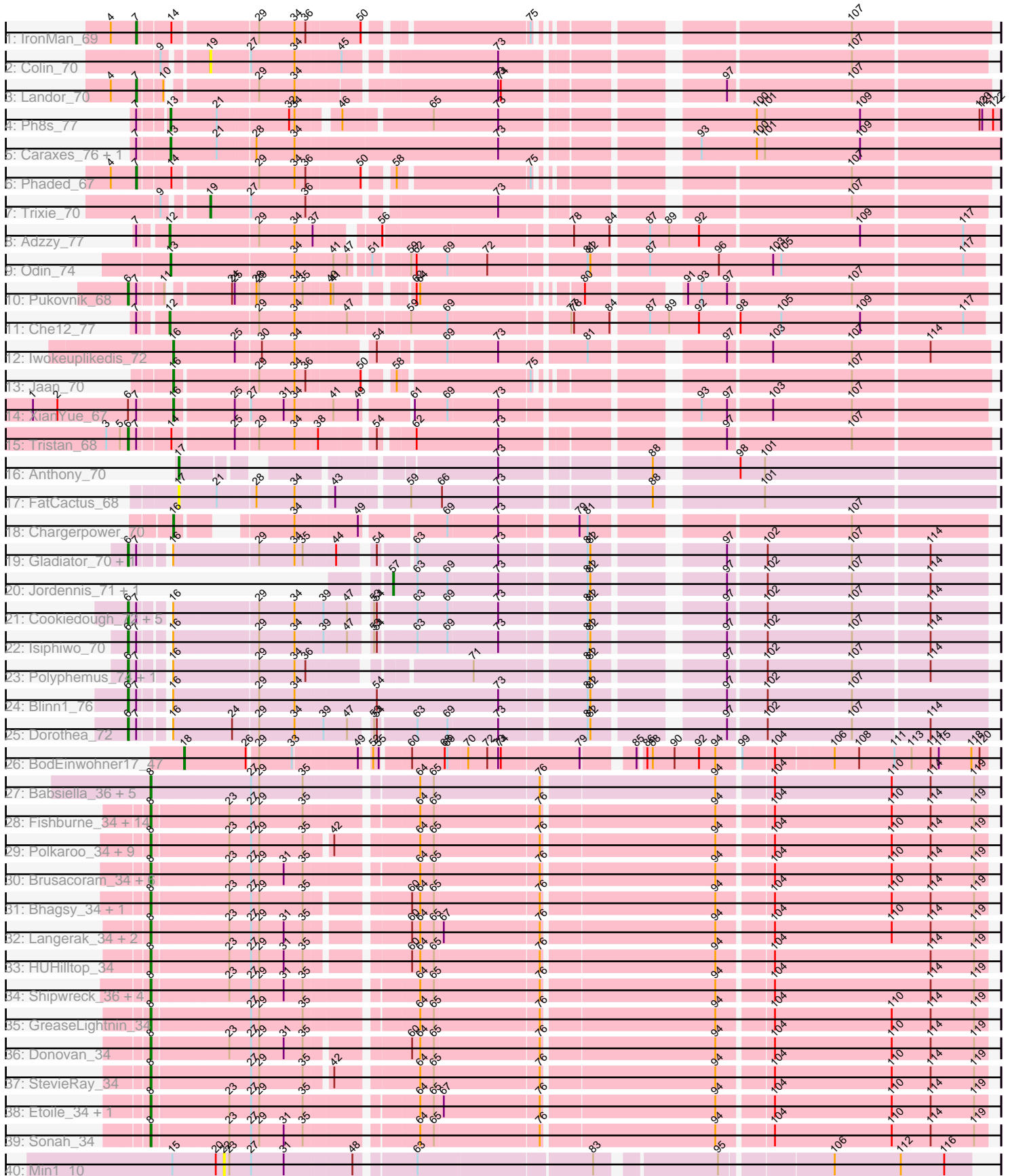


Pham 296450



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 296450 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296450 has 91 members, 10 are drafts.

Phages represented in each track:

- Track 1 : IronMan_69
- Track 2 : Colin_70
- Track 3 : Landor_70
- Track 4 : Ph8s_77
- Track 5 : Caraxes_76, Superchunk_75
- Track 6 : Phaded_67
- Track 7 : Trixie_70
- Track 8 : Adzzy_77
- Track 9 : Odin_74
- Track 10 : Pukovnik_68
- Track 11 : Che12_77
- Track 12 : Iwokeuplikedis_72
- Track 13 : Jaan_70
- Track 14 : XianYue_67
- Track 15 : Tristan_68
- Track 16 : Anthony_70
- Track 17 : FatCactus_68
- Track 18 : Chargerpower_70
- Track 19 : Gladiator_70, Newrala_72
- Track 20 : Jordennis_71, Priamo_74
- Track 21 : Cookiedough_72, Neeharika16_71, BABullseye_65, Pmask_71, SuperAwesome_72, SuperCallie99_69
- Track 22 : Isiphiwo_70
- Track 23 : Polyphemus_74, JewelBug_72
- Track 24 : Blinn1_76
- Track 25 : Dorothea_72
- Track 26 : BodEinwohner17_47
- Track 27 : Babsiella_36, Brujita_36, HC_34, Island3_36, QueenHazel_32, Xula_31
- Track 28 : Fishburne_34, Bartholomew_33, Venti_34, Majeke_34, Dynamo_34, BronnyJr_34, Mangethe_34, Phineas_34, Vidya_34, Necropolis_34, Chubbello_34, Kari_34, FirstPlacePfu_34, Zilizebeth_34, Phegasus_34
- Track 29 : Polkaroo_34, KilKor_34, Willsammy_33, Phalm_34, Gavriela_34, Jung_33, Megiddo_34, CactusJack_34, StressBall_34, Glaske_34
- Track 30 : Brusacoram_34, Atcoo_34, Bunnies_34, Juniormint_34, Jebeks_35, Ksquared_34, Thespis_34
- Track 31 : Bhagsy_34, PeanutPie_34
- Track 32 : Langerak_34, Arib1_34, GaloreK_34

