

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 306348 Report

This analysis was run 06/27/26 on database version 652.

Pham number 306348 has 92 members, 21 are drafts.

Phages represented in each track:

- Track 1 : StAugustine_15
- Track 2 : Causa_17
- Track 3 : Shrubaron_25, Metamorphoo_25, Tyrumbra_23, RobsFeet_26
- Track 4 : Paschalis_24, Jollipop_25, PiperSansNom_25, Glorp_26, Phrancesco_25, PierreOrion_25, Piperis_25
- Track 5 : Ganandorf_24, Busephilis_24
- Track 6 : Rockwell_24, Hermeonysus_24, LittleFortune_26, Jefe_25, Cranjis_26, BeagleBug_24, KaiHaiDragon_25, Selwyn23_26, Pulchra_26, Ramiel05_24, Lucretia_25, EarickHC_25, Savannah_24, BrazzalePHS_24, Antares_25, Scumberland_26, Germa_26, CrazyRich_24, Crisis_26, Quhwah_27, Honeyfin_26, Kowalski_24
- Track 7 : Yeti_25
- Track 8 : Ariadne_33, Smarties_33
- Track 9 : ClearAsMud_27
- Track 10 : PhedwardCullen_24, Phorgeous_24
- Track 11 : Skugga_23
- Track 12 : Jayden_26
- Track 13 : Megan_19
- Track 14 : Onika_24
- Track 15 : SirFrank_24, NoodlelyBoi_24
- Track 16 : Gina_26
- Track 17 : Teamocil_26
- Track 18 : Merry_, Sunny_
- Track 19 : Nicole72_20
- Track 20 : Fireman_25
- Track 21 : Shotgun_24
- Track 22 : Zapato_24
- Track 23 : Cinna_20
- Track 24 : Margaery_19
- Track 25 : Cressida_22
- Track 26 : Matzah_21
- Track 27 : Kozie_21
- Track 28 : MementoMori_21
- Track 29 : Terij_20
- Track 30 : KSunshine22_75, Ellewin_69, Emmetator_73, WaddleDee_68, DunneganBoMo_70, Artu_73, BooTeria_77
- Track 31 : FrostedClock_83, Bloom_84, Racecar_81, Mimi_80, Talia1610_80

- Track 32 : Chilliams_77
- Track 33 : Phrampa_72
- Track 34 : SJReid_83
- Track 35 : Rockabye_82
- Track 36 : ReginaGlobina_80, Atuin_75
- Track 37 : Panchaali_73
- Track 38 : FloraSnap32_80, Patbob_79
- Track 39 : LeoJr_80
- Track 40 : GoldenEssence_66
- Track 41 : Stewart25555_71
- Track 42 : MisoSoup_14
- Track 43 : FuzzBuster_27
- Track 44 : Laure_82
- Track 45 : phiAsp2_7

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

The start number called the most often in the published annotations is 19, it was called in 56 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antares_25, Ariadne_33, BeagleBug_24, BrazzalePHS_24, Busephillis_24, Cinna_20, ClearAsMud_27, Cranjis_26, CrazyRich_24, Cressida_22, Crisis_26, EarickHC_25, Fireman_25, Ganandorf_24, Germa_26, Gina_26, Glorp_26, Hermeonysus_24, Honeyfin_26, Jayden_26, Jefe_25, Jollipop_25, KaiHaiDragon_25, Kowalski_24, Kozi_21, LittleFortune_26, Lucretia_25, Margaery_19, Matzah_21, Megan_19, MementoMori_21, Merry_, Metamorphoo_25, Nicole72_20, NoodlelyBoi_24, Onika_24, Paschalis_24, PhedwardCullen_24, Phorgeous_24, Phrancesco_25, PierreOrion_25, PiperSansNom_25, Piperis_25, Pulchra_26, Quhwah_27, Ramiel05_24, RobsFeet_26, Rockwell_24, Savannah_24, Scumberland_26, Selwyn23_26, Shotgun_24, Shrubaron_25, SirFrank_24, Skugga_23, Smarties_33, Sunny_, Teamocil_26, Terij_20, Tyrumbra_23, Yeti_25, Zapato_24,

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

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

- Artu_73, Atuin_75, Bloom_84, BooTeria_77, Causa_17, Chilliams_77, DunneganBoMo_70, Ellewin_69, Emmetator_73, FloraSnap32_80, FrostedClock_83, FuzzBuster_27, GoldenEssence_66, KSunshine22_75, Laure_82, LeoJr_80, Mimi_80, MisoSoup_14, Panchaali_73, Patbob_79, Phrampa_72, Racecar_81, ReginaGlobina_80, Rockabye_82, SJReid_83, StAugustine_15, Stewart25555_71, Talia1610_80, WaddleDee_68, phiAsp2_7,

Summary by start number:

Start 10:

- Found in 3 of 92 (3.3%) of genes in pham
- Manual Annotations of this start: 2 of 71

- Called 66.7% of time when present
- Phage (with cluster) where this start called: Causa_17 (AI), StAugustine_15 (AI),

Start 15:

- Found in 9 of 92 (9.8%) of genes in pham
- Manual Annotations of this start: 4 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Artu_73 (FC), BooTeria_77 (FC), DunneganBoMo_70 (FC), Ellewin_69 (FC), Emmetator_73 (FC), KSunshine22_75 (FC), Panchaali_73 (FC), Stewart25555_71 (FC), WaddleDee_68 (FC),

Start 16:

- Found in 16 of 92 (17.4%) of genes in pham
- Manual Annotations of this start: 8 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin_75 (FC), Bloom_84 (FC), Chilliams_77 (FC), FloraSnap32_80 (FC), FrostedClock_83 (FC), GoldenEssence_66 (FC), Laure_82 (UNK), LeoJr_80 (FC), Mimi_80 (FC), Patbob_79 (FC), Phrampa_72 (FC), Racecar_81 (FC), ReginaGlobina_80 (FC), Rockabye_82 (FC), SJReid_83 (FC), Talia1610_80 (FC),

Start 19:

