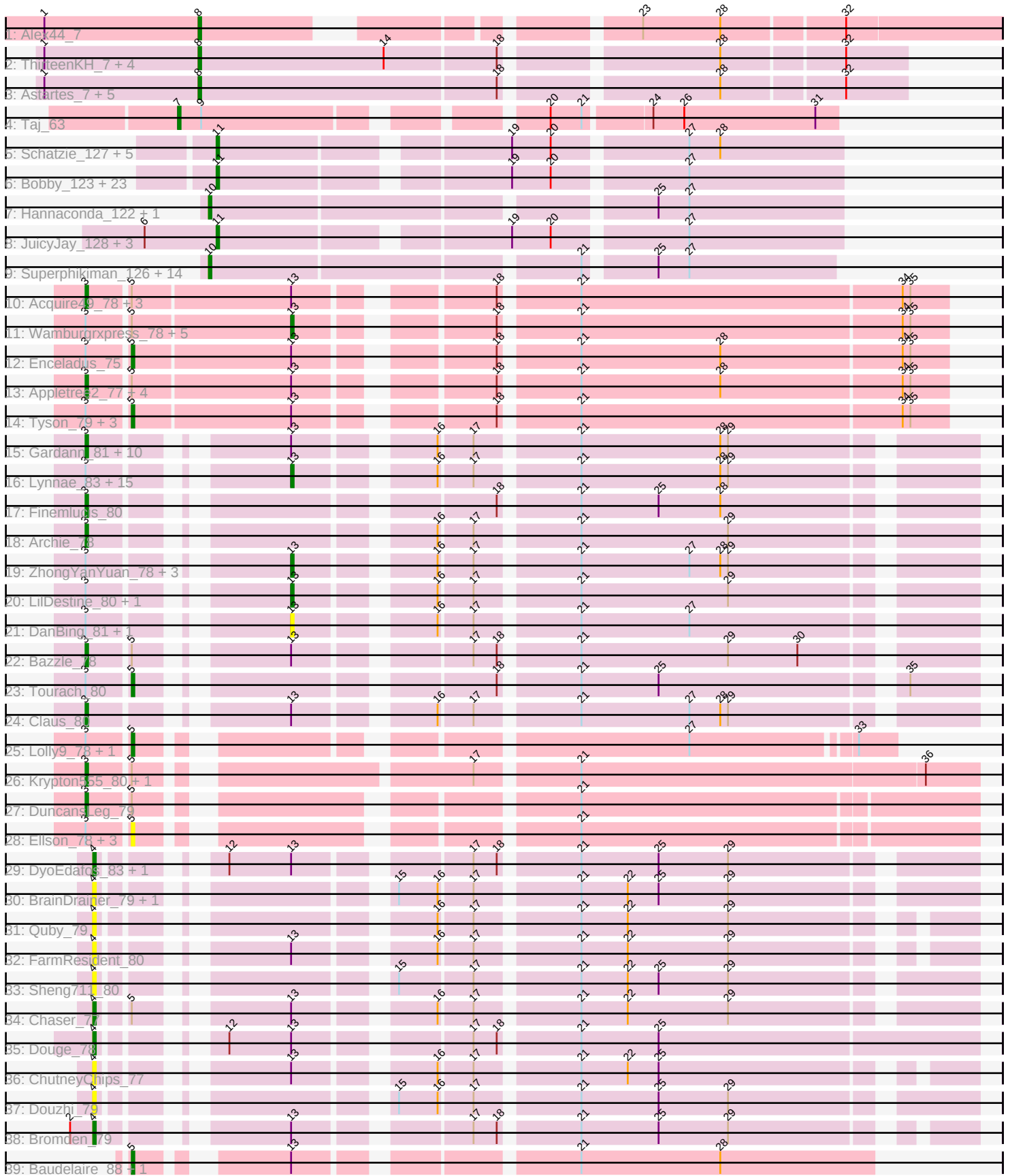




Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 280171 Report

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

Pham number 280171 has 147 members, 36 are drafts.

Phages represented in each track:

- Track 1 : Alex44_7
- Track 2 : ThirteenKH_7, TrippleS_7, Atraxi_7, Morrill_7, Yafa_7
- Track 3 : Astartes_7, RicoCaldo_7, PhriedRice_7, Fullmetal_7, Moleficent_7, StagePhright_7
- Track 4 : Taj_63
- Track 5 : Schatzie_127, Kalah2_122, Bagrid_131, DmpstrDiver_131, Pound_120, Optimus_122
- Track 6 : Bobby_123, Marleymoo_116, Ejimix_125, EricMillard_123, Odette_133, Halley_133, Xiaokay_125, Thibault_113, Hughesyang_131, Redno2_123, Yeet_123, Minerva_130, ThreeRngTarjay_127, Dallas_132, Phoebus_132, Wanda_130, HokkenD_121, Dove_117, BAKA_131, Constella_121, Zelink_126, Klein_128, Hidrated_116, Duke13_126
- Track 7 : Hannaconda_122, MiaZeal_129
- Track 8 : JuicyJay_128, Bombitas_119, NihilNomen_133, Beem_133
- Track 9 : Superphikiman_126, Porcelain_127, Nibley_126, Shaboozey_130, Ariel_129, Gonephishing_123, Nekros_132, Squint_127, LittleE_132, Lucky2013_124, KashFlow_127, Omega_139, Rearden_127, Courthouse_124, BronnyJames_127
- Track 10 : Acquire49_78, MAckerman_76, Zaria_79, Wyatt2_79
- Track 11 : Wamburgxpress_78, Rose5_78, LeBron_77, UPIE_77, AvadaKedavra_78, CicholasNage_75
- Track 12 : Enceladus_75
- Track 13 : Appletree2_77, DirkDirk_75, OhShagHennessey_75, JoeDirt_78, Poochiewood_76
- Track 14 : Tyson_79, Halena_76, Silverleaf_78, Calm_80
- Track 15 : Gardann_81, Kahlid_81, Faith1_81, Winky_81, Miley16_81, Itos_80, Rumpelstiltskin_78, Zakai_82, Wilder_82, MkaliMitinis3_82, Breezona_81
- Track 16 : Lynnae_83, SoJulia_83, Loadrie_80, BobsGarage_81, Sarshaun_82, GuuelaD_79, OverPar_83, DrSeegs_81, BigCheese_81, Nicholasp3_81, Lewan_82, Soap141_81, Netyap_82, Crossroads_81, Gabriela_80, Underpass_72
- Track 17 : Finemlucis_80
- Track 18 : Archie_78
- Track 19 : ZhongYanYuan_78, DHan_84, Wigglewiggle_80, Hafay_82
- Track 20 : LilDestine_80, Vetrix_80
- Track 21 : DanBing_81, Baoshan_78
- Track 22 : Bazzle_78
- Track 23 : Tourach_80