- Track 33 : HUHilltop_34
- Track 34 : Shipwreck_36, Pygmy_36, Camster_34, Bogie_36, Malithi_34
- Track 35 : GreaseLightnin_34
- Track 36 : Donovan_34
- Track 37 : StevieRay_34
- Track 38 : Etoile_34, Techage_34
- Track 39 : Sonah_34
- Track 40 : Min1_10

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

The start number called the most often in the published annotations is 8, it was called in 49 of the 81 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Arib1_34, Atcoo_34, Babsiella_36, Bartholomew_33, Bhagsy_34, Bogie_36, BronnyJr_34, Brujita_36, Brusacoram_34, Bunnies_34, CactusJack_34, Camster_34, Chubbello_34, Donovan_34, Dynamo_34, Etoile_34, FirstPlacePfu_34, Fishburne_34, GaloreK_34, Gavriela_34, Glaske_34, GreaseLightnin_34, HC_34, HUHilltop_34, Island3_36, Jebeks_35, Jung_33, Juniormint_34, Kari_34, KilKor_34, Ksquared_34, Langerak_34, Majeke_34, Malithi_34, Mangethe_34, Megiddo_34, Necropolis_34, PeanutPie_34, Phalm_34, Phegasus_34, Phineas_34, Polkaroo_34, Pygmy_36, QueenHazel_32, Shipwreck_36, Sonah_34, StevieRay_34, StressBall_34, Techage_34, Thespi_34, Venti_34, Vidya_34, Willsammy_33, Xula_31, Zilizebeth_34,

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

-

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

- Adzzy_77, Anthony_70, BABullseye_65, Blinn1_76, BodEinwohner17_47, Caraxes_76, Chargerpower_70, Che12_77, Colin_70, Cookiedough_72, Dorothea_72, FatCactus_68, Gladiator_70, IronMan_69, Isiphiwo_70, Iwokeuplikedis_72, Jaan_70, JewelBug_72, Jordennis_71, Landor_70, Min1_10, Neeharika16_71, Newrala_72, Odin_74, Ph8s_77, Phaded_67, Pmask_71, Polyphemos_74, Priamo_74, Pukovnik_68, SuperAwesome_72, SuperCallie99_69, Superchunk_75, Tristan_68, Trixie_70, XianYue_67,

Summary by start number:

Start 6:

- Found in 16 of 91 (17.6%) of genes in pham
- Manual Annotations of this start: 15 of 81
- Called 93.8% of time when present
- Phage (with cluster) where this start called: BABullseye_65 (A6), Blinn1_76 (A6), Cookiedough_72 (A6), Dorothea_72 (A6), Gladiator_70 (A6), Isiphiwo_70 (A6), JewelBug_72 (A6), Neeharika16_71 (A6), Newrala_72 (A6), Pmask_71 (A6), Polyphemos_74 (A6), Pukovnik_68 (A2), SuperAwesome_72 (A6), SuperCallie99_69 (A6), Tristan_68 (A2),

Start 7:

- Found in 24 of 91 (26.4%) of genes in pham
- Manual Annotations of this start: 3 of 81
- Called 12.5% of time when present
- Phage (with cluster) where this start called: IronMan_69 (A2), Landor_70 (A2), Phaded_67 (A2),

Start 8:

- Found in 55 of 91 (60.4%) of genes in pham
- Manual Annotations of this start: 49 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arib1_34 (P1), Atcoo_34 (P1), Babsiella_36 (I1), Bartholomew_33 (P1), Bhagsy_34 (P1), Bogie_36 (P1), BronnyJr_34 (P1), Brujita_36 (I1), Brusacoram_34 (P1), Bunnies_34 (P1), CactusJack_34 (P1), Camster_34 (P1), Chubbello_34 (P1), Donovan_34 (P1), Dynamo_34 (P1), Etoile_34 (P1), FirstPlacePfu_34 (P1), Fishburne_34 (P1), GaloreK_34 (P1), Gavriela_34 (P1), Glaske_34 (P1), GreaseLightnin_34 (P1), HC_34 (I1), HUHilltop_34 (P1), Island3_36 (I1), Jebeks_35 (P1), Jung_33 (P1), Juniormint_34 (P1), Kari_34 (P1), KilKor_34 (P1), Ksquared_34 (P1), Langerak_34 (P1), Majeke_34 (P1), Malithi_34 (P1), Mangethe_34 (P1), Megiddo_34 (P1), Necropolis_34 (P1), PeanutPie_34 (P1), Phalm_34 (P1), Phegasus_34 (P1), Phineas_34 (P1), Polkaroo_34 (P1), Pygmy_36 (P1), QueenHazel_32 (I1), Shipwreck_36 (P1), Sonah_34 (P1), StevieRay_34 (P1), StressBall_34 (P1), Techage_34 (P1), Thespis_34 (P1), Venti_34 (P1), Vidya_34 (P1), Willsammy_33 (P1), Xula_31 (I1), Zilizebeth_34 (P1),

Start 12:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adzzy_77 (A2), Che12_77 (A2),

Start 13:

- Found in 4 of 91 (4.4%) of genes in pham
- Manual Annotations of this start: 3 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Caraxes_76 (A2), Odin_74 (A2), Ph8s_77 (A2), Superchunk_75 (A2),

Start 16:

- Found in 17 of 91 (18.7%) of genes in pham
- Manual Annotations of this start: 4 of 81
- Called 23.5% of time when present
- Phage (with cluster) where this start called: Chargerpower_70 (A22), Iwokeuplikedis_72 (A2), Jaan_70 (A2), XianYue_67 (A2),

Start 17:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anthony_70 (A20), FatCactus_68 (A20),

Start 18:

- Found in 1 of 91 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BodEinwohner17_47 (F1),

Start 19:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 1 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Colin_70 (A2), Trixie_70 (A2),

Start 22:

- Found in 1 of 91 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Min1_10 (singleton),

Start 57:

- Found in 2 of 91 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 81
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jordennis_71 (A6), Priamo_74 (A6),

Summary by clusters:

There are 8 clusters represented in this pham: A20, F1, A22, P1, I1, singleton, A2, A6,

Info for manual annotations of cluster A2:

- Start number 6 was manually annotated 2 times for cluster A2.
- Start number 7 was manually annotated 3 times for cluster A2.
- Start number 12 was manually annotated 2 times for cluster A2.
- Start number 13 was manually annotated 3 times for cluster A2.
- Start number 16 was manually annotated 3 times for cluster A2.
- Start number 19 was manually annotated 1 time for cluster A2.