- Found in 62 of 92 (67.4%) of genes in pham
- Manual Annotations of this start: 56 of 71
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antares_25 (EC), Ariadne_33 (EC), BeagleBug_24 (EC), BrazzalePHS_24 (EC), Busephilis_24 (EC), Cinna_20 (EI), ClearAsMud_27 (EC), Cranjis_26 (EC), CrazyRich_24 (EC), Cressida_22 (EI), Crisis_26 (EC), EarickHC_25 (EC), Fireman_25 (EC), Ganandorf_24 (EC), Germa_26 (EC), Gina_26 (EC), Glorp_26 (EC), Hermeonysus_24 (EC), Honeyfin_26 (EC), Jayden_26 (EC), Jefe_25 (EC), Jollipop_25 (EC), KaiHaiDragon_25 (EC), Kowalski_24 (EC), Kozie_21 (EI), LittleFortune_26 (EC), Lucretia_25 (EC), Margaery_19 (EI), Matzah_21 (EI), Megan_19 (EC), MementoMori_21 (EI), Merry_24 (EC), Metamorphoo_25 (EC), Nicole72_20 (EC), NoodlelyBoi_24 (EC), Onika_24 (EC), Paschalis_24 (EC), PhedwardCullen_24 (EC), Phorgeous_24 (EC), Phrancesco_25 (EC), PierreOrion_25 (EC), PiperSansNom_25 (EC), Piperis_25 (EC), Pulchra_26 (EC), Quhwah_27 (EC), Ramiel05_24 (EC), RobsFeet_26 (EC), Rockwell_24 (EC), Savannah_24 (EC), Scumberland_26 (EC), Selwyn23_26 (EC), Shotgun_24 (EC), Shrubaron_25 (EC), SirFrank_24 (EC), Skugga_23 (EC), Smarties_33 (EC), Sunny_24 (EC), Teamocil_26 (EC), Terij_20 (EI), Tyrumbra_23 (EC), Yeti_25 (EC), Zapato_24 (EC),

Start 26:

- Found in 51 of 92 (55.4%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 3.9% of time when present
- Phage (with cluster) where this start called: FuzzBuster_27 (GM), MisoSoup_14 (GM),

Start 37:

- Found in 1 of 92 (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: phiAsp2_7 (singleton),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, EI, AI, EC, FC, GM, UNK,

Info for manual annotations of cluster AI:

- Start number 10 was manually annotated 2 times for cluster AI.

Info for manual annotations of cluster EC:

- Start number 19 was manually annotated 49 times for cluster EC.

Info for manual annotations of cluster EI:

- Start number 19 was manually annotated 7 times for cluster EI.

Info for manual annotations of cluster FC:

- Start number 15 was manually annotated 4 times for cluster FC.
- Start number 16 was manually annotated 8 times for cluster FC.

Info for manual annotations of cluster GM:

- Start number 26 was manually annotated 1 time for cluster GM.

Gene Information:

Gene: Antares_25 Start: 12156, Stop: 13625, Start Num: 19

Candidate Starts for Antares_25:

(Start: 19 @12156 has 56 MA's), (Start: 26 @12213 has 1 MA's), (28, 12225), (30, 12237), (45, 12333), (46, 12351), (50, 12387), (54, 12411), (56, 12423), (61, 12459), (65, 12489), (67, 12516), (75, 12582), (76, 12588), (78, 12597), (80, 12615), (85, 12639), (86, 12648), (87, 12651), (89, 12660), (99, 12723), (103, 12738), (104, 12756), (105, 12759), (112, 12804), (126, 12903), (129, 12930), (132, 12981), (143, 13119), (149, 13212), (151, 13224), (152, 13230), (161, 13308), (171, 13383), (172, 13398), (174, 13419), (175, 13437), (180, 13461), (196, 13590),

Gene: Ariadne_33 Start: 13624, Stop: 15117, Start Num: 19

Candidate Starts for Ariadne_33:

(Start: 19 @13624 has 56 MA's), (28, 13693), (30, 13705), (45, 13801), (46, 13819), (48, 13840), (56, 13891), (61, 13927), (67, 13984), (71, 14020), (73, 14044), (75, 14050), (76, 14056), (78, 14065), (85, 14107), (86, 14116), (87, 14119), (104, 14224), (105, 14227), (123, 14368), (136, 14536), (145, 14632), (151, 14716), (152, 14722), (154, 14743), (160, 14788), (164, 14845), (167, 14854), (172, 14890), (181, 14956), (196, 15082),

Gene: Artu_73 Start: 42522, Stop: 44036, Start Num: 15

Candidate Starts for Artu_73:

(7, 42429), (Start: 15 @42522 has 4 MA's), (18, 42555), (20, 42582), (40, 42690), (44, 42708), (47, 42747), (53, 42777), (55, 42789), (58, 42819), (70, 42918), (97, 43065), (98, 43071), (105, 43113), (126, 43233), (134, 43353), (191, 43890), (198, 43956),

Gene: Atuin_75 Start: 45156, Stop: 46664, Start Num: 16

Candidate Starts for Atuin_75:

(11, 45114), (13, 45117), (Start: 16 @45156 has 8 MA's), (17, 45165), (20, 45216), (53, 45411), (55, 45423), (57, 45450), (70, 45552), (97, 45693), (106, 45744), (134, 45981), (148, 46131), (150, 46161), (168, 46314), (191, 46518), (198, 46584), (199, 46587),

Gene: BeagleBug_24 Start: 11934, Stop: 13403, Start Num: 19

Candidate Starts for BeagleBug_24:

(Start: 19 @11934 has 56 MA's), (Start: 26 @11991 has 1 MA's), (28, 12003), (30, 12015), (45, 12111), (46, 12129), (50, 12165), (54, 12189), (56, 12201), (61, 12237), (65, 12267), (67, 12294), (75, 12360), (76, 12366), (78, 12375), (80, 12393), (85, 12417), (86, 12426), (87, 12429), (89, 12438), (99, 12501), (103, 12516), (104, 12534), (105, 12537), (112, 12582), (126, 12681), (129, 12708), (132, 12759), (143, 12897), (149, 12990), (151, 13002), (152, 13008), (161, 13086), (171, 13161), (172, 13176), (174, 13197), (175, 13215), (180, 13239), (196, 13368),

