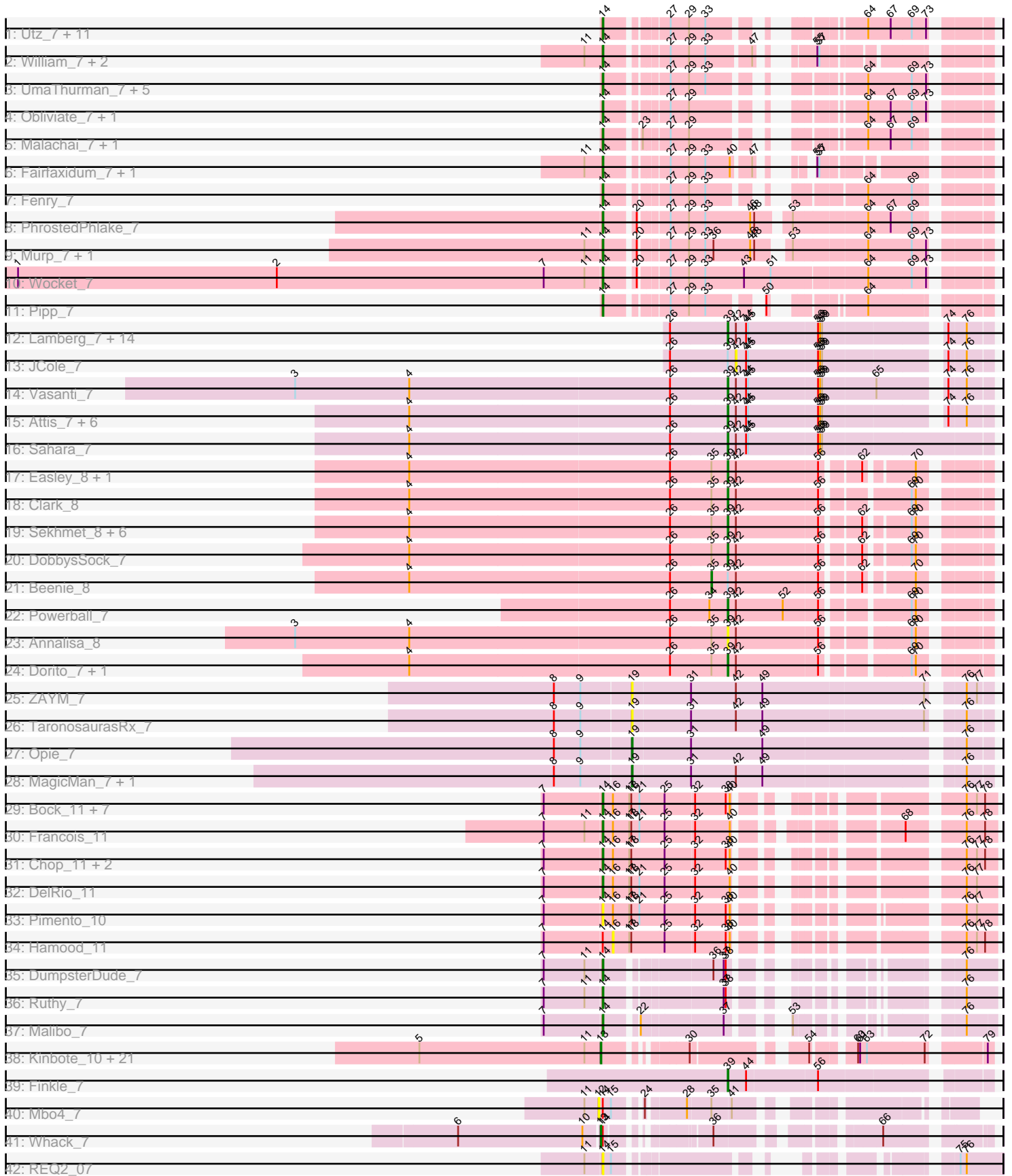


Pham 171299



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 171299 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171299 has 123 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Utz_7, MintFen_7, Guacamole_7, Zarbodnamra_7, Lysidious_7, Melba_7, Barco_7, Wisp_7, BlingBling_7, CaptainKirk2_7, JasperJr_7, Delian_7
- Track 2 : William_7, PCoral7_7, Toast_7
- Track 3 : UmaThurman_7, Jalammah_7, Mellie_7, Samba_7, Archis_7, Hitter_7
- Track 4 : Obliviate_7, ZiggyZoo_7
- Track 5 : Malachai_7, Begonia_7
- Track 6 : Fairfaxidum_7, PrincePatrick_7
- Track 7 : Fenry_7
- Track 8 : PhrostedPhlake_7
- Track 9 : Murp_7, KappaFarmDelta_7
- Track 10 : Wocket_7
- Track 11 : Pipp_7
- Track 12 : Lamberg_7, Cynthia_7, Clap_7, GemG_7, Denise_7, Mocha12_7, Gizermo_7, Sproutie_7, Nettuno_7, TuertoX_7, Ebert_7, Savage_7, Haley23_7, EdnaMode_7, Whiteclaw_7
- Track 13 : JCole_7
- Track 14 : Vasanti_7
- Track 15 : Attis_7, SoilAssassin_7, Matteo_7, Bjanes7_7, Pickett_7, Yeet412_7, LordFarquaad_7
- Track 16 : Sahara_7
- Track 17 : Easley_8, MichaelScott_8
- Track 18 : Clark_8
- Track 19 : Sekhmet_8, Suerte_7, Dolores_8, Samman98_8, Thimann_8, WinkNick_8, Oregano_8
- Track 20 : DobbysSock_7
- Track 21 : Beenie_8
- Track 22 : Powerball_7
- Track 23 : Annalisa_8
- Track 24 : Dorito_7, PhriskyACE_7
- Track 25 : ZAYM_7
- Track 26 : TaronosaurusRx_7
- Track 27 : Opie_7
- Track 28 : MagicMan_7, Schnabeltier_7
- Track 29 : Bock_11, Mulch_11, WheatThin_11, Nadeem_11, BetterKatz_11, Brylie_11, Parada_11, NancyRae_11
- Track 30 : Francois_11
- Track 31 : Chop_11, Ayotoya_11, GrandSlam_11

- Track 32 : DelRio_11
- Track 33 : Pimento_10
- Track 34 : Hamood_11
- Track 35 : DumpsterDude_7
- Track 36 : Ruthy_7
- Track 37 : Malibo_7
- Track 38 : Kinbote_10, Ein37_10, OBUpride_10, HH92_10, Daegal_11, Amochick_10, Luna22_10, Ubuntu_10, Evanesce_10, DeepSoil15_10, Dewey_10, Amymech_10, Gravaillia_10, Webster2_10, Giles_10, Wishmaker_10, Luke_10, Gancho_9, Hail_10, LilHazelNut_10, Hadrien_10, Forge_10