Info for manual annotations of cluster A20:

- Start number 17 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A22:

- Start number 16 was manually annotated 1 time for cluster A22.

Info for manual annotations of cluster A6:

- Start number 6 was manually annotated 13 times for cluster A6.
- Start number 57 was manually annotated 2 times for cluster A6.

Info for manual annotations of cluster F1:

- Start number 18 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster I1:

- Start number 8 was manually annotated 6 times for cluster I1.

Info for manual annotations of cluster P1:

- Start number 8 was manually annotated 43 times for cluster P1.

Gene Information:

Gene: Adzzy_77 Start: 43239, Stop: 42412, Start Num: 12

Candidate Starts for Adzzy_77:

(Start: 7 @43266 has 3 MA's), (Start: 12 @43239 has 2 MA's), (29, 43146), (34, 43107), (37, 43089), (56, 43032), (78, 42843), (84, 42804), (87, 42768), (89, 42747), (92, 42714), (109, 42543), (117, 42435),

Gene: Anthony_70 Start: 42960, Stop: 42178, Start Num: 17

Candidate Starts for Anthony_70:

(Start: 17 @42960 has 1 MA's), (73, 42675), (88, 42528), (98, 42453), (101, 42426),

Gene: Arib1_34 Start: 27945, Stop: 28808, Start Num: 8

Candidate Starts for Arib1_34:

(Start: 8 @27945 has 49 MA's), (23, 28026), (27, 28050), (29, 28059), (31, 28086), (35, 28107), (60, 28203), (64, 28212), (65, 28227), (67, 28236), (76, 28338), (94, 28521), (104, 28575), (110, 28704), (114, 28746), (119, 28794),

Gene: Atcoo_34 Start: 28426, Stop: 29292, Start Num: 8

Candidate Starts for Atcoo_34:

(Start: 8 @28426 has 49 MA's), (23, 28507), (27, 28531), (29, 28540), (31, 28567), (35, 28588), (64, 28696), (65, 28711), (76, 28822), (94, 29005), (104, 29059), (110, 29188), (114, 29230), (119, 29278),

Gene: BABullseye_65 Start: 39826, Stop: 38978, Start Num: 6

Candidate Starts for BABullseye_65:

(Start: 6 @39826 has 15 MA's), (Start: 7 @39817 has 3 MA's), (Start: 16 @39793 has 4 MA's), (29, 39703), (34, 39664), (39, 39634), (47, 39610), (53, 39592), (54, 39589), (63, 39550), (69, 39517), (73, 39463), (81, 39376), (82, 39373), (97, 39253), (102, 39214), (107, 39121), (114, 39040),

Gene: Babsiella_36 Start: 28877, Stop: 29746, Start Num: 8

Candidate Starts for Babsiella_36:

(Start: 8 @28877 has 49 MA's), (27, 28985), (29, 28994), (35, 29042), (64, 29150), (65, 29165), (76, 29276), (94, 29459), (104, 29513), (110, 29642), (114, 29684), (119, 29732),

Gene: Bartholomew_33 Start: 27939, Stop: 28805, Start Num: 8

Candidate Starts for Bartholomew_33:

(Start: 8 @27939 has 49 MA's), (23, 28020), (27, 28044), (29, 28053), (35, 28101), (64, 28209), (65, 28224), (76, 28335), (94, 28518), (104, 28572), (110, 28701), (114, 28743), (119, 28791),

Gene: Bhagsy_34 Start: 27935, Stop: 28798, Start Num: 8

Candidate Starts for Bhagsy_34:

(Start: 8 @27935 has 49 MA's), (23, 28016), (27, 28040), (29, 28049), (35, 28097), (60, 28193), (64, 28202), (65, 28217), (76, 28328), (94, 28511), (104, 28565), (110, 28694), (114, 28736), (119, 28784),

Gene: Blinn1_76 Start: 42445, Stop: 41582, Start Num: 6

Candidate Starts for Blinn1_76:

(Start: 6 @42445 has 15 MA's), (Start: 7 @42436 has 3 MA's), (Start: 16 @42412 has 4 MA's), (29, 42322), (34, 42283), (54, 42196), (73, 42067), (81, 41980), (82, 41977), (97, 41857), (102, 41818), (107, 41725),

Gene: BodEinwohner17_47 Start: 35274, Stop: 36077, Start Num: 18

Candidate Starts for BodEinwohner17_47:

(Start: 18 @35274 has 1 MA's), (26, 35340), (29, 35349), (33, 35385), (49, 35451), (52, 35457), (55, 35463), (60, 35490), (68, 35526), (69, 35529), (70, 35550), (72, 35571), (73, 35583), (74, 35586), (79, 35670), (85, 35715), (86, 35721), (88, 35727), (90, 35751), (92, 35778), (94, 35796), (99, 35817), (104, 35850), (106, 35910), (108, 35937), (111, 35976), (113, 35994), (114, 36015), (115, 36024), (118, 36060), (120, 36069),

Gene: Bogie_36 Start: 29722, Stop: 30588, Start Num: 8

Candidate Starts for Bogie_36:

(Start: 8 @29722 has 49 MA's), (23, 29803), (27, 29827), (29, 29836), (31, 29863), (35, 29884), (64, 29992), (65, 30007), (76, 30118), (94, 30301), (104, 30355), (114, 30526), (119, 30574),

Gene: BronnyJr_34 Start: 28436, Stop: 29302, Start Num: 8

Candidate Starts for BronnyJr_34:

(Start: 8 @28436 has 49 MA's), (23, 28517), (27, 28541), (29, 28550), (35, 28598), (64, 28706), (65, 28721), (76, 28832), (94, 29015), (104, 29069), (110, 29198), (114, 29240), (119, 29288),

Gene: Brujita_36 Start: 29775, Stop: 30644, Start Num: 8

Candidate Starts for Brujita_36:

(Start: 8 @29775 has 49 MA's), (27, 29883), (29, 29892), (35, 29940), (64, 30048), (65, 30063), (76, 30174), (94, 30357), (104, 30411), (110, 30540), (114, 30582), (119, 30630),

Gene: Brusacoram_34 Start: 27932, Stop: 28798, Start Num: 8

Candidate Starts for Brusacoram_34:

(Start: 8 @27932 has 49 MA's), (23, 28013), (27, 28037), (29, 28046), (31, 28073), (35, 28094), (64, 28202), (65, 28217), (76, 28328), (94, 28511), (104, 28565), (110, 28694), (114, 28736), (119, 28784),

Gene: Bunnies_34 Start: 27953, Stop: 28819, Start Num: 8

Candidate Starts for Bunnies_34:

(Start: 8 @27953 has 49 MA's), (23, 28034), (27, 28058), (29, 28067), (31, 28094), (35, 28115), (64, 28223), (65, 28238), (76, 28349), (94, 28532), (104, 28586), (110, 28715), (114, 28757), (119, 28805),

Gene: CactusJack_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for CactusJack_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: Camster_34 Start: 27969, Stop: 28835, Start Num: 8

Candidate Starts for Camster_34:

(Start: 8 @27969 has 49 MA's), (23, 28050), (27, 28074), (29, 28083), (31, 28110), (35, 28131), (64, 28239), (65, 28254), (76, 28365), (94, 28548), (104, 28602), (114, 28773), (119, 28821),

Gene: Caraxes_76 Start: 43021, Stop: 42170, Start Num: 13

Candidate Starts for Caraxes_76:

(Start: 7 @43054 has 3 MA's), (Start: 13 @43021 has 3 MA's), (21, 42970), (28, 42931), (34, 42889), (73, 42673), (93, 42493), (100, 42433), (101, 42424), (109, 42319),

Gene: Chargerpower_70 Start: 41985, Stop: 41206, Start Num: 16

Candidate Starts for Chargerpower_70:

(Start: 16 @41985 has 4 MA's), (34, 41895), (49, 41829), (69, 41745), (73, 41691), (79, 41613), (81, 41604), (107, 41349),

Gene: Che12_77 Start: 43138, Stop: 42296, Start Num: 12

Candidate Starts for Che12_77:

(Start: 7 @43165 has 3 MA's), (Start: 12 @43138 has 2 MA's), (29, 43045), (34, 43006), (47, 42952), (59, 42889), (69, 42850), (77, 42730), (78, 42727), (84, 42688), (87, 42652), (89, 42631), (92, 42598), (98, 42559), (105, 42514), (109, 42427), (117, 42319),

Gene: Chubbello_34 Start: 27935, Stop: 28801, Start Num: 8

Candidate Starts for Chubbello_34:

(Start: 8 @27935 has 49 MA's), (23, 28016), (27, 28040), (29, 28049), (35, 28097), (64, 28205), (65, 28220), (76, 28331), (94, 28514), (104, 28568), (110, 28697), (114, 28739), (119, 28787),

Gene: Colin_70 Start: 43999, Stop: 43229, Start Num: 19

Candidate Starts for Colin_70:

(9, 44038), (Start: 19 @43999 has 1 MA's), (27, 43957), (34, 43909), (45, 43861), (73, 43711), (107, 43372),

Gene: Cookiedough_72 Start: 42134, Stop: 41286, Start Num: 6

Candidate Starts for Cookiedough_72:

(Start: 6 @42134 has 15 MA's), (Start: 7 @42125 has 3 MA's), (Start: 16 @42101 has 4 MA's), (29, 42011), (34, 41972), (39, 41942), (47, 41918), (53, 41900), (54, 41897), (63, 41858), (69, 41825), (73, 41771), (81, 41684), (82, 41681), (97, 41561), (102, 41522), (107, 41429), (114, 41348),

Gene: Donovan_34 Start: 27961, Stop: 28824, Start Num: 8

Candidate Starts for Donovan_34:

(Start: 8 @27961 has 49 MA's), (23, 28042), (27, 28066), (29, 28075), (31, 28102), (35, 28123), (60, 28219), (64, 28228), (65, 28243), (76, 28354), (94, 28537), (104, 28591), (110, 28720), (114, 28762), (119, 28810),

Gene: Dorothea_72 Start: 42132, Stop: 41284, Start Num: 6

Candidate Starts for Dorothea_72:

(Start: 6 @42132 has 15 MA's), (Start: 7 @42123 has 3 MA's), (Start: 16 @42099 has 4 MA's), (24, 42036), (29, 42009), (34, 41970), (39, 41940), (47, 41916), (53, 41898), (54, 41895), (63, 41856), (69, 41823), (73, 41769), (81, 41682), (82, 41679), (97, 41559), (102, 41520), (107, 41427), (114, 41346),

Gene: Dynamo_34 Start: 28347, Stop: 29213, Start Num: 8

Candidate Starts for Dynamo_34:

(Start: 8 @28347 has 49 MA's), (23, 28428), (27, 28452), (29, 28461), (35, 28509), (64, 28617), (65, 28632), (76, 28743), (94, 28926), (104, 28980), (110, 29109), (114, 29151), (119, 29199),

Gene: Etoile_34 Start: 27939, Stop: 28805, Start Num: 8

Candidate Starts for Etoile_34:

(Start: 8 @27939 has 49 MA's), (23, 28020), (27, 28044), (29, 28053), (35, 28101), (64, 28209), (65, 28224), (67, 28233), (76, 28335), (94, 28518), (104, 28572), (110, 28701), (114, 28743), (119, 28791),

Gene: FatCactus_68 Start: 42406, Stop: 41588, Start Num: 17

Candidate Starts for FatCactus_68:

(Start: 17 @42406 has 1 MA's), (21, 42364), (28, 42325), (34, 42283), (43, 42250), (59, 42178), (66, 42145), (73, 42085), (88, 41938), (101, 41836),

Gene: FirstPlacePfu_34 Start: 27971, Stop: 28837, Start Num: 8

Candidate Starts for FirstPlacePfu_34:

(Start: 8 @27971 has 49 MA's), (23, 28052), (27, 28076), (29, 28085), (35, 28133), (64, 28241), (65, 28256), (76, 28367), (94, 28550), (104, 28604), (110, 28733), (114, 28775), (119, 28823),

Gene: Fishburne_34 Start: 27939, Stop: 28805, Start Num: 8

Candidate Starts for Fishburne_34:

(Start: 8 @27939 has 49 MA's), (23, 28020), (27, 28044), (29, 28053), (35, 28101), (64, 28209), (65, 28224), (76, 28335), (94, 28518), (104, 28572), (110, 28701), (114, 28743), (119, 28791),

Gene: GaloreK_34 Start: 27935, Stop: 28798, Start Num: 8

Candidate Starts for GaloreK_34:

(Start: 8 @27935 has 49 MA's), (23, 28016), (27, 28040), (29, 28049), (31, 28076), (35, 28097), (60, 28193), (64, 28202), (65, 28217), (67, 28226), (76, 28328), (94, 28511), (104, 28565), (110, 28694), (114, 28736), (119, 28784),

Gene: Gavriela_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for Gavriela_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: Gladiator_70 Start: 41751, Stop: 40912, Start Num: 6

Candidate Starts for Gladiator_70:

(Start: 6 @41751 has 15 MA's), (Start: 7 @41742 has 3 MA's), (Start: 16 @41718 has 4 MA's), (29, 41628), (34, 41589), (35, 41580), (44, 41547), (54, 41517), (63, 41484), (73, 41397), (81, 41310), (82, 41307), (97, 41187), (102, 41148), (107, 41055), (114, 40974),

Gene: Glaske_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for Glaske_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: GreaseLightnin_34 Start: 28179, Stop: 29045, Start Num: 8

Candidate Starts for GreaseLightnin_34:

(Start: 8 @28179 has 49 MA's), (27, 28284), (29, 28293), (35, 28341), (64, 28449), (65, 28464), (76, 28575), (94, 28758), (104, 28812), (110, 28941), (114, 28983), (119, 29031),

Gene: HC_34 Start: 27658, Stop: 28527, Start Num: 8

Candidate Starts for HC_34:

(Start: 8 @27658 has 49 MA's), (27, 27766), (29, 27775), (35, 27823), (64, 27931), (65, 27946), (76, 28057), (94, 28240), (104, 28294), (110, 28423), (114, 28465), (119, 28513),

Gene: HUHilltop_34 Start: 27972, Stop: 28835, Start Num: 8

Candidate Starts for HUHilltop_34:

(Start: 8 @27972 has 49 MA's), (23, 28053), (27, 28077), (29, 28086), (31, 28113), (35, 28134), (60, 28230), (64, 28239), (65, 28254), (76, 28365), (94, 28548), (104, 28602), (114, 28773), (119, 28821),

Gene: IronMan_69 Start: 44419, Stop: 43604, Start Num: 7

Candidate Starts for IronMan_69:

(4, 44446), (Start: 7 @44419 has 3 MA's), (14, 44386), (29, 44302), (34, 44263), (36, 44251), (50, 44194), (75, 44041), (107, 43750),

Gene: Isiphiwo_70 Start: 41692, Stop: 40844, Start Num: 6

Candidate Starts for Isiphiwo_70:

(Start: 6 @41692 has 15 MA's), (Start: 7 @41683 has 3 MA's), (Start: 16 @41659 has 4 MA's), (29, 41569), (34, 41530), (39, 41500), (47, 41476), (53, 41458), (54, 41455), (63, 41416), (69, 41383), (73, 41329), (81, 41242), (82, 41239), (97, 41119), (102, 41080), (107, 40987), (114, 40906),

Gene: Island3_36 Start: 29775, Stop: 30644, Start Num: 8

Candidate Starts for Island3_36:

(Start: 8 @29775 has 49 MA's), (27, 29883), (29, 29892), (35, 29940), (64, 30048), (65, 30063), (76, 30174), (94, 30357), (104, 30411), (110, 30540), (114, 30582), (119, 30630),

Gene: Iwokeuplikedis_72 Start: 43407, Stop: 42592, Start Num: 16

Candidate Starts for Iwokeuplikedis_72:

(Start: 16 @43407 has 4 MA's), (25, 43341), (30, 43314), (34, 43278), (54, 43203), (69, 43134), (73, 43080), (81, 42993), (97, 42870), (103, 42825), (107, 42738), (114, 42657),

Gene: Jaan_70 Start: 44554, Stop: 43772, Start Num: 16

Candidate Starts for Jaan_70:

(Start: 16 @44554 has 4 MA's), (29, 44470), (34, 44431), (36, 44419), (50, 44362), (58, 44341), (75, 44209), (107, 43918),

Gene: Jebeks_35 Start: 27924, Stop: 28790, Start Num: 8

Candidate Starts for Jebeks_35:

(Start: 8 @27924 has 49 MA's), (23, 28005), (27, 28029), (29, 28038), (31, 28065), (35, 28086), (64, 28194), (65, 28209), (76, 28320), (94, 28503), (104, 28557), (110, 28686), (114, 28728), (119, 28776),

Gene: JewelBug_72 Start: 42414, Stop: 41578, Start Num: 6

Candidate Starts for JewelBug_72:

(Start: 6 @42414 has 15 MA's), (Start: 7 @42405 has 3 MA's), (Start: 16 @42381 has 4 MA's), (29, 42291), (34, 42252), (36, 42240), (71, 42090), (81, 41976), (82, 41973), (97, 41853), (102, 41814), (107, 41721), (114, 41640),