Gene: Bloom_84 Start: 46467, Stop: 48026, Start Num: 16

Candidate Starts for Bloom_84:

(Start: 16 @46467 has 8 MA's), (20, 46527), (21, 46542), (53, 46752), (70, 46893), (91, 47007), (97, 47058), (105, 47106), (133, 47340), (146, 47475), (151, 47538), (176, 47757), (191, 47883), (198, 47949),

Gene: BooTeria_77 Start: 42590, Stop: 44104, Start Num: 15

Candidate Starts for BooTeria_77:

(7, 42497), (Start: 15 @42590 has 4 MA's), (18, 42623), (20, 42650), (40, 42758), (44, 42776), (47, 42815), (53, 42845), (55, 42857), (58, 42887), (70, 42986), (97, 43133), (98, 43139), (105, 43181), (126, 43301), (134, 43421), (191, 43958), (198, 44024),

Gene: BrazzalePHS_24 Start: 11949, Stop: 13418, Start Num: 19

Candidate Starts for BrazzalePHS_24:

(Start: 19 @11949 has 56 MA's), (Start: 26 @12006 has 1 MA's), (28, 12018), (30, 12030), (45, 12126), (46, 12144), (50, 12180), (54, 12204), (56, 12216), (61, 12252), (65, 12282), (67, 12309), (75, 12375), (76, 12381), (78, 12390), (80, 12408), (85, 12432), (86, 12441), (87, 12444), (89, 12453), (99, 12516), (103, 12531), (104, 12549), (105, 12552), (112, 12597), (126, 12696), (129, 12723), (132, 12774), (143, 12912), (149, 13005), (151, 13017), (152, 13023), (161, 13101), (171, 13176), (172, 13191), (174, 13212), (175, 13230), (180, 13254), (196, 13383),

Gene: Busephilis_24 Start: 11887, Stop: 13356, Start Num: 19

Candidate Starts for Busephilis_24:

(Start: 19 @11887 has 56 MA's), (Start: 26 @11944 has 1 MA's), (28, 11956), (30, 11968), (45, 12064), (46, 12082), (50, 12118), (54, 12142), (56, 12154), (61, 12190), (65, 12220), (67, 12247), (75, 12313), (76, 12319), (78, 12328), (80, 12346), (85, 12370), (86, 12379), (87, 12382), (89, 12391), (99, 12454), (103, 12469), (104, 12487), (105, 12490), (111, 12529), (112, 12535), (126, 12634), (129, 12661), (132, 12712), (143, 12850), (149, 12943), (151, 12955), (152, 12961), (161, 13039), (171, 13114), (172, 13129), (174, 13150), (175, 13168), (180, 13192), (196, 13321),

Gene: Causa_17 Start: 11421, Stop: 12947, Start Num: 10

Candidate Starts for Causa_17:

(Start: 10 @11421 has 2 MA's), (24, 11574), (28, 11607), (38, 11679), (44, 11718), (46, 11739), (56, 11799), (64, 11862), (70, 11928), (81, 11997), (82, 12000), (112, 12162), (119, 12240), (138, 12462), (153, 12627), (155, 12633), (166, 12735), (193, 12936),

Gene: Chilliams_77 Start: 48357, Stop: 49904, Start Num: 16

Candidate Starts for Chilliams_77:

(2, 48171), (4, 48201), (5, 48237), (8, 48264), (11, 48315), (13, 48318), (Start: 16 @48357 has 8 MA's), (17, 48366), (20, 48417), (21, 48432), (53, 48642), (70, 48783), (88, 48870), (97, 48933), (105, 48981),

(113, 49026), (132, 49179), (134, 49221), (191, 49758), (198, 49824),

Gene: Cinna_20 Start: 11368, Stop: 12846, Start Num: 19

Candidate Starts for Cinna_20:

(Start: 19 @11368 has 56 MA's), (30, 11461), (32, 11488), (34, 11506), (43, 11542), (46, 11572), (57, 11668), (65, 11713), (67, 11740), (75, 11806), (78, 11821), (80, 11839), (86, 11863), (102, 11923), (105, 11950), (106, 11953), (109, 11971), (110, 11980), (112, 11995), (114, 12028), (115, 12046), (125, 12100), (130, 12145), (131, 12175), (132, 12193), (143, 12331), (145, 12352), (151, 12436), (152, 12442), (161, 12520), (165, 12571), (170, 12589), (171, 12595), (172, 12610), (174, 12631), (175, 12649), (177, 12658), (179, 12670), (181, 12676), (182, 12682), (186, 12721), (190, 12775), (192, 12778), (195, 12796), (196, 12802),

Gene: ClearAsMud_27 Start: 12684, Stop: 14153, Start Num: 19

Candidate Starts for ClearAsMud_27:

(Start: 19 @12684 has 56 MA's), (Start: 26 @12741 has 1 MA's), (28, 12753), (30, 12765), (45, 12861), (46, 12879), (50, 12915), (54, 12939), (56, 12951), (61, 12987), (65, 13017), (67, 13044), (75, 13110), (76, 13116), (78, 13125), (80, 13143), (85, 13167), (86, 13176), (87, 13179), (99, 13248), (103, 13263), (104, 13281), (105, 13284), (112, 13329), (126, 13428), (129, 13455), (132, 13506), (144, 13650), (149, 13737), (151, 13749), (152, 13755), (155, 13779), (159, 13806), (161, 13833), (171, 13908), (175, 13962), (177, 13971), (180, 13986), (196, 14115),

Gene: Cranjis_26 Start: 12111, Stop: 13580, Start Num: 19

Candidate Starts for Cranjis_26:

(Start: 19 @12111 has 56 MA's), (Start: 26 @12168 has 1 MA's), (28, 12180), (30, 12192), (45, 12288), (46, 12306), (50, 12342), (54, 12366), (56, 12378), (61, 12414), (65, 12444), (67, 12471), (75, 12537), (76, 12543), (78, 12552), (80, 12570), (85, 12594), (86, 12603), (87, 12606), (89, 12615), (99, 12678), (103, 12693), (104, 12711), (105, 12714), (112, 12759), (126, 12858), (129, 12885), (132, 12936), (143, 13074), (149, 13167), (151, 13179), (152, 13185), (161, 13263), (171, 13338), (172, 13353), (174, 13374), (175, 13392), (180, 13416), (196, 13545),

Gene: CrazyRich_24 Start: 11921, Stop: 13390, Start Num: 19

Candidate Starts for CrazyRich_24:

(Start: 19 @11921 has 56 MA's), (Start: 26 @11978 has 1 MA's), (28, 11990), (30, 12002), (45, 12098), (46, 12116), (50, 12152), (54, 12176), (56, 12188), (61, 12224), (65, 12254), (67, 12281), (75, 12347), (76, 12353), (78, 12362), (80, 12380), (85, 12404), (86, 12413), (87, 12416), (89, 12425), (99, 12488), (103, 12503), (104, 12521), (105, 12524), (112, 12569), (126, 12668), (129, 12695), (132, 12746), (143, 12884), (149, 12977), (151, 12989), (152, 12995), (161, 13073), (171, 13148), (172, 13163), (174, 13184), (175, 13202), (180, 13226), (196, 13355),

Gene: Cressida_22 Start: 11398, Stop: 12870, Start Num: 19

Candidate Starts for Cressida_22:

(Start: 19 @11398 has 56 MA's), (30, 11491), (31, 11512), (32, 11518), (43, 11575), (46, 11605), (57, 11701), (65, 11746), (67, 11773), (75, 11839), (78, 11854), (80, 11872), (86, 11896), (102, 11956), (105, 11983), (109, 12004), (110, 12013), (112, 12028), (114, 12061), (125, 12136), (130, 12181), (131, 12211), (132, 12229), (143, 12367), (145, 12388), (151, 12472), (152, 12478), (161, 12556), (165, 12607), (170, 12625), (172, 12646), (174, 12667), (175, 12685), (177, 12694), (179, 12706), (181, 12712), (182, 12718), (186, 12757), (192, 12814),

Gene: Crisis_26 Start: 11906, Stop: 13375, Start Num: 19

Candidate Starts for Crisis_26:

(Start: 19 @11906 has 56 MA's), (Start: 26 @11963 has 1 MA's), (28, 11975), (30, 11987), (45, 12083), (46, 12101), (50, 12137), (54, 12161), (56, 12173), (61, 12209), (65, 12239), (67, 12266), (75, 12332), (76, 12338), (78, 12347), (80, 12365), (85, 12389), (86, 12398), (87, 12401), (89, 12410), (99, 12473),

(103, 12488), (104, 12506), (105, 12509), (112, 12554), (126, 12653), (129, 12680), (132, 12731), (143, 12869), (149, 12962), (151, 12974), (152, 12980), (161, 13058), (171, 13133), (172, 13148), (174, 13169), (175, 13187), (180, 13211), (196, 13340),

Gene: DunneganBoMo_70 Start: 42015, Stop: 43529, Start Num: 15

Candidate Starts for DunneganBoMo_70:

(7, 41922), (Start: 15 @42015 has 4 MA's), (18, 42048), (20, 42075), (40, 42183), (44, 42201), (47, 42240), (53, 42270), (55, 42282), (58, 42312), (70, 42411), (97, 42558), (98, 42564), (105, 42606), (126, 42726), (134, 42846), (191, 43383), (198, 43449),

Gene: EarickHC_25 Start: 11832, Stop: 13301, Start Num: 19

Candidate Starts for EarickHC_25:

(Start: 19 @11832 has 56 MA's), (Start: 26 @11889 has 1 MA's), (28, 11901), (30, 11913), (45, 12009), (46, 12027), (50, 12063), (54, 12087), (56, 12099), (61, 12135), (65, 12165), (67, 12192), (75, 12258), (76, 12264), (78, 12273), (80, 12291), (85, 12315), (86, 12324), (87, 12327), (89, 12336), (99, 12399), (103, 12414), (104, 12432), (105, 12435), (112, 12480), (126, 12579), (129, 12606), (132, 12657), (143, 12795), (149, 12888), (151, 12900), (152, 12906), (161, 12984), (171, 13059), (172, 13074), (174, 13095), (175, 13113), (180, 13137), (196, 13266),

Gene: Ellewin_69 Start: 41610, Stop: 43124, Start Num: 15

Candidate Starts for Ellewin_69:

(7, 41517), (Start: 15 @41610 has 4 MA's), (18, 41643), (20, 41670), (40, 41778), (44, 41796), (47, 41835), (53, 41865), (55, 41877), (58, 41907), (70, 42006), (97, 42153), (98, 42159), (105, 42201), (126, 42321), (134, 42441), (191, 42978), (198, 43044),

Gene: Emmetator_73 Start: 42762, Stop: 44276, Start Num: 15

Candidate Starts for Emmetator_73:

(7, 42669), (Start: 15 @42762 has 4 MA's), (18, 42795), (20, 42822), (40, 42930), (44, 42948), (47, 42987), (53, 43017), (55, 43029), (58, 43059), (70, 43158), (97, 43305), (98, 43311), (105, 43353), (126, 43473), (134, 43593), (191, 44130), (198, 44196),

Gene: Fireman_25 Start: 11529, Stop: 13022, Start Num: 19

Candidate Starts for Fireman_25:

(Start: 19 @11529 has 56 MA's), (Start: 26 @11586 has 1 MA's), (28, 11598), (30, 11610), (45, 11706), (46, 11724), (50, 11760), (54, 11784), (56, 11796), (61, 11832), (67, 11889), (71, 11925), (75, 11955), (76, 11961), (78, 11970), (80, 11988), (85, 12012), (86, 12021), (87, 12024), (103, 12111), (104, 12129), (105, 12132), (123, 12270), (132, 12375), (136, 12438), (145, 12534), (149, 12606), (151, 12618), (152, 12624), (154, 12645), (160, 12690), (167, 12756), (172, 12792), (196, 12984),