- Track 24 : Claus_80
- Track 25 : Lolly9_78, MiniMac_83
- Track 26 : Krypton555_80, Whirlwind_80
- Track 27 : DuncansLeg_79
- Track 28 : Ellson_78, KirDoubleO7_77, BourbonZero_80, LiyuLake_78
- Track 29 : DyoEdafos_83, Kropertea_75
- Track 30 : BrainDrainer_79, PYPDinur_78
- Track 31 : Quby_79
- Track 32 : FarmResident_80
- Track 33 : Sheng711_80
- Track 34 : Chaser_77
- Track 35 : Douge_78
- Track 36 : ChutneyChips_77
- Track 37 : Douzhi_79
- Track 38 : Bromden_79
- Track 39 : Baudelaire_88, Aegeus_88

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

The start number called the most often in the published annotations is 11, it was called in 29 of the 111 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- BAKA_131, Bagrid_131, Beem_133, Bobby_123, Bombitas_119, Constella_121, Dallas_132, DmpstrDiver_131, Dove_117, Duke13_126, Ejimix_125, EricMillard_123, Halley_133, Hidrated_116, HokkenD_121, Hughesyang_131, JuicyJay_128, Kalah2_122, Klein_128, Marleymoo_116, Minerva_130, NihilNomen_133, Odette_133, Optimus_122, Phoebus_132, Pound_120, Redno2_123, Schatzie_127, Thibault_113, ThreeRngTarjay_127, Wanda_130, Xiaokay_125, Yeet_123, Zelink_126,

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

-

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

- Acquire49_78, Aegeus_88, Alex44_7, Appletree2_77, Archie_78, Ariel_129, Astartes_7, Atraxi_7, AvadaKedavra_78, Baoshan_78, Baudelaire_88, Bazzle_78, BigCheese_81, BobsGarage_81, BourbonZero_80, BrainDrainer_79, Breezona_81, Bromden_79, BronnyJames_127, Calm_80, Chaser_77, ChutneyChips_77, CicholasNage_75, Claus_80, Courthouse_124, Crossroads_81, DHan_84, DanBing_81, DirkDirk_75, Douge_78, Douzhi_79, DrSeegs_81, DuncansLeg_79, DyoEdafos_83, Ellson_78, Enceladus_75, Faith1_81, FarmResident_80, Finemlucis_80, Fullmetal_7, Gabriela_80, Gardann_81, Gonephishing_123, GuuelaD_79, Hafay_82, Halena_76, Hannaconda_122, Itos_80, JoeDirt_78, Kahlid_81, KashFlow_127, KirDoubleO7_77, Kropertea_75, Krypton555_80, LeBron_77, Lewan_82, LilDestine_80, LittleE_132, LiyuLake_78, Loadrie_80, Lolly9_78, Lucky2013_124, Lynnae_83, MAckerman_76, MiaZeal_129, Miley16_81, MiniMac_83, MkaliMitinis3_82, Moleficent_7, Morrill_7, Nekros_132, Netyap_82, Nibley_126, Nicholasp3_81, OhShagHennessy_75, Omega_139, OverPar_83, PYPDinur_78, PhriedRice_7, Poochiewood_76, Porcelain_127, Quby_79,

Rearden_127, RicoCaldo_7, Rose5_78, Rumpelstiltskin_78, Sarshaun_82, Shaboozey_130, Sheng711_80, Silverleaf_78, SoJulia_83, Soap141_81, Squint_127, StagePhright_7, Superphikiman_126, Taj_63, ThirteenKH_7, Tourach_80, TrippleS_7, Tyson_79, UPIE_77, Underpass_72, Vetrix_80, Wamburgxpress_78, Whirlwind_80, Wigglewiggles_80, Wilder_82, Winky_81, Wyatt2_79, Yafa_7, Zakai_82, Zaria_79, ZhongYanYuan_78,

Summary by start number:

Start 3:

- Found in 69 of 147 (46.9%) of genes in pham
- Manual Annotations of this start: 26 of 111
- Called 39.1% of time when present
- Phage (with cluster) where this start called: Acquire49_78 (L1), Appletree2_77 (L1), Archie_78 (L2), Bazzle_78 (L2), Breezons_81 (L2), Claus_80 (L2), DirkDirk_75 (L1), DuncansLeg_79 (L3), Faith1_81 (L2), Finemlucis_80 (L2), Gardann_81 (L2), Itos_80 (L2), JoeDirt_78 (L1), Kahlid_81 (L2), Krypton555_80 (L3), MAckerman_76 (L1), Miley16_81 (L2), MkaliMitinis3_82 (L2), OhShagHennessy_75 (L1), Poochiewood_76 (L1), Rumpelstiltskin_78 (L2), Whirlwind_80 (L3), Wilder_82 (L2), Winky_81 (L2), Wyatt2_79 (L1), Zakai_82 (L2), Zaria_79 (L1),

Start 4:

- Found in 12 of 147 (8.2%) of genes in pham
- Manual Annotations of this start: 4 of 111
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BrainDrainer_79 (L4), Bromden_79 (L4), Chaser_77 (L4), ChutneyChips_77 (L4), Douge_78 (L4), Douzhi_79 (L4), DyoEdafos_83 (L4), FarmResident_80 (L4), Kropertea_75 (L4), PYPDinur_78 (L4), Quby_79 (L4), Sheng711_80 (L4),

Start 5:

- Found in 34 of 147 (23.1%) of genes in pham
- Manual Annotations of this start: 10 of 111
- Called 41.2% of time when present
- Phage (with cluster) where this start called: Aegeus_88 (L5), Baudelaire_88 (L5), BourbonZero_80 (L3), Calm_80 (L1), Ellson_78 (L3), Enceladus_75 (L1), Halena_76 (L1), KirDoubleO7_77 (L3), LiyuLake_78 (L3), Lolly9_78 (L3), MiniMac_83 (L3), Silverleaf_78 (L1), Tourach_80 (L2), Tyson_79 (L1),

Start 7:

- Found in 1 of 147 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 111
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Taj_63 (F1),

Start 8:

- Found in 12 of 147 (8.2%) of genes in pham
- Manual Annotations of this start: 10 of 111
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alex44_7 (EK1), Astartes_7 (EK2), Atraxi_7 (EK2), Fullmetal_7 (EK2), Moleficent_7 (EK2), Morrill_7 (EK2), PhriedRice_7 (EK2), RicoCaldo_7 (EK2), StagePhright_7 (EK2), ThirteenKH_7 (EK2), TrippleS_7 (EK2), Yafa_7 (EK2),

Start 10:

- Found in 17 of 147 (11.6%) of genes in pham
- Manual Annotations of this start: 11 of 111
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Ariel_129 (J), BronnyJames_127 (J), Courthouse_124 (J), Gonephishing_123 (J), Hannaconda_122 (J), KashFlow_127 (J), LittleE_132 (J), Lucky2013_124 (J), MiaZeal_129 (J), Nekros_132 (J), Nibley_126 (J), Omega_139 (J), Porcelain_127 (J), Rearden_127 (J), Shaboozey_130 (J), Squint_127 (J), Superphikiman_126 (J),

Start 11:

- Found in 34 of 147 (23.1%) of genes in pham
- Manual Annotations of this start: 29 of 111
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BAKA_131 (J), Bagrid_131 (J), Beem_133 (J), Bobby_123 (J), Bombitas_119 (J), Constella_121 (J), Dallas_132 (J), DmpstrDiver_131 (J), Dove_117 (J), Duke13_126 (J), Ejimix_125 (J), EricMillard_123 (J), Halley_133 (J), Hidrated_116 (J), HokkenD_121 (J), Hughesyang_131 (J), JuicyJay_128 (J), Kalah2_122 (J), Klein_128 (J), Marleymoo_116 (J), Minerva_130 (J), NihilNomen_133 (J), Odette_133 (J), Optimus_122 (J), Phoebus_132 (J), Pound_120 (J), Redno2_123 (J), Schatzie_127 (J), Thibault_113 (J), ThreeRngTarjay_127 (J), Wanda_130 (J), Xiaokay_125 (J), Yeet_123 (J), Zelink_126 (J),

Start 13:

- Found in 66 of 147 (44.9%) of genes in pham
- Manual Annotations of this start: 20 of 111
- Called 45.5% of time when present
- Phage (with cluster) where this start called: AvadaKedavra_78 (L1), Baoshan_78 (L2), BigCheese_81 (L2), BobsGarage_81 (L2), CicholasNage_75 (L1), Crossroads_81 (L2), DHan_84 (L2), DanBing_81 (L2), DrSeegs_81 (L2), Gabriela_80 (L2), GuuelaD_79 (L2), Hafay_82 (L2), LeBron_77 (L1), Lewan_82 (L2), LilDestine_80 (L2), Loadrie_80 (L2), Lynnae_83 (L2), Netyap_82 (L2), Nicholasp3_81 (L2), OverPar_83 (L2), Rose5_78 (L1), Sarshaun_82 (L2), SoJulia_83 (L2), Soap141_81 (L2), UPIE_77 (L1), Underpass_72 (L2), Vetrix_80 (L2), Wamburgxpress_78 (L1), Wigglewiggles_80 (L2), ZhongYanYuan_78 (L2),

Summary by clusters:

There are 9 clusters represented in this pham: F1, J, L4, L5, L2, L3, L1, EK2, EK1,

Info for manual annotations of cluster EK1:

- Start number 8 was manually annotated 1 time for cluster EK1.

Info for manual annotations of cluster EK2:

- Start number 8 was manually annotated 9 times for cluster EK2.

Info for manual annotations of cluster F1:

- Start number 7 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster J:

- Start number 10 was manually annotated 11 times for cluster J.

- Start number 11 was manually annotated 29 times for cluster J.

Info for manual annotations of cluster L1:

- Start number 3 was manually annotated 8 times for cluster L1.
- Start number 5 was manually annotated 5 times for cluster L1.
- Start number 13 was manually annotated 6 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 3 was manually annotated 15 times for cluster L2.
- Start number 5 was manually annotated 1 time for cluster L2.
- Start number 13 was manually annotated 14 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 3 was manually annotated 3 times for cluster L3.
- Start number 5 was manually annotated 2 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 4 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster L5:

- Start number 5 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: Acquire49_78 Start: 52009, Stop: 52314, Start Num: 3

Candidate Starts for Acquire49_78:

(Start: 3 @52009 has 26 MA's), (Start: 5 @52024 has 10 MA's), (Start: 13 @52084 has 20 MA's), (18, 52147), (21, 52174), (34, 52297), (35, 52300),

Gene: Aegeus_88 Start: 54840, Stop: 55091, Start Num: 5

Candidate Starts for Aegeus_88:

(Start: 5 @54840 has 10 MA's), (Start: 13 @54885 has 20 MA's), (21, 54978), (28, 55032),

Gene: Alex44_7 Start: 5465, Stop: 5193, Start Num: 8

Candidate Starts for Alex44_7:

(1, 5525), (Start: 8 @5465 has 10 MA's), (23, 5327), (28, 5297), (32, 5252),

Gene: Appletree2_77 Start: 51620, Stop: 51925, Start Num: 3

Candidate Starts for Appletree2_77:

(Start: 3 @51620 has 26 MA's), (Start: 5 @51635 has 10 MA's), (Start: 13 @51695 has 20 MA's), (18, 51758), (21, 51785), (28, 51839), (34, 51908), (35, 51911),

Gene: Archie_78 Start: 53502, Stop: 53798, Start Num: 3

Candidate Starts for Archie_78:

(Start: 3 @53502 has 26 MA's), (16, 53607), (17, 53619), (21, 53655), (29, 53712),

Gene: Ariel_129 Start: 68157, Stop: 68387, Start Num: 10

Candidate Starts for Ariel_129:

(Start: 10 @68157 has 11 MA's), (21, 68292), (25, 68316), (27, 68328),

Gene: Astartes_7 Start: 5219, Stop: 4962, Start Num: 8

Candidate Starts for Astartes_7:

(1, 5279), (Start: 8 @5219 has 10 MA's), (18, 5105), (28, 5030), (32, 4985),

Gene: Atraxi_7 Start: 5184, Stop: 4927, Start Num: 8

Candidate Starts for Atraxi_7:

(1, 5244), (Start: 8 @5184 has 10 MA's), (14, 5112), (18, 5070), (28, 4995), (32, 4950),

Gene: AvadaKedavra_78 Start: 52163, Stop: 52393, Start Num: 13

Candidate Starts for AvadaKedavra_78:

(Start: 3 @52088 has 26 MA's), (Start: 5 @52103 has 10 MA's), (Start: 13 @52163 has 20 MA's), (18, 52226), (21, 52253), (34, 52376), (35, 52379),

Gene: BAKA_131 Start: 71128, Stop: 71352, Start Num: 11

Candidate Starts for BAKA_131:

(Start: 11 @71128 has 29 MA's), (19, 71230), (20, 71245), (27, 71293),

Gene: Bagrid_131 Start: 71206, Stop: 71430, Start Num: 11

Candidate Starts for Bagrid_131:

(Start: 11 @71206 has 29 MA's), (19, 71308), (20, 71323), (27, 71371), (28, 71383),

Gene: Baoshan_78 Start: 53848, Stop: 54084, Start Num: 13

Candidate Starts for Baoshan_78:

(Start: 3 @53788 has 26 MA's), (Start: 13 @53848 has 20 MA's), (16, 53893), (17, 53905), (21, 53941), (27, 53983),

Gene: Baudelaire_88 Start: 54840, Stop: 55091, Start Num: 5

Candidate Starts for Baudelaire_88:

(Start: 5 @54840 has 10 MA's), (Start: 13 @54885 has 20 MA's), (21, 54978), (28, 55032),

Gene: Bazzle_78 Start: 53691, Stop: 53987, Start Num: 3

Candidate Starts for Bazzle_78:

(Start: 3 @53691 has 26 MA's), (Start: 5 @53706 has 10 MA's), (Start: 13 @53751 has 20 MA's), (17, 53808), (18, 53817), (21, 53844), (29, 53901), (30, 53928),

Gene: Beem_133 Start: 72681, Stop: 72905, Start Num: 11

Candidate Starts for Beem_133:

(6, 72654), (Start: 11 @72681 has 29 MA's), (19, 72783), (20, 72798), (27, 72846),

Gene: BigCheese_81 Start: 53978, Stop: 54214, Start Num: 13

Candidate Starts for BigCheese_81:

(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071), (28, 54125), (29, 54128),

Gene: Bobby_123 Start: 72782, Stop: 73006, Start Num: 11

Candidate Starts for Bobby_123:

(Start: 11 @72782 has 29 MA's), (19, 72884), (20, 72899), (27, 72947),

Gene: BobsGarage_81 Start: 53978, Stop: 54214, Start Num: 13

Candidate Starts for BobsGarage_81:

(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071), (28, 54125), (29, 54128),

Gene: Bombitas_119 Start: 70092, Stop: 70316, Start Num: 11

Candidate Starts for Bombitas_119:

(6, 70065), (Start: 11 @70092 has 29 MA's), (19, 70194), (20, 70209), (27, 70257),

Gene: BourbonZero_80 Start: 53807, Stop: 54094, Start Num: 5

Candidate Starts for BourbonZero_80:

(Start: 3 @53792 has 26 MA's), (Start: 5 @53807 has 10 MA's), (21, 53945),

Gene: BrainDrainer_79 Start: 52733, Stop: 53023, Start Num: 4

Candidate Starts for BrainDrainer_79:

(Start: 4 @52733 has 4 MA's), (15, 52817), (16, 52832), (17, 52844), (21, 52880), (22, 52898), (25, 52910), (29, 52937),

Gene: Breezona_81 Start: 53918, Stop: 54214, Start Num: 3

Candidate Starts for Breezona_81:

(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071), (28, 54125), (29, 54128),

Gene: Bromden_79 Start: 53366, Stop: 53650, Start Num: 4

Candidate Starts for Bromden_79:

(2, 53357), (Start: 4 @53366 has 4 MA's), (Start: 13 @53420 has 20 MA's), (17, 53477), (18, 53486), (21, 53513), (25, 53543), (29, 53570),

Gene: BronnyJames_127 Start: 69316, Stop: 69543, Start Num: 10

Candidate Starts for BronnyJames_127:

(Start: 10 @69316 has 11 MA's), (21, 69451), (25, 69475), (27, 69487),

Gene: Calm_80 Start: 52346, Stop: 52636, Start Num: 5

Candidate Starts for Calm_80:

(Start: 3 @52331 has 26 MA's), (Start: 5 @52346 has 10 MA's), (Start: 13 @52406 has 20 MA's), (18, 52469), (21, 52496), (34, 52619), (35, 52622),

Gene: Chaser_77 Start: 52365, Stop: 52655, Start Num: 4

Candidate Starts for Chaser_77:

(Start: 4 @52365 has 4 MA's), (Start: 5 @52374 has 10 MA's), (Start: 13 @52419 has 20 MA's), (16, 52464), (17, 52476), (21, 52512), (22, 52530), (29, 52569),

Gene: ChutneyChips_77 Start: 52710, Stop: 52994, Start Num: 4

Candidate Starts for ChutneyChips_77:

(Start: 4 @52710 has 4 MA's), (Start: 13 @52764 has 20 MA's), (16, 52809), (17, 52821), (21, 52857), (22, 52875), (25, 52887),

Gene: CicholasNage_75 Start: 51748, Stop: 51978, Start Num: 13

Candidate Starts for CicholasNage_75:

(Start: 3 @51673 has 26 MA's), (Start: 5 @51688 has 10 MA's), (Start: 13 @51748 has 20 MA's), (18, 51811), (21, 51838), (34, 51961), (35, 51964),

Gene: Claus_80 Start: 53853, Stop: 54149, Start Num: 3

Candidate Starts for Claus_80:

(Start: 3 @53853 has 26 MA's), (Start: 13 @53913 has 20 MA's), (16, 53958), (17, 53970), (21, 54006), (27, 54048), (28, 54060), (29, 54063),

Gene: Constella_121 Start: 68215, Stop: 68439, Start Num: 11

Candidate Starts for Constella_121:

(Start: 11 @68215 has 29 MA's), (19, 68317), (20, 68332), (27, 68380),

Gene: Courthouse_124 Start: 67757, Stop: 67984, Start Num: 10

Candidate Starts for Courthouse_124:

(Start: 10 @67757 has 11 MA's), (21, 67892), (25, 67916), (27, 67928),

Gene: Crossroads_81 Start: 54053, Stop: 54289, Start Num: 13

Candidate Starts for Crossroads_81:

(Start: 3 @53993 has 26 MA's), (Start: 13 @54053 has 20 MA's), (16, 54098), (17, 54110), (21, 54146), (28, 54200), (29, 54203),

Gene: DHan_84 Start: 54131, Stop: 54367, Start Num: 13

Candidate Starts for DHan_84:

(Start: 3 @54071 has 26 MA's), (Start: 13 @54131 has 20 MA's), (16, 54176), (17, 54188), (21, 54224), (27, 54266), (28, 54278), (29, 54281),

Gene: Dallas_132 Start: 72193, Stop: 72417, Start Num: 11

Candidate Starts for Dallas_132:

(Start: 11 @72193 has 29 MA's), (19, 72295), (20, 72310), (27, 72358),

Gene: DanBing_81 Start: 53783, Stop: 54019, Start Num: 13

Candidate Starts for DanBing_81:

(Start: 3 @53723 has 26 MA's), (Start: 13 @53783 has 20 MA's), (16, 53828), (17, 53840), (21, 53876), (27, 53918),

Gene: DirkDirk_75 Start: 51200, Stop: 51505, Start Num: 3

Candidate Starts for DirkDirk_75:

(Start: 3 @51200 has 26 MA's), (Start: 5 @51215 has 10 MA's), (Start: 13 @51275 has 20 MA's), (18, 51338), (21, 51365), (28, 51419), (34, 51488), (35, 51491),

Gene: DmpstrDiver_131 Start: 71495, Stop: 71719, Start Num: 11

Candidate Starts for DmpstrDiver_131:

(Start: 11 @71495 has 29 MA's), (19, 71597), (20, 71612), (27, 71660), (28, 71672),

Gene: Douge_78 Start: 52288, Stop: 52587, Start Num: 4

Candidate Starts for Douge_78:

(Start: 4 @52288 has 4 MA's), (12, 52318), (Start: 13 @52342 has 20 MA's), (17, 52399), (18, 52408), (21, 52435), (25, 52465),

Gene: Douzhi_79 Start: 52550, Stop: 52840, Start Num: 4

Candidate Starts for Douzhi_79:

(Start: 4 @52550 has 4 MA's), (15, 52634), (16, 52649), (17, 52661), (21, 52697), (25, 52727), (29, 52754),

Gene: Dove_117 Start: 67139, Stop: 67363, Start Num: 11

Candidate Starts for Dove_117:

(Start: 11 @67139 has 29 MA's), (19, 67241), (20, 67256), (27, 67304),

Gene: DrSeegs_81 Start: 53978, Stop: 54214, Start Num: 13

Candidate Starts for DrSeegs_81:

(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071), (28, 54125), (29, 54128),

Gene: Duke13_126 Start: 68796, Stop: 69020, Start Num: 11
Candidate Starts for Duke13_126:
(Start: 11 @68796 has 29 MA's), (19, 68898), (20, 68913), (27, 68961),

Gene: DuncansLeg_79 Start: 53780, Stop: 54082, Start Num: 3
Candidate Starts for DuncansLeg_79:
(Start: 3 @53780 has 26 MA's), (Start: 5 @53795 has 10 MA's), (21, 53933),