Gene: Jordennis_71 Start: 41658, Stop: 41059, Start Num: 57

Candidate Starts for Jordennis_71:

(Start: 57 @41658 has 2 MA's), (63, 41631), (69, 41598), (73, 41544), (81, 41457), (82, 41454), (97, 41334), (102, 41295), (107, 41202), (114, 41121),

Gene: Jung_33 Start: 27903, Stop: 28766, Start Num: 8

Candidate Starts for Jung_33:

(Start: 8 @27903 has 49 MA's), (23, 27984), (27, 28008), (29, 28017), (35, 28065), (42, 28089), (64, 28170), (65, 28185), (76, 28296), (94, 28479), (104, 28533), (110, 28662), (114, 28704), (119, 28752),

Gene: Juniormint_34 Start: 27975, Stop: 28841, Start Num: 8

Candidate Starts for Juniormint_34:

(Start: 8 @27975 has 49 MA's), (23, 28056), (27, 28080), (29, 28089), (31, 28116), (35, 28137), (64, 28245), (65, 28260), (76, 28371), (94, 28554), (104, 28608), (110, 28737), (114, 28779), (119, 28827),

Gene: Kari_34 Start: 27936, Stop: 28802, Start Num: 8

Candidate Starts for Kari_34:

(Start: 8 @27936 has 49 MA's), (23, 28017), (27, 28041), (29, 28050), (35, 28098), (64, 28206), (65, 28221), (76, 28332), (94, 28515), (104, 28569), (110, 28698), (114, 28740), (119, 28788),

Gene: KilKor_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for KilKor_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: Ksquared_34 Start: 27953, Stop: 28819, Start Num: 8

Candidate Starts for Ksquared_34:

(Start: 8 @27953 has 49 MA's), (23, 28034), (27, 28058), (29, 28067), (31, 28094), (35, 28115), (64, 28223), (65, 28238), (76, 28349), (94, 28532), (104, 28586), (110, 28715), (114, 28757), (119, 28805),

Gene: Landor_70 Start: 44512, Stop: 43679, Start Num: 7

Candidate Starts for Landor_70:

(4, 44539), (Start: 7 @44512 has 3 MA's), (10, 44488), (29, 44404), (34, 44365), (73, 44164), (74, 44161), (97, 43957), (107, 43825),

Gene: Langerak_34 Start: 27955, Stop: 28818, Start Num: 8

Candidate Starts for Langerak_34:

(Start: 8 @27955 has 49 MA's), (23, 28036), (27, 28060), (29, 28069), (31, 28096), (35, 28117), (60, 28213), (64, 28222), (65, 28237), (67, 28246), (76, 28348), (94, 28531), (104, 28585), (110, 28714), (114, 28756), (119, 28804),

Gene: Majeke_34 Start: 27977, Stop: 28843, Start Num: 8

Candidate Starts for Majeke_34:

(Start: 8 @27977 has 49 MA's), (23, 28058), (27, 28082), (29, 28091), (35, 28139), (64, 28247), (65, 28262), (76, 28373), (94, 28556), (104, 28610), (110, 28739), (114, 28781), (119, 28829),

Gene: Malithi_34 Start: 27862, Stop: 28728, Start Num: 8

Candidate Starts for Malithi_34:

(Start: 8 @27862 has 49 MA's), (23, 27943), (27, 27967), (29, 27976), (31, 28003), (35, 28024), (64, 28132), (65, 28147), (76, 28258), (94, 28441), (104, 28495), (114, 28666), (119, 28714),

Gene: Mangethe_34 Start: 27977, Stop: 28843, Start Num: 8

Candidate Starts for Mangethe_34:

(Start: 8 @27977 has 49 MA's), (23, 28058), (27, 28082), (29, 28091), (35, 28139), (64, 28247), (65, 28262), (76, 28373), (94, 28556), (104, 28610), (110, 28739), (114, 28781), (119, 28829),

Gene: Megiddo_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for Megiddo_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: Min1_10 Start: 3743, Stop: 4495, Start Num: 22

Candidate Starts for Min1_10:

(15, 3686), (20, 3734), (22, 3743), (23, 3749), (27, 3773), (31, 3809), (48, 3881), (63, 3935), (83, 4118), (95, 4235), (106, 4346), (112, 4418), (116, 4466),

Gene: Necropolis_34 Start: 27936, Stop: 28802, Start Num: 8

Candidate Starts for Necropolis_34:

(Start: 8 @27936 has 49 MA's), (23, 28017), (27, 28041), (29, 28050), (35, 28098), (64, 28206), (65, 28221), (76, 28332), (94, 28515), (104, 28569), (110, 28698), (114, 28740), (119, 28788),

Gene: Neeharika16_71 Start: 41586, Stop: 40738, Start Num: 6

Candidate Starts for Neeharika16_71:

(Start: 6 @41586 has 15 MA's), (Start: 7 @41577 has 3 MA's), (Start: 16 @41553 has 4 MA's), (29, 41463), (34, 41424), (39, 41394), (47, 41370), (53, 41352), (54, 41349), (63, 41310), (69, 41277), (73, 41223), (81, 41136), (82, 41133), (97, 41013), (102, 40974), (107, 40881), (114, 40800),

Gene: Newrala_72 Start: 42117, Stop: 41278, Start Num: 6

Candidate Starts for Newrala_72:

(Start: 6 @42117 has 15 MA's), (Start: 7 @42108 has 3 MA's), (Start: 16 @42084 has 4 MA's), (29, 41994), (34, 41955), (35, 41946), (44, 41913), (54, 41883), (63, 41850), (73, 41763), (81, 41676), (82, 41673), (97, 41553), (102, 41514), (107, 41421), (114, 41340),

Gene: Odin_74 Start: 43407, Stop: 42565, Start Num: 13

Candidate Starts for Odin_74:

(Start: 13 @43407 has 3 MA's), (34, 43275), (41, 43236), (47, 43221), (51, 43203), (59, 43167), (62, 43161), (69, 43128), (72, 43086), (81, 42987), (82, 42984), (87, 42927), (96, 42852), (103, 42792), (105, 42783), (117, 42588),