Gene: FloraSnap32_80 Start: 45495, Stop: 47063, Start Num: 16

Candidate Starts for FloraSnap32_80:

(Start: 16 @45495 has 8 MA's), (20, 45555), (21, 45570), (22, 45573), (53, 45780), (70, 45921), (91, 46035), (97, 46086), (105, 46134), (133, 46377), (146, 46512), (151, 46575), (176, 46794), (191, 46920), (198, 46986),

Gene: FrostedClock_83 Start: 45955, Stop: 47514, Start Num: 16

Candidate Starts for FrostedClock_83:

(Start: 16 @45955 has 8 MA's), (20, 46015), (21, 46030), (53, 46240), (70, 46381), (91, 46495), (97, 46546), (105, 46594), (133, 46828), (146, 46963), (151, 47026), (176, 47245), (191, 47371), (198, 47437),

Gene: FuzzBuster_27 Start: 11648, Stop: 13237, Start Num: 26

Candidate Starts for FuzzBuster_27:

(Start: 26 @11648 has 1 MA's), (58, 11912), (59, 11915), (63, 11993), (66, 12041), (68, 12056), (72, 12089), (75, 12110), (79, 12137), (87, 12179), (89, 12188), (97, 12239), (100, 12254), (105, 12287), (106, 12290), (107, 12293), (136, 12635), (137, 12656), (145, 12731), (159, 12872), (160, 12887), (163, 12932), (171, 12974), (175, 13031), (180, 13055), (183, 13073), (196, 13181),

Gene: Ganandorf_24 Start: 11968, Stop: 13437, Start Num: 19

Candidate Starts for Ganandorf_24:

(Start: 19 @11968 has 56 MA's), (Start: 26 @12025 has 1 MA's), (28, 12037), (30, 12049), (45, 12145), (46, 12163), (50, 12199), (54, 12223), (56, 12235), (61, 12271), (65, 12301), (67, 12328), (75, 12394), (76, 12400), (78, 12409), (80, 12427), (85, 12451), (86, 12460), (87, 12463), (89, 12472), (99, 12535), (103, 12550), (104, 12568), (105, 12571), (111, 12610), (112, 12616), (126, 12715), (129, 12742), (132, 12793), (143, 12931), (149, 13024), (151, 13036), (152, 13042), (161, 13120), (171, 13195), (172, 13210), (174, 13231), (175, 13249), (180, 13273), (196, 13402),

Gene: Germa_26 Start: 11797, Stop: 13266, Start Num: 19

Candidate Starts for Germa_26:

(Start: 19 @11797 has 56 MA's), (Start: 26 @11854 has 1 MA's), (28, 11866), (30, 11878), (45, 11974), (46, 11992), (50, 12028), (54, 12052), (56, 12064), (61, 12100), (65, 12130), (67, 12157), (75, 12223), (76, 12229), (78, 12238), (80, 12256), (85, 12280), (86, 12289), (87, 12292), (89, 12301), (99, 12364), (103, 12379), (104, 12397), (105, 12400), (112, 12445), (126, 12544), (129, 12571), (132, 12622), (143, 12760), (149, 12853), (151, 12865), (152, 12871), (161, 12949), (171, 13024), (172, 13039), (174, 13060), (175, 13078), (180, 13102), (196, 13231),

Gene: Gina_26 Start: 11315, Stop: 12709, Start Num: 19

Candidate Starts for Gina_26:

(Start: 19 @11315 has 56 MA's), (Start: 26 @11372 has 1 MA's), (45, 11393), (46, 11411), (50, 11447), (56, 11483), (61, 11519), (67, 11576), (71, 11612), (75, 11642), (76, 11648), (78, 11657), (85, 11699), (86, 11708), (87, 11711), (88, 11717), (104, 11822), (105, 11825), (112, 11870), (123, 11960), (127, 11990), (136, 12128), (145, 12224), (151, 12308), (152, 12314), (154, 12335), (160, 12380), (167, 12446), (196, 12674),

Gene: Glorp_26 Start: 11970, Stop: 13439, Start Num: 19

Candidate Starts for Glorp_26:

(Start: 19 @11970 has 56 MA's), (Start: 26 @12027 has 1 MA's), (28, 12039), (30, 12051), (45, 12147), (46, 12165), (50, 12201), (54, 12225), (56, 12237), (61, 12273), (65, 12303), (67, 12330), (75, 12396), (76, 12402), (78, 12411), (80, 12429), (85, 12453), (86, 12462), (87, 12465), (89, 12474), (103, 12552), (104, 12570), (105, 12573), (112, 12618), (126, 12717), (129, 12744), (132, 12795), (143, 12933), (149, 13026), (151, 13038), (152, 13044), (161, 13122), (171, 13197), (172, 13212), (174, 13233), (175, 13251), (180, 13275), (196, 13404),

Gene: GoldenEssence_66 Start: 40260, Stop: 41819, Start Num: 16

Candidate Starts for GoldenEssence_66:

(Start: 16 @40260 has 8 MA's), (20, 40320), (21, 40335), (53, 40545), (70, 40686), (91, 40800), (97, 40851), (105, 40899), (133, 41133), (146, 41268), (176, 41550), (191, 41676), (198, 41742),

Gene: Hermeonysus_24 Start: 11838, Stop: 13307, Start Num: 19

Candidate Starts for Hermeonysus_24:

(Start: 19 @11838 has 56 MA's), (Start: 26 @11895 has 1 MA's), (28, 11907), (30, 11919), (45, 12015), (46, 12033), (50, 12069), (54, 12093), (56, 12105), (61, 12141), (65, 12171), (67, 12198), (75, 12264), (76, 12270), (78, 12279), (80, 12297), (85, 12321), (86, 12330), (87, 12333), (89, 12342), (99, 12405), (103, 12420), (104, 12438), (105, 12441), (112, 12486), (126, 12585), (129, 12612), (132, 12663), (143, 12801), (149, 12894), (151, 12906), (152, 12912), (161, 12990), (171, 13065), (172, 13080), (174, 13101), (175, 13119), (180, 13143), (196, 13272),

