (73, 6622), (74, 6634), (76, 6643), (80, 6754), (81, 6784), (82, 6838),