Gene: PeanutPie_34 Start: 27935, Stop: 28798, Start Num: 8

Candidate Starts for PeanutPie_34:

(Start: 8 @27935 has 49 MA's), (23, 28016), (27, 28040), (29, 28049), (35, 28097), (60, 28193), (64, 28202), (65, 28217), (76, 28328), (94, 28511), (104, 28565), (110, 28694), (114, 28736), (119, 28784),

Gene: Ph8s_77 Start: 43456, Stop: 42623, Start Num: 13

Candidate Starts for Ph8s_77:

(Start: 7 @43483 has 3 MA's), (Start: 13 @43456 has 3 MA's), (21, 43405), (32, 43330), (34, 43324), (46, 43285), (65, 43195), (73, 43126), (100, 42886), (101, 42877), (109, 42772), (120, 42646), (121, 42643), (122, 42631),

Gene: Phaded_67 Start: 44471, Stop: 43656, Start Num: 7

Candidate Starts for Phaded_67:

(4, 44498), (Start: 7 @44471 has 3 MA's), (14, 44438), (29, 44354), (34, 44315), (36, 44303), (50, 44246), (58, 44225), (75, 44093), (107, 43802),

Gene: Phalm_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for Phalm_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: Phegasus_34 Start: 27944, Stop: 28810, Start Num: 8

Candidate Starts for Phegasus_34:

(Start: 8 @27944 has 49 MA's), (23, 28025), (27, 28049), (29, 28058), (35, 28106), (64, 28214), (65, 28229), (76, 28340), (94, 28523), (104, 28577), (110, 28706), (114, 28748), (119, 28796),

Gene: Phineas_34 Start: 28307, Stop: 29173, Start Num: 8

Candidate Starts for Phineas_34:

(Start: 8 @28307 has 49 MA's), (23, 28388), (27, 28412), (29, 28421), (35, 28469), (64, 28577), (65, 28592), (76, 28703), (94, 28886), (104, 28940), (110, 29069), (114, 29111), (119, 29159),

Gene: Pmask_71 Start: 42122, Stop: 41274, Start Num: 6

Candidate Starts for Pmask_71:

(Start: 6 @42122 has 15 MA's), (Start: 7 @42113 has 3 MA's), (Start: 16 @42089 has 4 MA's), (29, 41999), (34, 41960), (39, 41930), (47, 41906), (53, 41888), (54, 41885), (63, 41846), (69, 41813), (73, 41759), (81, 41672), (82, 41669), (97, 41549), (102, 41510), (107, 41417), (114, 41336),

Gene: Polkaroo_34 Start: 27953, Stop: 28816, Start Num: 8

Candidate Starts for Polkaroo_34:

(Start: 8 @27953 has 49 MA's), (23, 28034), (27, 28058), (29, 28067), (35, 28115), (42, 28139), (64, 28220), (65, 28235), (76, 28346), (94, 28529), (104, 28583), (110, 28712), (114, 28754), (119, 28802),

Gene: Polyphemus_74 Start: 42500, Stop: 41664, Start Num: 6

Candidate Starts for Polyphemus_74:

(Start: 6 @42500 has 15 MA's), (Start: 7 @42491 has 3 MA's), (Start: 16 @42467 has 4 MA's), (29, 42377), (34, 42338), (36, 42326), (71, 42176), (81, 42062), (82, 42059), (97, 41939), (102, 41900), (107, 41807), (114, 41726),

Gene: Priamo_74 Start: 41728, Stop: 41129, Start Num: 57

Candidate Starts for Priamo_74:

(Start: 57 @41728 has 2 MA's), (63, 41701), (69, 41668), (73, 41614), (81, 41527), (82, 41524), (97, 41404), (102, 41365), (107, 41272), (114, 41191),

Gene: Pukovnik_68 Start: 44139, Stop: 43324, Start Num: 6

Candidate Starts for Pukovnik_68:

(Start: 6 @44139 has 15 MA's), (Start: 7 @44130 has 3 MA's), (11, 44106), (24, 44049), (25, 44046), (28, 44025), (29, 44022), (34, 43983), (35, 43974), (40, 43947), (41, 43944), (62, 43878), (64, 43875), (80, 43725), (91, 43641), (93, 43626), (97, 43599), (107, 43467),

Gene: Pygmy_36 Start: 29778, Stop: 30644, Start Num: 8

Candidate Starts for Pygmy_36:

(Start: 8 @29778 has 49 MA's), (23, 29859), (27, 29883), (29, 29892), (31, 29919), (35, 29940), (64, 30048), (65, 30063), (76, 30174), (94, 30357), (104, 30411), (114, 30582), (119, 30630),

Gene: QueenHazel_32 Start: 27811, Stop: 28680, Start Num: 8

Candidate Starts for QueenHazel_32:

(Start: 8 @27811 has 49 MA's), (27, 27919), (29, 27928), (35, 27976), (64, 28084), (65, 28099), (76, 28210), (94, 28393), (104, 28447), (110, 28576), (114, 28618), (119, 28666),

Gene: Shipwreck_36 Start: 29753, Stop: 30619, Start Num: 8

Candidate Starts for Shipwreck_36:

(Start: 8 @29753 has 49 MA's), (23, 29834), (27, 29858), (29, 29867), (31, 29894), (35, 29915), (64, 30023), (65, 30038), (76, 30149), (94, 30332), (104, 30386), (114, 30557), (119, 30605),

Gene: Sonah_34 Start: 27925, Stop: 28791, Start Num: 8

Candidate Starts for Sonah_34:

(Start: 8 @27925 has 49 MA's), (23, 28006), (27, 28030), (29, 28039), (31, 28066), (35, 28087), (64, 28195), (65, 28210), (76, 28321), (94, 28504), (104, 28558), (110, 28687), (114, 28729), (119, 28777),

Gene: StevieRay_34 Start: 27895, Stop: 28758, Start Num: 8

Candidate Starts for StevieRay_34:

(Start: 8 @27895 has 49 MA's), (27, 28000), (29, 28009), (35, 28057), (42, 28081), (64, 28162), (65, 28177), (76, 28288), (94, 28471), (104, 28525), (110, 28654), (114, 28696), (119, 28744),

Gene: StressBall_34 Start: 28196, Stop: 29059, Start Num: 8

Candidate Starts for StressBall_34:

(Start: 8 @28196 has 49 MA's), (23, 28277), (27, 28301), (29, 28310), (35, 28358), (42, 28382), (64, 28463), (65, 28478), (76, 28589), (94, 28772), (104, 28826), (110, 28955), (114, 28997), (119, 29045),

Gene: SuperAwesome_72 Start: 42164, Stop: 41316, Start Num: 6

Candidate Starts for SuperAwesome_72:

(Start: 6 @42164 has 15 MA's), (Start: 7 @42155 has 3 MA's), (Start: 16 @42131 has 4 MA's), (29, 42041), (34, 42002), (39, 41972), (47, 41948), (53, 41930), (54, 41927), (63, 41888), (69, 41855), (73, 41801), (81, 41714), (82, 41711), (97, 41591), (102, 41552), (107, 41459), (114, 41378),

Gene: SuperCallie99_69 Start: 42006, Stop: 41158, Start Num: 6

Candidate Starts for SuperCallie99_69:

(Start: 6 @42006 has 15 MA's), (Start: 7 @41997 has 3 MA's), (Start: 16 @41973 has 4 MA's), (29, 41883), (34, 41844), (39, 41814), (47, 41790), (53, 41772), (54, 41769), (63, 41730), (69, 41697), (73, 41643), (81, 41556), (82, 41553), (97, 41433), (102, 41394), (107, 41301), (114, 41220),

Gene: Superchunk_75 Start: 43021, Stop: 42170, Start Num: 13

Candidate Starts for Superchunk_75:

(Start: 7 @43054 has 3 MA's), (Start: 13 @43021 has 3 MA's), (21, 42970), (28, 42931), (34, 42889), (73, 42673), (93, 42493), (100, 42433), (101, 42424), (109, 42319),

Gene: Techage_34 Start: 27962, Stop: 28828, Start Num: 8

Candidate Starts for Techage_34:

(Start: 8 @27962 has 49 MA's), (23, 28043), (27, 28067), (29, 28076), (35, 28124), (64, 28232), (65, 28247), (67, 28256), (76, 28358), (94, 28541), (104, 28595), (110, 28724), (114, 28766), (119, 28814),

Gene: Thespis_34 Start: 27932, Stop: 28798, Start Num: 8

Candidate Starts for Thespis_34:

(Start: 8 @27932 has 49 MA's), (23, 28013), (27, 28037), (29, 28046), (31, 28073), (35, 28094), (64, 28202), (65, 28217), (76, 28328), (94, 28511), (104, 28565), (110, 28694), (114, 28736), (119, 28784),

Gene: Tristan_68 Start: 44342, Stop: 43494, Start Num: 6

Candidate Starts for Tristan_68:

(3, 44366), (5, 44351), (Start: 6 @44342 has 15 MA's), (Start: 7 @44333 has 3 MA's), (14, 44300), (25, 44240), (29, 44216), (34, 44177), (38, 44153), (54, 44099), (62, 44066), (73, 43979), (97, 43772), (107, 43640),

Gene: Trixie_70 Start: 43815, Stop: 43045, Start Num: 19

Candidate Starts for Trixie_70:

(9, 43854), (Start: 19 @43815 has 1 MA's), (27, 43773), (36, 43713), (73, 43527), (107, 43188),

Gene: Venti_34 Start: 27939, Stop: 28805, Start Num: 8

Candidate Starts for Venti_34:

(Start: 8 @27939 has 49 MA's), (23, 28020), (27, 28044), (29, 28053), (35, 28101), (64, 28209), (65, 28224), (76, 28335), (94, 28518), (104, 28572), (110, 28701), (114, 28743), (119, 28791),

Gene: Vidya_34 Start: 27972, Stop: 28838, Start Num: 8

Candidate Starts for Vidya_34:

(Start: 8 @27972 has 49 MA's), (23, 28053), (27, 28077), (29, 28086), (35, 28134), (64, 28242), (65, 28257), (76, 28368), (94, 28551), (104, 28605), (110, 28734), (114, 28776), (119, 28824),

Gene: Willsammy_33 Start: 27679, Stop: 28542, Start Num: 8

Candidate Starts for Willsammy_33:

(Start: 8 @27679 has 49 MA's), (23, 27760), (27, 27784), (29, 27793), (35, 27841), (42, 27865), (64, 27946), (65, 27961), (76, 28072), (94, 28255), (104, 28309), (110, 28438), (114, 28480), (119, 28528),

Gene: XianYue_67 Start: 43032, Stop: 42220, Start Num: 16

Candidate Starts for XianYue_67:

(1, 43182), (2, 43155), (Start: 6 @43077 has 15 MA's), (Start: 7 @43068 has 3 MA's), (Start: 16 @43032 has 4 MA's), (25, 42972), (27, 42957), (31, 42921), (34, 42909), (41, 42870), (49, 42843), (61, 42795), (69, 42759), (73, 42705), (93, 42522), (97, 42495), (103, 42450), (107, 42363),

Gene: Xula_31 Start: 27335, Stop: 28204, Start Num: 8

Candidate Starts for Xula_31:

(Start: 8 @27335 has 49 MA's), (27, 27443), (29, 27452), (35, 27500), (64, 27608), (65, 27623), (76, 27734), (94, 27917), (104, 27971), (110, 28100), (114, 28142), (119, 28190),

Gene: Zilizabeth_34 Start: 27971, Stop: 28837, Start Num: 8

Candidate Starts for Zilizabeth_34:

(Start: 8 @27971 has 49 MA's), (23, 28052), (27, 28076), (29, 28085), (35, 28133), (64, 28241), (65, 28256), (76, 28367), (94, 28550), (104, 28604), (110, 28733), (114, 28775), (119, 28823),