Gene: Honeyfin_26 Start: 12153, Stop: 13622, Start Num: 19

Candidate Starts for Honeyfin_26:

(Start: 19 @12153 has 56 MA's), (Start: 26 @12210 has 1 MA's), (28, 12222), (30, 12234), (45, 12330), (46, 12348), (50, 12384), (54, 12408), (56, 12420), (61, 12456), (65, 12486), (67, 12513), (75, 12579), (76, 12585), (78, 12594), (80, 12612), (85, 12636), (86, 12645), (87, 12648), (89, 12657), (99, 12720), (103, 12735), (104, 12753), (105, 12756), (112, 12801), (126, 12900), (129, 12927), (132, 12978), (143, 13116), (149, 13209), (151, 13221), (152, 13227), (161, 13305), (171, 13380), (172, 13395), (174, 13416), (175, 13434), (180, 13458), (196, 13587),

Gene: Jayden_26 Start: 11599, Stop: 13095, Start Num: 19

Candidate Starts for Jayden_26:

(Start: 19 @11599 has 56 MA's), (30, 11680), (45, 11776), (46, 11794), (50, 11830), (56, 11866), (61, 11902), (67, 11959), (75, 12025), (76, 12031), (78, 12040), (85, 12082), (86, 12091), (87, 12094), (104, 12202), (105, 12205), (112, 12250), (121, 12328), (123, 12346), (132, 12451), (136, 12514), (145, 12610), (151, 12694), (152, 12700), (154, 12721), (160, 12766), (167, 12832), (177, 12916), (179, 12928), (181, 12934), (184, 12955), (186, 12979), (196, 13060),

Gene: Jefe_25 Start: 11891, Stop: 13360, Start Num: 19

Candidate Starts for Jefe_25:

(Start: 19 @11891 has 56 MA's), (Start: 26 @11948 has 1 MA's), (28, 11960), (30, 11972), (45, 12068), (46, 12086), (50, 12122), (54, 12146), (56, 12158), (61, 12194), (65, 12224), (67, 12251), (75, 12317), (76, 12323), (78, 12332), (80, 12350), (85, 12374), (86, 12383), (87, 12386), (89, 12395), (99, 12458), (103, 12473), (104, 12491), (105, 12494), (112, 12539), (126, 12638), (129, 12665), (132, 12716), (143, 12854), (149, 12947), (151, 12959), (152, 12965), (161, 13043), (171, 13118), (172, 13133), (174, 13154), (175, 13172), (180, 13196), (196, 13325),

Gene: Jollipop_25 Start: 12239, Stop: 13708, Start Num: 19

Candidate Starts for Jollipop_25:

(Start: 19 @12239 has 56 MA's), (Start: 26 @12296 has 1 MA's), (28, 12308), (30, 12320), (45, 12416), (46, 12434), (50, 12470), (54, 12494), (56, 12506), (61, 12542), (65, 12572), (67, 12599), (75, 12665), (76, 12671), (78, 12680), (80, 12698), (85, 12722), (86, 12731), (87, 12734), (89, 12743), (103, 12821), (104, 12839), (105, 12842), (112, 12887), (126, 12986), (129, 13013), (132, 13064), (143, 13202), (149, 13295), (151, 13307), (152, 13313), (161, 13391), (171, 13466), (172, 13481), (174, 13502), (175, 13520), (180, 13544), (196, 13673),

Gene: KSunshine22_75 Start: 43249, Stop: 44763, Start Num: 15

Candidate Starts for KSunshine22_75:

(7, 43156), (Start: 15 @43249 has 4 MA's), (18, 43282), (20, 43309), (40, 43417), (44, 43435), (47, 43474), (53, 43504), (55, 43516), (58, 43546), (70, 43645), (97, 43792), (98, 43798), (105, 43840), (126, 43960), (134, 44080), (191, 44617), (198, 44683),

Gene: KaiHaiDragon_25 Start: 11832, Stop: 13301, Start Num: 19

Candidate Starts for KaiHaiDragon_25:

(Start: 19 @11832 has 56 MA's), (Start: 26 @11889 has 1 MA's), (28, 11901), (30, 11913), (45, 12009), (46, 12027), (50, 12063), (54, 12087), (56, 12099), (61, 12135), (65, 12165), (67, 12192), (75, 12258), (76, 12264), (78, 12273), (80, 12291), (85, 12315), (86, 12324), (87, 12327), (89, 12336), (99, 12399), (103, 12414), (104, 12432), (105, 12435), (112, 12480), (126, 12579), (129, 12606), (132, 12657), (143, 12795), (149, 12888), (151, 12900), (152, 12906), (161, 12984), (171, 13059), (172, 13074), (174, 13095), (175, 13113), (180, 13137), (196, 13266),

Gene: Kowalski_24 Start: 11948, Stop: 13417, Start Num: 19

Candidate Starts for Kowalski_24:

(Start: 19 @11948 has 56 MA's), (Start: 26 @12005 has 1 MA's), (28, 12017), (30, 12029), (45, 12125), (46, 12143), (50, 12179), (54, 12203), (56, 12215), (61, 12251), (65, 12281), (67, 12308), (75, 12374), (76, 12380), (78, 12389), (80, 12407), (85, 12431), (86, 12440), (87, 12443), (89, 12452), (99, 12515), (103, 12530), (104, 12548), (105, 12551), (112, 12596), (126, 12695), (129, 12722), (132, 12773), (143, 12911), (149, 13004), (151, 13016), (152, 13022), (161, 13100), (171, 13175), (172, 13190), (174, 13211), (175, 13229), (180, 13253), (196, 13382),

Gene: Kozie_21 Start: 11363, Stop: 12874, Start Num: 19

Candidate Starts for Kozie_21:

(Start: 19 @11363 has 56 MA's), (23, 11420), (29, 11459), (36, 11525), (43, 11561), (45, 11573), (49, 11621), (52, 11645), (54, 11654), (67, 11759), (71, 11795), (75, 11825), (76, 11831), (78, 11840), (80, 11858), (86, 11891), (104, 12002), (105, 12005), (109, 12026), (111, 12044), (112, 12050), (118, 12119), (132, 12233), (142, 12368), (144, 12377), (145, 12392), (151, 12476), (160, 12548), (174, 12671), (175, 12689), (181, 12716), (196, 12842),