Gene: DyoEdafos_83 Start: 53198, Stop: 53488, Start Num: 4
Candidate Starts for DyoEdafos_83:
(Start: 4 @53198 has 4 MA's), (12, 53228), (Start: 13 @53252 has 20 MA's), (17, 53309), (18, 53318),
(21, 53345), (25, 53375), (29, 53402),

Gene: Ejimix_125 Start: 72261, Stop: 72485, Start Num: 11
Candidate Starts for Ejimix_125:
(Start: 11 @72261 has 29 MA's), (19, 72363), (20, 72378), (27, 72426),

Gene: Ellson_78 Start: 54110, Stop: 54397, Start Num: 5
Candidate Starts for Ellson_78:
(Start: 3 @54095 has 26 MA's), (Start: 5 @54110 has 10 MA's), (21, 54248),

Gene: Enceladus_75 Start: 51992, Stop: 52282, Start Num: 5
Candidate Starts for Enceladus_75:
(Start: 3 @51977 has 26 MA's), (Start: 5 @51992 has 10 MA's), (Start: 13 @52052 has 20 MA's), (18,
52115), (21, 52142), (28, 52196), (34, 52265), (35, 52268),

Gene: EricMillard_123 Start: 70765, Stop: 70989, Start Num: 11
Candidate Starts for EricMillard_123:
(Start: 11 @70765 has 29 MA's), (19, 70867), (20, 70882), (27, 70930),

Gene: Faith1_81 Start: 53918, Stop: 54214, Start Num: 3
Candidate Starts for Faith1_81:
(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071),
(28, 54125), (29, 54128),

Gene: FarmResident_80 Start: 52292, Stop: 52576, Start Num: 4
Candidate Starts for FarmResident_80:
(Start: 4 @52292 has 4 MA's), (Start: 13 @52346 has 20 MA's), (16, 52391), (17, 52403), (21, 52439),
(22, 52457), (29, 52496),

Gene: Finemlucis_80 Start: 54386, Stop: 54682, Start Num: 3
Candidate Starts for Finemlucis_80:
(Start: 3 @54386 has 26 MA's), (18, 54512), (21, 54539), (25, 54569), (28, 54593),

Gene: Fullmetal_7 Start: 5216, Stop: 4959, Start Num: 8
Candidate Starts for Fullmetal_7:
(1, 5276), (Start: 8 @5216 has 10 MA's), (18, 5102), (28, 5027), (32, 4982),

Gene: Gabriela_80 Start: 53324, Stop: 53560, Start Num: 13
Candidate Starts for Gabriela_80:
(Start: 3 @53264 has 26 MA's), (Start: 13 @53324 has 20 MA's), (16, 53369), (17, 53381), (21, 53417),
(28, 53471), (29, 53474),

Gene: Gardann_81 Start: 53753, Stop: 54049, Start Num: 3

Candidate Starts for Gardann_81:

(Start: 3 @53753 has 26 MA's), (Start: 13 @53813 has 20 MA's), (16, 53858), (17, 53870), (21, 53906), (28, 53960), (29, 53963),

Gene: Gonephishing_123 Start: 67355, Stop: 67585, Start Num: 10

Candidate Starts for Gonephishing_123:

(Start: 10 @67355 has 11 MA's), (21, 67490), (25, 67514), (27, 67526),

Gene: GuuelaD_79 Start: 54093, Stop: 54329, Start Num: 13

Candidate Starts for GuuelaD_79:

(Start: 3 @54033 has 26 MA's), (Start: 13 @54093 has 20 MA's), (16, 54138), (17, 54150), (21, 54186), (28, 54240), (29, 54243),

Gene: Hafay_82 Start: 53908, Stop: 54144, Start Num: 13

Candidate Starts for Hafay_82:

(Start: 3 @53848 has 26 MA's), (Start: 13 @53908 has 20 MA's), (16, 53953), (17, 53965), (21, 54001), (27, 54043), (28, 54055), (29, 54058),

Gene: Halena_76 Start: 51262, Stop: 51552, Start Num: 5

Candidate Starts for Halena_76:

(Start: 3 @51247 has 26 MA's), (Start: 5 @51262 has 10 MA's), (Start: 13 @51322 has 20 MA's), (18, 51385), (21, 51412), (34, 51535), (35, 51538),

Gene: Halley_133 Start: 72577, Stop: 72801, Start Num: 11

Candidate Starts for Halley_133:

(Start: 11 @72577 has 29 MA's), (19, 72679), (20, 72694), (27, 72742),

Gene: Hannaconda_122 Start: 68008, Stop: 68238, Start Num: 10

Candidate Starts for Hannaconda_122:

(Start: 10 @68008 has 11 MA's), (25, 68167), (27, 68179),

Gene: Hidrated_116 Start: 68846, Stop: 69070, Start Num: 11

Candidate Starts for Hidrated_116:

(Start: 11 @68846 has 29 MA's), (19, 68948), (20, 68963), (27, 69011),

Gene: HokkenD_121 Start: 70940, Stop: 71164, Start Num: 11

Candidate Starts for HokkenD_121:

(Start: 11 @70940 has 29 MA's), (19, 71042), (20, 71057), (27, 71105),

Gene: Hughesyang_131 Start: 72302, Stop: 72526, Start Num: 11

Candidate Starts for Hughesyang_131:

(Start: 11 @72302 has 29 MA's), (19, 72404), (20, 72419), (27, 72467),

Gene: Itos_80 Start: 52824, Stop: 53120, Start Num: 3

Candidate Starts for Itos_80:

(Start: 3 @52824 has 26 MA's), (Start: 13 @52884 has 20 MA's), (16, 52929), (17, 52941), (21, 52977), (28, 53031), (29, 53034),

Gene: JoeDirt_78 Start: 52575, Stop: 52880, Start Num: 3

Candidate Starts for JoeDirt_78:

(Start: 3 @52575 has 26 MA's), (Start: 5 @52590 has 10 MA's), (Start: 13 @52650 has 20 MA's), (18, 52713), (21, 52740), (28, 52794), (34, 52863), (35, 52866),

Gene: JuicyJay_128 Start: 73817, Stop: 74041, Start Num: 11

Candidate Starts for JuicyJay_128:

(6, 73790), (Start: 11 @73817 has 29 MA's), (19, 73919), (20, 73934), (27, 73982),

Gene: Kahlid_81 Start: 53924, Stop: 54220, Start Num: 3

Candidate Starts for Kahlid_81:

(Start: 3 @53924 has 26 MA's), (Start: 13 @53984 has 20 MA's), (16, 54029), (17, 54041), (21, 54077),
(28, 54131), (29, 54134),

Gene: Kalah2_122 Start: 71108, Stop: 71332, Start Num: 11

Candidate Starts for Kalah2_122:

(Start: 11 @71108 has 29 MA's), (19, 71210), (20, 71225), (27, 71273), (28, 71285),

Gene: KashFlow_127 Start: 69790, Stop: 70017, Start Num: 10

Candidate Starts for KashFlow_127:

(Start: 10 @69790 has 11 MA's), (21, 69925), (25, 69949), (27, 69961),

Gene: KirDoubleO7_77 Start: 53797, Stop: 54084, Start Num: 5

Candidate Starts for KirDoubleO7_77:

(Start: 3 @53782 has 26 MA's), (Start: 5 @53797 has 10 MA's), (21, 53935),

Gene: Klein_128 Start: 69498, Stop: 69722, Start Num: 11

Candidate Starts for Klein_128:

(Start: 11 @69498 has 29 MA's), (19, 69600), (20, 69615), (27, 69663),

Gene: Kropertea_75 Start: 52480, Stop: 52770, Start Num: 4

Candidate Starts for Kropertea_75:

(Start: 4 @52480 has 4 MA's), (12, 52510), (Start: 13 @52534 has 20 MA's), (17, 52591), (18, 52600),
(21, 52627), (25, 52657), (29, 52684),

Gene: Krypton555_80 Start: 54028, Stop: 54342, Start Num: 3

Candidate Starts for Krypton555_80:

(Start: 3 @54028 has 26 MA's), (Start: 5 @54043 has 10 MA's), (17, 54154), (21, 54190), (36, 54322),

Gene: LeBron_77 Start: 51321, Stop: 51551, Start Num: 13

Candidate Starts for LeBron_77:

(Start: 3 @51246 has 26 MA's), (Start: 5 @51261 has 10 MA's), (Start: 13 @51321 has 20 MA's), (18, 51384), (21, 51411), (34, 51534), (35, 51537),

Gene: Lewan_82 Start: 54036, Stop: 54272, Start Num: 13

Candidate Starts for Lewan_82:

(Start: 3 @53976 has 26 MA's), (Start: 13 @54036 has 20 MA's), (16, 54081), (17, 54093), (21, 54129),
(28, 54183), (29, 54186),

Gene: LilDestine_80 Start: 53888, Stop: 54124, Start Num: 13

Candidate Starts for LilDestine_80:

(Start: 3 @53828 has 26 MA's), (Start: 13 @53888 has 20 MA's), (16, 53933), (17, 53945), (21, 53981),
(29, 54038),

Gene: LittleE_132 Start: 70999, Stop: 71229, Start Num: 10

Candidate Starts for LittleE_132:

(Start: 10 @70999 has 11 MA's), (21, 71134), (25, 71158), (27, 71170),

Gene: LiyuLake_78 Start: 53870, Stop: 54157, Start Num: 5

Candidate Starts for LiyuLake_78:

(Start: 3 @53855 has 26 MA's), (Start: 5 @53870 has 10 MA's), (21, 54008),

Gene: Loadrie_80 Start: 54063, Stop: 54299, Start Num: 13

Candidate Starts for Loadrie_80:

(Start: 3 @54003 has 26 MA's), (Start: 13 @54063 has 20 MA's), (16, 54108), (17, 54120), (21, 54156), (28, 54210), (29, 54213),

Gene: Lolly9_78 Start: 53913, Stop: 54164, Start Num: 5

Candidate Starts for Lolly9_78:

(Start: 3 @53898 has 26 MA's), (Start: 5 @53913 has 10 MA's), (27, 54090), (33, 54150),

Gene: Lucky2013_124 Start: 67876, Stop: 68106, Start Num: 10

Candidate Starts for Lucky2013_124:

(Start: 10 @67876 has 11 MA's), (21, 68011), (25, 68035), (27, 68047),

Gene: Lynnae_83 Start: 53996, Stop: 54232, Start Num: 13

Candidate Starts for Lynnae_83:

(Start: 3 @53936 has 26 MA's), (Start: 13 @53996 has 20 MA's), (16, 54041), (17, 54053), (21, 54089), (28, 54143), (29, 54146),

Gene: MAckerman_76 Start: 51240, Stop: 51545, Start Num: 3

Candidate Starts for MAckerman_76:

(Start: 3 @51240 has 26 MA's), (Start: 5 @51255 has 10 MA's), (Start: 13 @51315 has 20 MA's), (18, 51378), (21, 51405), (34, 51528), (35, 51531),

Gene: Marleymoo_116 Start: 68528, Stop: 68752, Start Num: 11

Candidate Starts for Marleymoo_116:

(Start: 11 @68528 has 29 MA's), (19, 68630), (20, 68645), (27, 68693),

Gene: MiaZeal_129 Start: 69014, Stop: 69244, Start Num: 10

Candidate Starts for MiaZeal_129:

(Start: 10 @69014 has 11 MA's), (25, 69173), (27, 69185),

Gene: Miley16_81 Start: 53918, Stop: 54214, Start Num: 3

Candidate Starts for Miley16_81:

(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071), (28, 54125), (29, 54128),

Gene: Minerva_130 Start: 70903, Stop: 71127, Start Num: 11

Candidate Starts for Minerva_130:

(Start: 11 @70903 has 29 MA's), (19, 71005), (20, 71020), (27, 71068),

Gene: MiniMac_83 Start: 53909, Stop: 54160, Start Num: 5

Candidate Starts for MiniMac_83:

(Start: 3 @53894 has 26 MA's), (Start: 5 @53909 has 10 MA's), (27, 54086), (33, 54146),

Gene: MkaliMitinis3_82 Start: 53987, Stop: 54283, Start Num: 3

Candidate Starts for MkaliMitinis3_82:

(Start: 3 @53987 has 26 MA's), (Start: 13 @54047 has 20 MA's), (16, 54092), (17, 54104), (21, 54140), (28, 54194), (29, 54197),

Gene: Moleficent_7 Start: 5213, Stop: 4956, Start Num: 8

Candidate Starts for Moleficent_7:

(1, 5273), (Start: 8 @5213 has 10 MA's), (18, 5099), (28, 5024), (32, 4979),

Gene: Morrill_7 Start: 5168, Stop: 4911, Start Num: 8

Candidate Starts for Morrill_7:

(1, 5228), (Start: 8 @5168 has 10 MA's), (14, 5096), (18, 5054), (28, 4979), (32, 4934),

Gene: Nekros_132 Start: 72510, Stop: 72737, Start Num: 10

Candidate Starts for Nekros_132:

(Start: 10 @72510 has 11 MA's), (21, 72645), (25, 72669), (27, 72681),

Gene: Netyap_82 Start: 53979, Stop: 54215, Start Num: 13

Candidate Starts for Netyap_82:

(Start: 3 @53919 has 26 MA's), (Start: 13 @53979 has 20 MA's), (16, 54024), (17, 54036), (21, 54072), (28, 54126), (29, 54129),

Gene: Nibley_126 Start: 68893, Stop: 69120, Start Num: 10

Candidate Starts for Nibley_126:

(Start: 10 @68893 has 11 MA's), (21, 69028), (25, 69052), (27, 69064),

Gene: Nicholasp3_81 Start: 53813, Stop: 54049, Start Num: 13

Candidate Starts for Nicholasp3_81:

(Start: 3 @53753 has 26 MA's), (Start: 13 @53813 has 20 MA's), (16, 53858), (17, 53870), (21, 53906), (28, 53960), (29, 53963),

Gene: NihilNomen_133 Start: 71762, Stop: 71986, Start Num: 11

Candidate Starts for NihilNomen_133:

(6, 71735), (Start: 11 @71762 has 29 MA's), (19, 71864), (20, 71879), (27, 71927),