- Track 39 : Finkle_7
- Track 40 : Mbo4_7
- Track 41 : Whack_7
- Track 42 : REQ2_07

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

The start number called the most often in the published annotations is 14, it was called in 48 of the 113 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archis_7, Ayotoya_11, Barco_7, Begonia_7, BetterKatz_11, BlingBling_7, Bock_11, Brylie_11, CaptainKirk2_7, Chop_11, DelRio_11, Delian_7, DumpsterDude_7, Fairfaxidum_7, Fenry_7, Francois_11, GrandSlam_11, Guacamole_7, Hitter_7, Jalammah_7, JasperJr_7, KappaFarmDelta_7, Lysidious_7, Malachai_7, Malibo_7, Melba_7, Mellie_7, MintFen_7, Mulch_11, Murp_7, Nadeem_11, NancyRae_11, Obliviate_7, PCoral7_7, Parada_11, PhrostedPhlake_7, Pimento_10, Pipp_7, PrincePatrick_7, REQ2_07, Ruthy_7, Samba_7, Toast_7, UmaThurman_7, Utz_7, WheatThin_11, William_7, Wisp_7, Wocket_7, Zarbodnamra_7, ZiggyZoo_7,

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

- Hamood_11, Mbo4_7, Whack_7,

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

- Amochick_10, Amymech_10, Annalisa_8, Attis_7, Beenie_8, Bjanes7_7, Clap_7, Clark_8, Cynthia_7, Daegal_11, DeepSoil15_10, Denise_7, Dewey_10, DobbysSock_7, Dolores_8, Dorito_7, Easley_8, Ebert_7, EdnaMode_7, Ein37_10, Evanesce_10, Finkle_7, Forge_10, Gancho_9, GemG_7, Giles_10, Gizermo_7, Gravaillia_10, HH92_10, Hadrien_10, Hail_10, Haley23_7, JCole_7, Kinbote_10, Lamberg_7, LilHazelNut_10, LordFarquaad_7, Luke_10, Luna22_10, MagicMan_7, Matteo_7, MichaelScott_8, Mocha12_7, Nettuno_7, OBUpride_10, Opie_7, Oregano_8, PhriskyACE_7, Pickett_7, Powerball_7, Sahara_7, Samman98_8, Savage_7, Schnabeltier_7, Sekhmet_8, SoilAssassin_7, Sproutie_7, Suerte_7, TaronosaurusRx_7, Thimann_8, TuertoX_7, Ubuntu_10, Vasanti_7, Webster2_10, Whiteclaw_7, WinkNick_8, Wishmaker_10, Yeet412_7, ZAYM_7,

Summary by start number:

Start 12:

- Found in 1 of 123 (0.8%) of genes in pham

- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mbo4_7 (singleton),

Start 13:

- Found in 23 of 123 (18.7%) of genes in pham
- Manual Annotations of this start: 23 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amochick_10 (Q), Amymech_10 (Q), Daegal_11 (Q), DeepSoil15_10 (Q), Dewey_10 (Q), Ein37_10 (Q), Evanesce_10 (Q), Forge_10 (Q), Gancho_9 (Q), Giles_10 (Q), Gravaillia_10 (Q), HH92_10 (Q), Hadrien_10 (Q), Hail_10 (Q), Kinbote_10 (Q), LilHazelnut_10 (Q), Luke_10 (Q), Luna22_10 (Q), OBUpride_10 (Q), Ubuntu_10 (Q), Webster2_10 (Q), Whack_7 (singleton), Wishmaker_10 (Q),

Start 14:

- Found in 54 of 123 (43.9%) of genes in pham
- Manual Annotations of this start: 48 of 113
- Called 94.4% of time when present
- Phage (with cluster) where this start called: Archis_7 (CV), Ayotoya_11 (DI), Barco_7 (CV), Begonia_7 (CV), BetterKatz_11 (DI), BlingBling_7 (CV), Bock_11 (DI), Brylie_11 (DI), CaptainKirk2_7 (CV), Chop_11 (DI), DelRio_11 (DI), Delian_7 (CV), DumpsterDude_7 (DW), Fairfaxidum_7 (CV), Fenry_7 (CV), Francois_11 (DI), GrandSlam_11 (DI), Guacamole_7 (CV), Hitter_7 (CV), Jalammah_7 (CV), JasperJr_7 (CV), KappaFarmDelta_7 (CV), Lysidious_7 (CV), Malachai_7 (CV), Malibo_7 (DW), Melba_7 (CV), Mellie_7 (CV), MintFen_7 (CV), Mulch_11 (DI), Murp_7 (CV), Nadeem_11 (DI), NancyRae_11 (DI), Obliviate_7 (CV), PCoral7_7 (CV), Parada_11 (DI), PhrostedPhlake_7 (CV), Pimento_10 (DI), Pipp_7 (CV), PrincePatrick_7 (CV), REQ2_07 (singleton), Ruthy_7 (DW), Samba_7 (CV), Toast_7 (CV), UmaThurman_7 (CV), Utz_7 (CV), WheatThin_11 (DI), William_7 (CV), Wisp_7 (CV), Wocket_7 (CV), Zarbodnamra_7 (CV), ZiggyZoo_7 (CV),

Start 16:

- Found in 15 of 123 (12.2%) of genes in pham
- No Manual Annotations of this start.
- Called 6.7% of time when present
- Phage (with cluster) where this start called: Hamood_11 (DI),

Start 19:

- Found in 5 of 123 (4.1%) of genes in pham
- Manual Annotations of this start: 3 of 113
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MagicMan_7 (DB), Opie_7 (DB), Schnabeltier_7 (DB), TaronosaurusRx_7 (DB), ZAYM_7 (DB),

Start 35:

- Found in 16 of 123 (13.0%) of genes in pham
- Manual Annotations of this start: 1 of 113
- Called 6.2% of time when present
- Phage (with cluster) where this start called: Beenie_8 (CZ4),

Start 39:

- Found in 42 of 123 (34.1%) of genes in pham

- Manual Annotations of this start: 38 of 113
- Called 95.2% of time when present
- Phage (with cluster) where this start called: Annalisa_8 (CZ4), Attis_7 (CZ2), Bjaness7_7 (CZ2), Clap_7 (CZ2), Clark_8 (CZ4), Cynthia_7 (CZ2), Denise_7 (CZ5), DobbysSock_7 (CZ4), Dolores_8 (CZ4), Dorito_7 (CZ4), Easley_8 (CZ4), Ebert_7 (CZ2), EdnaMode_7 (CZ2), Finkle_7 (singleton), GemG_7 (CZ2), Gizermo_7 (CZ2), Haley23_7 (CZ2), Lamberg_7 (CZ2), LordFarquaad_7 (CZ2), Matteo_7 (CZ2), MichaelScott_8 (CZ4), Mocha12_7 (CZ2), Nettuno_7 (CZ2), Oregano_8 (CZ4), PhriskyACE_7 (CZ4), Pickett_7 (CZ2), Powerball_7 (CZ4), Sahara_7 (CZ2), Samman98_8 (CZ4), Savage_7 (CZ2), Sekhmet_8 (CZ4), SoilAssassin_7 (CZ2), Sproutie_7 (CZ2), Suerte_7 (CZ4), Thimann_8 (CZ4), TuertoX_7 (CZ2), Vasanti_7 (CZ2), Whiteclaw_7 (CZ2), WinkNick_8 (CZ4), Yeet412_7 (CZ2),

Start 42:

- Found in 45 of 123 (36.6%) of genes in pham
- No Manual Annotations of this start.
- Called 2.2% of time when present
- Phage (with cluster) where this start called: JCole_7 (CZ2),

Summary by clusters:

There are 9 clusters represented in this pham: singleton, DI, CZ2, DB, CZ4, CZ5, Q, DW, CV,

Info for manual annotations of cluster CV:

- Start number 14 was manually annotated 32 times for cluster CV.