Gene: Laure_82 Start: 46131, Stop: 47720, Start Num: 16

Candidate Starts for Laure_82:

(Start: 16 @46131 has 8 MA's), (17, 46140), (20, 46191), (40, 46371), (53, 46458), (62, 46527), (70, 46602), (71, 46605), (75, 46635), (88, 46692), (97, 46749), (105, 46797), (113, 46842), (134, 47037), (136, 47052), (140, 47100), (150, 47220), (191, 47574), (194, 47586), (198, 47640),

Gene: LeoJr_80 Start: 45284, Stop: 46792, Start Num: 16

Candidate Starts for LeoJr_80:

(11, 45242), (13, 45245), (Start: 16 @45284 has 8 MA's), (17, 45293), (20, 45344), (53, 45539), (55, 45551), (57, 45578), (70, 45680), (97, 45821), (106, 45872), (134, 46109), (148, 46259), (150, 46289), (159, 46355), (191, 46646), (198, 46712), (199, 46715),

Gene: LittleFortune_26 Start: 12195, Stop: 13664, Start Num: 19

Candidate Starts for LittleFortune_26:

(Start: 19 @12195 has 56 MA's), (Start: 26 @12252 has 1 MA's), (28, 12264), (30, 12276), (45, 12372), (46, 12390), (50, 12426), (54, 12450), (56, 12462), (61, 12498), (65, 12528), (67, 12555), (75, 12621), (76, 12627), (78, 12636), (80, 12654), (85, 12678), (86, 12687), (87, 12690), (89, 12699), (99, 12762), (103, 12777), (104, 12795), (105, 12798), (112, 12843), (126, 12942), (129, 12969), (132, 13020), (143, 13158), (149, 13251), (151, 13263), (152, 13269), (161, 13347), (171, 13422), (172, 13437), (174, 13458), (175, 13476), (180, 13500), (196, 13629),

Gene: Lucretia_25 Start: 11885, Stop: 13354, Start Num: 19

Candidate Starts for Lucretia_25:

(Start: 19 @11885 has 56 MA's), (Start: 26 @11942 has 1 MA's), (28, 11954), (30, 11966), (45, 12062), (46, 12080), (50, 12116), (54, 12140), (56, 12152), (61, 12188), (65, 12218), (67, 12245), (75, 12311), (76, 12317), (78, 12326), (80, 12344), (85, 12368), (86, 12377), (87, 12380), (89, 12389), (99, 12452), (103, 12467), (104, 12485), (105, 12488), (112, 12533), (126, 12632), (129, 12659), (132, 12710), (143, 12848), (149, 12941), (151, 12953), (152, 12959), (161, 13037), (171, 13112), (172, 13127), (174, 13148), (175, 13166), (180, 13190), (196, 13319),

Gene: Margaery_19 Start: 11140, Stop: 12612, Start Num: 19

Candidate Starts for Margaery_19:

(Start: 19 @11140 has 56 MA's), (30, 11233), (32, 11260), (43, 11314), (46, 11344), (57, 11440), (67, 11512), (71, 11548), (75, 11578), (80, 11611), (86, 11635), (102, 11695), (105, 11722), (109, 11743), (110, 11752), (112, 11767), (114, 11800), (125, 11878), (130, 11923), (131, 11953), (132, 11971), (143, 12109), (145, 12130), (151, 12214), (152, 12220), (161, 12298), (165, 12349), (172, 12388), (175, 12427), (182, 12460), (186, 12499),

Gene: Matzah_21 Start: 11345, Stop: 12823, Start Num: 19

Candidate Starts for Matzah_21:

(Start: 19 @11345 has 56 MA's), (30, 11438), (32, 11465), (34, 11483), (43, 11519), (46, 11549), (57, 11645), (65, 11690), (67, 11717), (75, 11783), (78, 11798), (80, 11816), (86, 11840), (102, 11900), (105, 11927), (109, 11948), (110, 11957), (112, 11972), (114, 12005), (115, 12023), (125, 12077), (130, 12122), (131, 12152), (132, 12170), (143, 12308), (145, 12329), (151, 12413), (152, 12419), (161, 12497), (165, 12548), (170, 12566), (171, 12572), (172, 12587), (174, 12608), (175, 12626), (177, 12635), (179, 12647), (181, 12653), (182, 12659), (186, 12698), (190, 12752), (192, 12755), (195, 12773), (196, 12779),

Gene: Megan_19 Start: 12956, Stop: 14425, Start Num: 19

Candidate Starts for Megan_19:

(Start: 10 @12860 has 2 MA's), (12, 12875), (18, 12947), (Start: 19 @12956 has 56 MA's), (Start: 26 @13013 has 1 MA's), (43, 13112), (49, 13172), (52, 13196), (54, 13205), (56, 13217), (57, 13238), (67, 13310), (70, 13343), (73, 13370), (75, 13376), (78, 13391), (84, 13424), (86, 13436), (92, 13457), (104, 13532), (105, 13535), (109, 13556), (112, 13580), (114, 13613), (141, 13895), (144, 13922), (145, 13937), (147, 13964), (151, 14021), (155, 14051), (157, 14066), (160, 14093), (171, 14180), (181, 14261), (182, 14267), (184, 14282), (196, 14387),

Gene: MementoMori_21 Start: 11058, Stop: 12539, Start Num: 19

Candidate Starts for MementoMori_21:

(Start: 19 @11058 has 56 MA's), (30, 11151), (32, 11178), (34, 11196), (43, 11232), (46, 11262), (57, 11358), (65, 11403), (67, 11430), (71, 11466), (75, 11496), (78, 11511), (80, 11529), (86, 11553), (102, 11613), (105, 11640), (109, 11661), (110, 11670), (112, 11685), (114, 11718), (115, 11736), (125, 11793), (130, 11838), (131, 11868), (132, 11886), (143, 12024), (145, 12045), (151, 12129), (152, 12135), (161, 12213), (165, 12264), (170, 12282), (172, 12303), (174, 12324), (175, 12342), (177, 12351), (179, 12363), (181, 12369), (182, 12375), (186, 12414), (190, 12468), (192, 12471), (195, 12489), (196, 12495),