Gene: Odette_133 Start: 72857, Stop: 73081, Start Num: 11

Candidate Starts for Odette_133:

(Start: 11 @72857 has 29 MA's), (19, 72959), (20, 72974), (27, 73022),

Gene: OhShagHennessy_75 Start: 51278, Stop: 51583, Start Num: 3

Candidate Starts for OhShagHennessy_75:

(Start: 3 @51278 has 26 MA's), (Start: 5 @51293 has 10 MA's), (Start: 13 @51353 has 20 MA's), (18, 51416), (21, 51443), (28, 51497), (34, 51566), (35, 51569),

Gene: Omega_139 Start: 72680, Stop: 72910, Start Num: 10

Candidate Starts for Omega_139:

(Start: 10 @72680 has 11 MA's), (21, 72815), (25, 72839), (27, 72851),

Gene: Optimus_122 Start: 69299, Stop: 69523, Start Num: 11

Candidate Starts for Optimus_122:

(Start: 11 @69299 has 29 MA's), (19, 69401), (20, 69416), (27, 69464), (28, 69476),

Gene: OverPar_83 Start: 54063, Stop: 54299, Start Num: 13

Candidate Starts for OverPar_83:

(Start: 3 @54003 has 26 MA's), (Start: 13 @54063 has 20 MA's), (16, 54108), (17, 54120), (21, 54156), (28, 54210), (29, 54213),

Gene: PYPDinur_78 Start: 52985, Stop: 53275, Start Num: 4

Candidate Starts for PYPDinur_78:

(Start: 4 @52985 has 4 MA's), (15, 53069), (16, 53084), (17, 53096), (21, 53132), (22, 53150), (25, 53162), (29, 53189),

Gene: Phoebus_132 Start: 73656, Stop: 73880, Start Num: 11

Candidate Starts for Phoebus_132:

(Start: 11 @73656 has 29 MA's), (19, 73758), (20, 73773), (27, 73821),

Gene: PhriedRice_7 Start: 5180, Stop: 4923, Start Num: 8

Candidate Starts for PhriedRice_7:

(1, 5240), (Start: 8 @5180 has 10 MA's), (18, 5066), (28, 4991), (32, 4946),

Gene: Poochiewood_76 Start: 52583, Stop: 52888, Start Num: 3

Candidate Starts for Poochiewood_76:

(Start: 3 @52583 has 26 MA's), (Start: 5 @52598 has 10 MA's), (Start: 13 @52658 has 20 MA's), (18, 52721), (21, 52748), (28, 52802), (34, 52871), (35, 52874),

Gene: Porcelain_127 Start: 68822, Stop: 69052, Start Num: 10

Candidate Starts for Porcelain_127:

(Start: 10 @68822 has 11 MA's), (21, 68957), (25, 68981), (27, 68993),

Gene: Pound_120 Start: 70039, Stop: 70263, Start Num: 11

Candidate Starts for Pound_120:

(Start: 11 @70039 has 29 MA's), (19, 70141), (20, 70156), (27, 70204), (28, 70216),

Gene: Quby_79 Start: 52316, Stop: 52600, Start Num: 4

Candidate Starts for Quby_79:

(Start: 4 @52316 has 4 MA's), (16, 52415), (17, 52427), (21, 52463), (22, 52481), (29, 52520),

Gene: Rearden_127 Start: 68913, Stop: 69143, Start Num: 10

Candidate Starts for Rearden_127:

(Start: 10 @68913 has 11 MA's), (21, 69048), (25, 69072), (27, 69084),

Gene: Redno2_123 Start: 69089, Stop: 69313, Start Num: 11

Candidate Starts for Redno2_123:

(Start: 11 @69089 has 29 MA's), (19, 69191), (20, 69206), (27, 69254),

Gene: RicoCaldo_7 Start: 5210, Stop: 4953, Start Num: 8

Candidate Starts for RicoCaldo_7:

(1, 5270), (Start: 8 @5210 has 10 MA's), (18, 5096), (28, 5021), (32, 4976),

Gene: Rose5_78 Start: 52495, Stop: 52725, Start Num: 13

Candidate Starts for Rose5_78:

(Start: 3 @52420 has 26 MA's), (Start: 5 @52435 has 10 MA's), (Start: 13 @52495 has 20 MA's), (18, 52558), (21, 52585), (34, 52708), (35, 52711),

Gene: Rumpelstiltskin_78 Start: 53546, Stop: 53842, Start Num: 3

Candidate Starts for Rumpelstiltskin_78:

(Start: 3 @53546 has 26 MA's), (Start: 13 @53606 has 20 MA's), (16, 53651), (17, 53663), (21, 53699), (28, 53753), (29, 53756),

Gene: Sarshaun_82 Start: 54071, Stop: 54307, Start Num: 13

Candidate Starts for Sarshaun_82:

(Start: 3 @54011 has 26 MA's), (Start: 13 @54071 has 20 MA's), (16, 54116), (17, 54128), (21, 54164), (28, 54218), (29, 54221),

Gene: Schatzie_127 Start: 71752, Stop: 71976, Start Num: 11

Candidate Starts for Schatzie_127:

(Start: 11 @71752 has 29 MA's), (19, 71854), (20, 71869), (27, 71917), (28, 71929),

Gene: Shaboozey_130 Start: 69337, Stop: 69564, Start Num: 10

Candidate Starts for Shaboozey_130:

(Start: 10 @69337 has 11 MA's), (21, 69472), (25, 69496), (27, 69508),

Gene: Sheng711_80 Start: 52619, Stop: 52909, Start Num: 4

Candidate Starts for Sheng711_80:

(Start: 4 @52619 has 4 MA's), (15, 52703), (17, 52730), (21, 52766), (22, 52784), (25, 52796), (29, 52823),

Gene: Silverleaf_78 Start: 51891, Stop: 52181, Start Num: 5

Candidate Starts for Silverleaf_78:

(Start: 3 @51876 has 26 MA's), (Start: 5 @51891 has 10 MA's), (Start: 13 @51951 has 20 MA's), (18, 52014), (21, 52041), (34, 52164), (35, 52167),

Gene: SoJulia_83 Start: 55139, Stop: 55375, Start Num: 13

Candidate Starts for SoJulia_83:

(Start: 3 @55079 has 26 MA's), (Start: 13 @55139 has 20 MA's), (16, 55184), (17, 55196), (21, 55232), (28, 55286), (29, 55289),

Gene: Soap141_81 Start: 54071, Stop: 54307, Start Num: 13

Candidate Starts for Soap141_81:

(Start: 3 @54011 has 26 MA's), (Start: 13 @54071 has 20 MA's), (16, 54116), (17, 54128), (21, 54164), (28, 54218), (29, 54221),

Gene: Squint_127 Start: 69127, Stop: 69354, Start Num: 10

Candidate Starts for Squint_127:

(Start: 10 @69127 has 11 MA's), (21, 69262), (25, 69286), (27, 69298),

Gene: StagePhright_7 Start: 5180, Stop: 4923, Start Num: 8

Candidate Starts for StagePhright_7:

(1, 5240), (Start: 8 @5180 has 10 MA's), (18, 5066), (28, 4991), (32, 4946),

Gene: Superphikiman_126 Start: 68039, Stop: 68266, Start Num: 10

Candidate Starts for Superphikiman_126:

(Start: 10 @68039 has 11 MA's), (21, 68174), (25, 68198), (27, 68210),

Gene: Taj_63 Start: 41748, Stop: 41978, Start Num: 7

Candidate Starts for Taj_63:

(Start: 7 @41748 has 1 MA's), (9, 41757), (20, 41871), (21, 41883), (24, 41907), (26, 41919), (31, 41970),

Gene: Thibault_113 Start: 66424, Stop: 66648, Start Num: 11

Candidate Starts for Thibault_113:

(Start: 11 @66424 has 29 MA's), (19, 66526), (20, 66541), (27, 66589),

Gene: ThirteenKH_7 Start: 5168, Stop: 4911, Start Num: 8

Candidate Starts for ThirteenKH_7:

(1, 5228), (Start: 8 @5168 has 10 MA's), (14, 5096), (18, 5054), (28, 4979), (32, 4934),

Gene: ThreeRngTarjay_127 Start: 72247, Stop: 72471, Start Num: 11

Candidate Starts for ThreeRngTarjay_127:

(Start: 11 @72247 has 29 MA's), (19, 72349), (20, 72364), (27, 72412),

Gene: Tourach_80 Start: 54051, Stop: 54332, Start Num: 5

Candidate Starts for Tourach_80:

(Start: 3 @54036 has 26 MA's), (Start: 5 @54051 has 10 MA's), (18, 54162), (21, 54189), (25, 54219), (35, 54306),

Gene: TrippleS_7 Start: 5168, Stop: 4911, Start Num: 8

Candidate Starts for TrippleS_7:

(1, 5228), (Start: 8 @5168 has 10 MA's), (14, 5096), (18, 5054), (28, 4979), (32, 4934),

Gene: Tyson_79 Start: 52361, Stop: 52651, Start Num: 5

Candidate Starts for Tyson_79:

(Start: 3 @52346 has 26 MA's), (Start: 5 @52361 has 10 MA's), (Start: 13 @52421 has 20 MA's), (18, 52484), (21, 52511), (34, 52634), (35, 52637),

Gene: UPIE_77 Start: 52017, Stop: 52247, Start Num: 13

Candidate Starts for UPIE_77:

(Start: 3 @51942 has 26 MA's), (Start: 5 @51957 has 10 MA's), (Start: 13 @52017 has 20 MA's), (18, 52080), (21, 52107), (34, 52230), (35, 52233),

Gene: Underpass_72 Start: 48849, Stop: 49085, Start Num: 13

Candidate Starts for Underpass_72:

(Start: 3 @48789 has 26 MA's), (Start: 13 @48849 has 20 MA's), (16, 48894), (17, 48906), (21, 48942), (28, 48996), (29, 48999),

Gene: Vetrix_80 Start: 53895, Stop: 54131, Start Num: 13

Candidate Starts for Vetrix_80:

(Start: 3 @53835 has 26 MA's), (Start: 13 @53895 has 20 MA's), (16, 53940), (17, 53952), (21, 53988), (29, 54045),

Gene: Wamburgrxpress_78 Start: 52456, Stop: 52686, Start Num: 13

Candidate Starts for Wamburgrxpress_78:

(Start: 3 @52381 has 26 MA's), (Start: 5 @52396 has 10 MA's), (Start: 13 @52456 has 20 MA's), (18, 52519), (21, 52546), (34, 52669), (35, 52672),

Gene: Wanda_130 Start: 69382, Stop: 69606, Start Num: 11

Candidate Starts for Wanda_130:

(Start: 11 @69382 has 29 MA's), (19, 69484), (20, 69499), (27, 69547),

Gene: Whirlwind_80 Start: 53994, Stop: 54305, Start Num: 3

Candidate Starts for Whirlwind_80:

(Start: 3 @53994 has 26 MA's), (Start: 5 @54009 has 10 MA's), (17, 54120), (21, 54156), (36, 54285),

Gene: Wigglewigggle_80 Start: 53840, Stop: 54076, Start Num: 13

Candidate Starts for Wigglewigggle_80:

(Start: 3 @53780 has 26 MA's), (Start: 13 @53840 has 20 MA's), (16, 53885), (17, 53897), (21, 53933), (27, 53975), (28, 53987), (29, 53990),

Gene: Wilder_82 Start: 53924, Stop: 54220, Start Num: 3

Candidate Starts for Wilder_82:

(Start: 3 @53924 has 26 MA's), (Start: 13 @53984 has 20 MA's), (16, 54029), (17, 54041), (21, 54077), (28, 54131), (29, 54134),

Gene: Winky_81 Start: 53918, Stop: 54214, Start Num: 3

Candidate Starts for Winky_81:

(Start: 3 @53918 has 26 MA's), (Start: 13 @53978 has 20 MA's), (16, 54023), (17, 54035), (21, 54071), (28, 54125), (29, 54128),

Gene: Wyatt2_79 Start: 52344, Stop: 52649, Start Num: 3

Candidate Starts for Wyatt2_79:

(Start: 3 @52344 has 26 MA's), (Start: 5 @52359 has 10 MA's), (Start: 13 @52419 has 20 MA's), (18, 52482), (21, 52509), (34, 52632), (35, 52635),

Gene: Xiaokay_125 Start: 69320, Stop: 69544, Start Num: 11

Candidate Starts for Xiaokay_125:

(Start: 11 @69320 has 29 MA's), (19, 69422), (20, 69437), (27, 69485),

Gene: Yafa_7 Start: 5183, Stop: 4926, Start Num: 8

Candidate Starts for Yafa_7:

(1, 5243), (Start: 8 @5183 has 10 MA's), (14, 5111), (18, 5069), (28, 4994), (32, 4949),

Gene: Yeet_123 Start: 70969, Stop: 71193, Start Num: 11

Candidate Starts for Yeet_123:

(Start: 11 @70969 has 29 MA's), (19, 71071), (20, 71086), (27, 71134),

Gene: Zakai_82 Start: 54244, Stop: 54540, Start Num: 3

Candidate Starts for Zakai_82:

(Start: 3 @54244 has 26 MA's), (Start: 13 @54304 has 20 MA's), (16, 54349), (17, 54361), (21, 54397), (28, 54451), (29, 54454),

Gene: Zaria_79 Start: 51796, Stop: 52101, Start Num: 3

Candidate Starts for Zaria_79:

(Start: 3 @51796 has 26 MA's), (Start: 5 @51811 has 10 MA's), (Start: 13 @51871 has 20 MA's), (18, 51934), (21, 51961), (34, 52084), (35, 52087),

Gene: Zelink_126 Start: 72194, Stop: 72418, Start Num: 11

Candidate Starts for Zelink_126:

(Start: 11 @72194 has 29 MA's), (19, 72296), (20, 72311), (27, 72359),

Gene: ZhongYanYuan_78 Start: 53431, Stop: 53667, Start Num: 13

Candidate Starts for ZhongYanYuan_78:

(Start: 3 @53371 has 26 MA's), (Start: 13 @53431 has 20 MA's), (16, 53476), (17, 53488), (21, 53524), (27, 53566), (28, 53578), (29, 53581),