Info for manual annotations of cluster CZ2:

- Start number 39 was manually annotated 23 times for cluster CZ2.

Info for manual annotations of cluster CZ4:

- Start number 35 was manually annotated 1 time for cluster CZ4.
- Start number 39 was manually annotated 13 times for cluster CZ4.

Info for manual annotations of cluster CZ5:

- Start number 39 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster DB:

- Start number 19 was manually annotated 3 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 14 was manually annotated 13 times for cluster DI.

Info for manual annotations of cluster DW:

- Start number 14 was manually annotated 3 times for cluster DW.

Info for manual annotations of cluster Q:

- Start number 13 was manually annotated 22 times for cluster Q.

Gene Information:

Gene: Amochick_10 Start: 7533, Stop: 7973, Start Num: 13

Candidate Starts for Amochick_10:

(5, 7266), (11, 7509), (Start: 13 @7533 has 23 MA's), (30, 7629), (54, 7758), (60, 7806), (61, 7809), (63, 7818), (72, 7899), (79, 7965),

Gene: Amymech_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Amymech_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Annalisa_8 Start: 6265, Stop: 6591, Start Num: 39

Candidate Starts for Annalisa_8:

(3, 5638), (4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (69, 6502), (70, 6508),

Gene: Archis_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Archis_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (69, 6481), (73, 6499),

Gene: Attis_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Attis_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Ayotoya_11 Start: 8058, Stop: 8519, Start Num: 14

Candidate Starts for Ayotoya_11:

(7, 7974), (Start: 14 @8058 has 48 MA's), (16, 8073), (17, 8097), (18, 8100), (25, 8148), (32, 8190), (38, 8235), (40, 8241), (76, 8475), (77, 8490), (78, 8502),

Gene: Barco_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Barco_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Beenie_8 Start: 6244, Stop: 6585, Start Num: 35

Candidate Starts for Beenie_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (70, 6502),

Gene: Begonia_7 Start: 6145, Stop: 6573, Start Num: 14

Candidate Starts for Begonia_7:

(Start: 14 @6145 has 48 MA's), (23, 6187), (27, 6220), (29, 6247), (64, 6421), (67, 6454), (69, 6484),

Gene: BetterKatz_11 Start: 8026, Stop: 8487, Start Num: 14

Candidate Starts for BetterKatz_11:

(7, 7942), (Start: 14 @8026 has 48 MA's), (16, 8041), (17, 8065), (18, 8068), (21, 8080), (25, 8116), (32, 8158), (38, 8203), (40, 8209), (76, 8443), (77, 8458), (78, 8470),

Gene: Bjaner7_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Bjaner7_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: BlingBling_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for BlingBling_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Bock_11 Start: 7776, Stop: 8237, Start Num: 14

Candidate Starts for Bock_11:

(7, 7692), (Start: 14 @7776 has 48 MA's), (16, 7791), (17, 7815), (18, 7818), (21, 7830), (25, 7866), (32, 7908), (38, 7953), (40, 7959), (76, 8193), (77, 8208), (78, 8220),

Gene: Brylie_11 Start: 7773, Stop: 8234, Start Num: 14

Candidate Starts for Brylie_11:

(7, 7689), (Start: 14 @7773 has 48 MA's), (16, 7788), (17, 7812), (18, 7815), (21, 7827), (25, 7863), (32, 7905), (38, 7950), (40, 7956), (76, 8190), (77, 8205), (78, 8217),

Gene: CaptainKirk2_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for CaptainKirk2_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Chop_11 Start: 7806, Stop: 8267, Start Num: 14

Candidate Starts for Chop_11:

(7, 7722), (Start: 14 @7806 has 48 MA's), (16, 7821), (17, 7845), (18, 7848), (25, 7896), (32, 7938), (38, 7983), (40, 7989), (76, 8223), (77, 8238), (78, 8250),

Gene: Clap_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Clap_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Clark_8 Start: 6265, Stop: 6591, Start Num: 39

Candidate Starts for Clark_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (69, 6502), (70, 6508),

Gene: Cynthia_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Cynthia_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Daegal_11 Start: 7830, Stop: 8270, Start Num: 13

Candidate Starts for Daegal_11:

(5, 7563), (11, 7806), (Start: 13 @7830 has 23 MA's), (30, 7926), (54, 8055), (60, 8103), (61, 8106), (63, 8115), (72, 8196), (79, 8262),

Gene: DeepSoil15_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for DeepSoil15_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: DelRio_11 Start: 8070, Stop: 8531, Start Num: 14

Candidate Starts for DelRio_11:

(7, 7986), (Start: 14 @8070 has 48 MA's), (16, 8085), (17, 8109), (18, 8112), (21, 8124), (25, 8160), (32, 8202), (40, 8253), (76, 8487), (77, 8502),

Gene: Delian_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Delian_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Denise_7 Start: 5783, Stop: 6130, Start Num: 39

Candidate Starts for Denise_7:

(26, 5702), (Start: 39 @5783 has 38 MA's), (42, 5795), (44, 5810), (45, 5813), (56, 5912), (58, 5915), (59, 5918), (74, 6071), (76, 6095),

Gene: Dewey_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Dewey_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: DobbysSock_7 Start: 5763, Stop: 6083, Start Num: 39

Candidate Starts for DobbysSock_7:

(4, 5304), (26, 5682), (Start: 35 @5742 has 1 MA's), (Start: 39 @5763 has 38 MA's), (42, 5775), (56, 5892), (62, 5940), (69, 5994), (70, 6000),

Gene: Dolores_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for Dolores_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (69, 6496), (70, 6502),

Gene: Dorito_7 Start: 5763, Stop: 6089, Start Num: 39

Candidate Starts for Dorito_7:

(4, 5304), (26, 5682), (Start: 35 @5742 has 1 MA's), (Start: 39 @5763 has 38 MA's), (42, 5775), (56, 5892), (69, 6000), (70, 6006),

Gene: DumpsterDude_7 Start: 6346, Stop: 6756, Start Num: 14

Candidate Starts for DumpsterDude_7:

(7, 6262), (11, 6322), (Start: 14 @6346 has 48 MA's), (36, 6481), (37, 6496), (38, 6499), (76, 6712),

Gene: Easley_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for Easley_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (70, 6502),

Gene: Ebert_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Ebert_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: EdnaMode_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for EdnaMode_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Ein37_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Ein37_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Evanesce_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Evanesce_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Fairfaxidum_7 Start: 6141, Stop: 6554, Start Num: 14

Candidate Starts for Fairfaxidum_7:

(11, 6114), (Start: 14 @6141 has 48 MA's), (27, 6216), (29, 6243), (33, 6267), (40, 6303), (47, 6327), (55, 6354), (57, 6357),

Gene: Fenry_7 Start: 6145, Stop: 6579, Start Num: 14

Candidate Starts for Fenry_7:

(Start: 14 @6145 has 48 MA's), (27, 6220), (29, 6247), (33, 6271), (64, 6427), (69, 6490),

Gene: Finkle_7 Start: 5910, Stop: 6254, Start Num: 39

Candidate Starts for Finkle_7:

(Start: 39 @5910 has 38 MA's), (44, 5937), (56, 6036),

Gene: Forge_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Forge_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Francois_11 Start: 7775, Stop: 8248, Start Num: 14

Candidate Starts for Francois_11:

(7, 7691), (11, 7751), (Start: 14 @7775 has 48 MA's), (16, 7790), (17, 7814), (18, 7817), (21, 7829), (25, 7865), (32, 7907), (40, 7958), (68, 8135), (76, 8204), (78, 8231),

Gene: Gancho_9 Start: 7239, Stop: 7679, Start Num: 13

Candidate Starts for Gancho_9:

(5, 6972), (11, 7215), (Start: 13 @7239 has 23 MA's), (30, 7335), (54, 7464), (60, 7512), (61, 7515), (63, 7524), (72, 7605), (79, 7671),

Gene: GemG_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for GemG_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Giles_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Giles_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Gizermo_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Gizermo_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: GrandSlam_11 Start: 7806, Stop: 8267, Start Num: 14

Candidate Starts for GrandSlam_11:

(7, 7722), (Start: 14 @7806 has 48 MA's), (16, 7821), (17, 7845), (18, 7848), (25, 7896), (32, 7938), (38, 7983), (40, 7989), (76, 8223), (77, 8238), (78, 8250),

Gene: Gravaillia_10 Start: 7272, Stop: 7712, Start Num: 13

Candidate Starts for Gravaillia_10:

(5, 7005), (11, 7248), (Start: 13 @7272 has 23 MA's), (30, 7368), (54, 7497), (60, 7545), (61, 7548), (63, 7557), (72, 7638), (79, 7704),

Gene: Guacamole_7 Start: 6146, Stop: 6574, Start Num: 14

Candidate Starts for Guacamole_7:

(Start: 14 @6146 has 48 MA's), (27, 6221), (29, 6248), (33, 6272), (64, 6422), (67, 6455), (69, 6485), (73, 6503),

Gene: HH92_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for HH92_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Hadrien_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Hadrien_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Hail_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Hail_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Haley23_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Haley23_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Hamood_11 Start: 7821, Stop: 8267, Start Num: 16

Candidate Starts for Hamood_11:

(7, 7722), (Start: 14 @7806 has 48 MA's), (16, 7821), (17, 7845), (18, 7848), (25, 7896), (32, 7938), (38, 7983), (40, 7989), (76, 8223), (77, 8238), (78, 8250),

Gene: Hitter_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Hitter_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (69, 6481), (73, 6499),

Gene: JCole_7 Start: 5786, Stop: 6121, Start Num: 42

Candidate Starts for JCole_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Jalammah_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Jalammah_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (69, 6481), (73, 6499),

Gene: JasperJr_7 Start: 6146, Stop: 6574, Start Num: 14

Candidate Starts for JasperJr_7:

(Start: 14 @6146 has 48 MA's), (27, 6221), (29, 6248), (33, 6272), (64, 6422), (67, 6455), (69, 6485), (73, 6503),

Gene: KappaFarmDelta_7 Start: 6123, Stop: 6608, Start Num: 14

Candidate Starts for KappaFarmDelta_7:

(11, 6099), (Start: 14 @6123 has 48 MA's), (20, 6162), (27, 6198), (29, 6225), (33, 6249), (36, 6261), (46, 6315), (48, 6321), (53, 6354), (64, 6456), (69, 6519), (73, 6537),

Gene: Kinbote_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Kinbote_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Lamberg_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Lamberg_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: LilHazelnut_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for LilHazelnut_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: LordFarquaad_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for LordFarquaad_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Luke_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Luke_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Luna22_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Luna22_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Lysidious_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Lysidious_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: MagicMan_7 Start: 6338, Stop: 6826, Start Num: 19

Candidate Starts for MagicMan_7:

(8, 6227), (9, 6266), (Start: 19 @6338 has 3 MA's), (31, 6422), (42, 6488), (49, 6527), (76, 6791),

Gene: Malachai_7 Start: 6145, Stop: 6573, Start Num: 14

Candidate Starts for Malachai_7:

(Start: 14 @6145 has 48 MA's), (23, 6187), (27, 6220), (29, 6247), (64, 6421), (67, 6454), (69, 6484),

Gene: Malibo_7 Start: 6358, Stop: 6762, Start Num: 14

Candidate Starts for Malibo_7:

(7, 6274), (Start: 14 @6358 has 48 MA's), (22, 6397), (37, 6508), (53, 6556), (76, 6721),

Gene: Matteo_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Matteo_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Mbo4_7 Start: 6382, Stop: 6798, Start Num: 12

Candidate Starts for Mbo4_7:

(11, 6361), (12, 6382), (Start: 14 @6388 has 48 MA's), (15, 6400), (24, 6430), (28, 6481), (Start: 35 @6514 has 1 MA's), (41, 6541),

Gene: Melba_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Melba_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Mellie_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Mellie_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (69, 6481), (73, 6499),

Gene: MichaelScott_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for MichaelScott_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (70, 6502),

Gene: MintFen_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for MintFen_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Mocha12_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Mocha12_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Mulch_11 Start: 7773, Stop: 8234, Start Num: 14

Candidate Starts for Mulch_11:

(7, 7689), (Start: 14 @7773 has 48 MA's), (16, 7788), (17, 7812), (18, 7815), (21, 7827), (25, 7863), (32, 7905), (38, 7950), (40, 7956), (76, 8190), (77, 8205), (78, 8217),

Gene: Murp_7 Start: 6126, Stop: 6611, Start Num: 14

Candidate Starts for Murp_7:

(11, 6102), (Start: 14 @6126 has 48 MA's), (20, 6165), (27, 6201), (29, 6228), (33, 6252), (36, 6264), (46, 6318), (48, 6324), (53, 6357), (64, 6459), (69, 6522), (73, 6540),

Gene: Nadeem_11 Start: 7773, Stop: 8234, Start Num: 14

Candidate Starts for Nadeem_11:

(7, 7689), (Start: 14 @7773 has 48 MA's), (16, 7788), (17, 7812), (18, 7815), (21, 7827), (25, 7863), (32, 7905), (38, 7950), (40, 7956), (76, 8190), (77, 8205), (78, 8217),

Gene: NancyRae_11 Start: 7773, Stop: 8234, Start Num: 14

Candidate Starts for NancyRae_11:

(7, 7689), (Start: 14 @7773 has 48 MA's), (16, 7788), (17, 7812), (18, 7815), (21, 7827), (25, 7863), (32, 7905), (38, 7950), (40, 7956), (76, 8190), (77, 8205), (78, 8217),

Gene: Nettuno_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Nettuno_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: OBUpride_10 Start: 7533, Stop: 7973, Start Num: 13

Candidate Starts for OBUpride_10:

(5, 7266), (11, 7509), (Start: 13 @7533 has 23 MA's), (30, 7629), (54, 7758), (60, 7806), (61, 7809), (63, 7818), (72, 7899), (79, 7965),

Gene: Obliviate_7 Start: 6166, Stop: 6594, Start Num: 14

Candidate Starts for Obliviate_7:

(Start: 14 @6166 has 48 MA's), (27, 6241), (29, 6268), (64, 6442), (67, 6475), (69, 6505), (73, 6523),

Gene: Opie_7 Start: 6347, Stop: 6841, Start Num: 19

Candidate Starts for Opie_7:

(8, 6236), (9, 6275), (Start: 19 @6347 has 3 MA's), (31, 6431), (49, 6536), (76, 6806),

Gene: Oregano_8 Start: 5936, Stop: 6256, Start Num: 39

Candidate Starts for Oregano_8:

(4, 5477), (26, 5855), (Start: 35 @5915 has 1 MA's), (Start: 39 @5936 has 38 MA's), (42, 5948), (56, 6065), (62, 6113), (69, 6167), (70, 6173),

Gene: PCoral7_7 Start: 6141, Stop: 6554, Start Num: 14

Candidate Starts for PCoral7_7:

(11, 6114), (Start: 14 @6141 has 48 MA's), (27, 6216), (29, 6243), (33, 6267), (47, 6327), (55, 6354), (57, 6357),

Gene: Parada_11 Start: 7773, Stop: 8234, Start Num: 14

Candidate Starts for Parada_11:

(7, 7689), (Start: 14 @7773 has 48 MA's), (16, 7788), (17, 7812), (18, 7815), (21, 7827), (25, 7863), (32, 7905), (38, 7950), (40, 7956), (76, 8190), (77, 8205), (78, 8217),

Gene: PhriskyACE_7 Start: 5763, Stop: 6089, Start Num: 39

Candidate Starts for PhriskyACE_7:

(4, 5304), (26, 5682), (Start: 35 @5742 has 1 MA's), (Start: 39 @5763 has 38 MA's), (42, 5775), (56, 5892), (69, 6000), (70, 6006),

Gene: PhrostedPhlake_7 Start: 6160, Stop: 6651, Start Num: 14

Candidate Starts for PhrostedPhlake_7:

(Start: 14 @6160 has 48 MA's), (20, 6199), (27, 6235), (29, 6262), (33, 6286), (46, 6352), (48, 6358), (53, 6397), (64, 6499), (67, 6532), (69, 6562),

Gene: Pickett_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Pickett_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Pimento_10 Start: 7770, Stop: 8225, Start Num: 14

Candidate Starts for Pimento_10:

(7, 7686), (Start: 14 @7770 has 48 MA's), (16, 7785), (17, 7809), (18, 7812), (21, 7824), (25, 7860), (32, 7902), (38, 7947), (40, 7953), (76, 8181), (77, 8196),

Gene: Pipp_7 Start: 6166, Stop: 6594, Start Num: 14

Candidate Starts for Pipp_7:

(Start: 14 @6166 has 48 MA's), (27, 6241), (29, 6268), (33, 6292), (50, 6349), (64, 6442),

Gene: Powerball_7 Start: 5763, Stop: 6089, Start Num: 39

Candidate Starts for Powerball_7:

(26, 5682), (34, 5739), (Start: 39 @5763 has 38 MA's), (42, 5775), (52, 5844), (56, 5892), (69, 6000), (70, 6006),

Gene: PrincePatrick_7 Start: 6142, Stop: 6555, Start Num: 14

Candidate Starts for PrincePatrick_7:

(11, 6115), (Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (40, 6304), (47, 6328), (55, 6355), (57, 6358),

Gene: REQ2_07 Start: 5849, Stop: 6256, Start Num: 14

Candidate Starts for REQ2_07:

(11, 5825), (Start: 14 @5849 has 48 MA's), (15, 5861), (75, 6194), (76, 6203),

Gene: Ruthy_7 Start: 6423, Stop: 6830, Start Num: 14

Candidate Starts for Ruthy_7:

(7, 6339), (11, 6399), (Start: 14 @6423 has 48 MA's), (37, 6573), (38, 6576), (76, 6786),

Gene: Sahara_7 Start: 5765, Stop: 6136, Start Num: 39

Candidate Starts for Sahara_7:

(4, 5306), (26, 5684), (Start: 39 @5765 has 38 MA's), (42, 5777), (44, 5792), (45, 5795), (56, 5894), (58, 5897), (59, 5900),

Gene: Samba_7 Start: 6143, Stop: 6571, Start Num: 14

Candidate Starts for Samba_7:

(Start: 14 @6143 has 48 MA's), (27, 6218), (29, 6245), (33, 6269), (64, 6419), (69, 6482), (73, 6500),

Gene: Samman98_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for Samman98_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (69, 6496), (70, 6502),

Gene: Savage_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Savage_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Schnabeltier_7 Start: 6339, Stop: 6827, Start Num: 19

Candidate Starts for Schnabeltier_7:

(8, 6228), (9, 6267), (Start: 19 @6339 has 3 MA's), (31, 6423), (42, 6489), (49, 6528), (76, 6792),

Gene: Sekhmet_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for Sekhmet_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (69, 6496), (70, 6502),

Gene: SoilAssassin_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for SoilAssassin_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Sproutie_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Sproutie_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Suerte_7 Start: 5763, Stop: 6083, Start Num: 39

Candidate Starts for Suerte_7:

(4, 5304), (26, 5682), (Start: 35 @5742 has 1 MA's), (Start: 39 @5763 has 38 MA's), (42, 5775), (56, 5892), (62, 5940), (69, 5994), (70, 6000),

Gene: TaronosaurusRx_7 Start: 6346, Stop: 6837, Start Num: 19

Candidate Starts for TaronosaurusRx_7:

(8, 6235), (9, 6274), (Start: 19 @6346 has 3 MA's), (31, 6430), (42, 6496), (49, 6535), (71, 6766), (76, 6802),

Gene: Thimann_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for Thimann_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (69, 6496), (70, 6502),

Gene: Toast_7 Start: 6141, Stop: 6554, Start Num: 14

Candidate Starts for Toast_7:

(11, 6114), (Start: 14 @6141 has 48 MA's), (27, 6216), (29, 6243), (33, 6267), (47, 6327), (55, 6354), (57, 6357),

Gene: TuertoX_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for TuertoX_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: Ubuntu_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Ubuntu_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: UmaThurman_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for UmaThurman_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (69, 6481), (73, 6499),

Gene: Utz_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Utz_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Vasanti_7 Start: 5775, Stop: 6125, Start Num: 39

Candidate Starts for Vasanti_7:

(3, 5148), (4, 5316), (26, 5694), (Start: 39 @5775 has 38 MA's), (42, 5787), (44, 5802), (45, 5805), (56, 5904), (58, 5907), (59, 5910), (65, 5985), (74, 6066), (76, 6090),

Gene: Webster2_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Webster2_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Whack_7 Start: 5839, Stop: 6255, Start Num: 13

Candidate Starts for Whack_7:

(6, 5635), (10, 5818), (Start: 13 @5839 has 23 MA's), (Start: 14 @5842 has 48 MA's), (36, 5950), (66, 6127),

Gene: WheatThin_11 Start: 7773, Stop: 8234, Start Num: 14

Candidate Starts for WheatThin_11:

(7, 7689), (Start: 14 @7773 has 48 MA's), (16, 7788), (17, 7812), (18, 7815), (21, 7827), (25, 7863), (32, 7905), (38, 7950), (40, 7956), (76, 8190), (77, 8205), (78, 8217),

Gene: Whiteclaw_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Whiteclaw_7:

(26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: William_7 Start: 6141, Stop: 6569, Start Num: 14

Candidate Starts for William_7:

(11, 6114), (Start: 14 @6141 has 48 MA's), (27, 6216), (29, 6243), (33, 6267), (47, 6327), (55, 6369), (57, 6372),

Gene: WinkNick_8 Start: 6265, Stop: 6585, Start Num: 39

Candidate Starts for WinkNick_8:

(4, 5806), (26, 6184), (Start: 35 @6244 has 1 MA's), (Start: 39 @6265 has 38 MA's), (42, 6277), (56, 6394), (62, 6442), (69, 6496), (70, 6502),

Gene: Wishmaker_10 Start: 7539, Stop: 7979, Start Num: 13

Candidate Starts for Wishmaker_10:

(5, 7272), (11, 7515), (Start: 13 @7539 has 23 MA's), (30, 7635), (54, 7764), (60, 7812), (61, 7815), (63, 7824), (72, 7905), (79, 7971),

Gene: Wisp_7 Start: 6142, Stop: 6570, Start Num: 14

Candidate Starts for Wisp_7:

(Start: 14 @6142 has 48 MA's), (27, 6217), (29, 6244), (33, 6268), (64, 6418), (67, 6451), (69, 6481), (73, 6499),

Gene: Wocket_7 Start: 6129, Stop: 6635, Start Num: 14

Candidate Starts for Wocket_7:

(1, 5271), (2, 5652), (7, 6045), (11, 6105), (Start: 14 @6129 has 48 MA's), (20, 6168), (27, 6204), (29, 6231), (33, 6255), (43, 6312), (51, 6351), (64, 6483), (69, 6546), (73, 6564),

Gene: Yeet412_7 Start: 5774, Stop: 6121, Start Num: 39

Candidate Starts for Yeet412_7:

(4, 5315), (26, 5693), (Start: 39 @5774 has 38 MA's), (42, 5786), (44, 5801), (45, 5804), (56, 5903), (58, 5906), (59, 5909), (74, 6062), (76, 6086),

Gene: ZAYM_7 Start: 6339, Stop: 6830, Start Num: 19

Candidate Starts for ZAYM_7:

(8, 6228), (9, 6267), (Start: 19 @6339 has 3 MA's), (31, 6423), (42, 6489), (49, 6528), (71, 6759), (76, 6795), (77, 6810),

Gene: Zarbodnamra_7 Start: 6141, Stop: 6569, Start Num: 14

Candidate Starts for Zarbodnamra_7:

(Start: 14 @6141 has 48 MA's), (27, 6216), (29, 6243), (33, 6267), (64, 6417), (67, 6450), (69, 6480), (73, 6498),

Gene: ZiggyZoo_7 Start: 6166, Stop: 6594, Start Num: 14

Candidate Starts for ZiggyZoo_7:

(Start: 14 @6166 has 48 MA's), (27, 6241), (29, 6268), (64, 6442), (67, 6475), (69, 6505), (73, 6523),