Gene: Merry_ Start: 12177, Stop: 13676, Start Num: 19

Candidate Starts for Merry_:

(Start: 19 @12177 has 56 MA's), (28, 12246), (30, 12258), (45, 12354), (46, 12372), (57, 12465), (61, 12480), (67, 12537), (71, 12573), (75, 12603), (76, 12609), (78, 12618), (85, 12660), (86, 12669), (87, 12672), (90, 12684), (101, 12753), (105, 12783), (112, 12828), (120, 12906), (126, 12954), (132, 13032), (145, 13191), (149, 13263), (151, 13275), (152, 13281), (154, 13302), (155, 13305), (160, 13347), (170, 13428), (186, 13560), (196, 13641),

Gene: Metamorphoo_25 Start: 11518, Stop: 13008, Start Num: 19

Candidate Starts for Metamorphoo_25:

(Start: 19 @11518 has 56 MA's), (Start: 26 @11575 has 1 MA's), (28, 11587), (30, 11599), (45, 11695), (46, 11713), (50, 11749), (54, 11773), (56, 11785), (61, 11821), (67, 11878), (71, 11914), (75, 11944), (76, 11950), (78, 11959), (80, 11977), (85, 12001), (86, 12010), (87, 12013), (103, 12100), (104, 12118), (105, 12121), (123, 12256), (132, 12361), (136, 12424), (145, 12520), (151, 12604), (152, 12610), (154, 12631), (160, 12676), (167, 12742), (172, 12778), (196, 12970),

Gene: Mimi_80 Start: 45814, Stop: 47373, Start Num: 16

Candidate Starts for Mimi_80:

(Start: 16 @45814 has 8 MA's), (20, 45874), (21, 45889), (53, 46099), (70, 46240), (91, 46354), (97, 46405), (105, 46453), (133, 46687), (146, 46822), (151, 46885), (176, 47104), (191, 47230), (198, 47296),

Gene: MisoSoup_14 Start: 7399, Stop: 8979, Start Num: 26

Candidate Starts for MisoSoup_14:

(Start: 26 @7399 has 1 MA's), (63, 7741), (66, 7789), (75, 7858), (80, 7891), (87, 7927), (89, 7936), (105, 8035), (107, 8041), (112, 8080), (124, 8212), (131, 8290), (132, 8308), (136, 8374), (145, 8470), (150, 8545), (151, 8554), (159, 8611), (160, 8626), (173, 8749), (180, 8794),

Gene: Nicole72_20 Start: 13339, Stop: 14817, Start Num: 19

Candidate Starts for Nicole72_20:

(9, 13222), (Start: 19 @13339 has 56 MA's), (Start: 26 @13396 has 1 MA's), (43, 13495), (49, 13555), (52, 13579), (56, 13600), (57, 13621), (67, 13693), (73, 13753), (75, 13759), (78, 13774), (84, 13807), (86, 13819), (92, 13840), (95, 13864), (104, 13921), (105, 13924), (109, 13945), (112, 13969), (114, 14002), (117, 14032), (131, 14152), (132, 14170), (141, 14287), (144, 14314), (145, 14329), (147, 14356), (149, 14401), (151, 14413), (157, 14458), (163, 14530), (184, 14674), (186, 14698), (196, 14779),

Gene: NoodlelyBoi_24 Start: 11989, Stop: 13458, Start Num: 19

Candidate Starts for NoodlelyBoi_24:

(Start: 19 @11989 has 56 MA's), (Start: 26 @12046 has 1 MA's), (28, 12058), (30, 12070), (45, 12166), (46, 12184), (50, 12220), (54, 12244), (56, 12256), (61, 12292), (65, 12322), (67, 12349), (75, 12415), (76, 12421), (78, 12430), (80, 12448), (85, 12472), (86, 12481), (87, 12484), (99, 12553), (103, 12568), (104, 12586), (105, 12589), (112, 12634), (126, 12733), (129, 12760), (132, 12811), (144, 12955), (151, 13054), (152, 13060), (155, 13084), (161, 13138), (171, 13213), (175, 13267), (177, 13276), (180, 13291), (196, 13420),

Gene: Onika_24 Start: 11922, Stop: 13391, Start Num: 19

Candidate Starts for Onika_24:

(Start: 19 @11922 has 56 MA's), (Start: 26 @11979 has 1 MA's), (28, 11991), (30, 12003), (45, 12099), (46, 12117), (50, 12153), (54, 12177), (56, 12189), (61, 12225), (65, 12255), (67, 12282), (75, 12348), (76, 12354), (78, 12363), (80, 12381), (85, 12405), (86, 12414), (87, 12417), (89, 12426), (99, 12489), (103, 12504), (104, 12522), (105, 12525), (112, 12570), (126, 12669), (129, 12696), (132, 12747), (143, 12885), (149, 12978), (151, 12990), (152, 12996), (161, 13074), (165, 13125), (171, 13149), (172, 13164), (174, 13185), (175, 13203), (180, 13227), (196, 13356),

Gene: Panchaali_73 Start: 42946, Stop: 44454, Start Num: 15

Candidate Starts for Panchaali_73:

(Start: 15 @42946 has 4 MA's), (20, 43006), (33, 43063), (40, 43114), (41, 43117), (53, 43201), (55, 43213), (58, 43243), (70, 43342), (73, 43369), (94, 43459), (97, 43483), (98, 43489), (105, 43531), (126, 43651), (134, 43771), (151, 43960), (191, 44308), (198, 44374),

Gene: Paschalis_24 Start: 11937, Stop: 13406, Start Num: 19

Candidate Starts for Paschalis_24:

(Start: 19 @11937 has 56 MA's), (Start: 26 @11994 has 1 MA's), (28, 12006), (30, 12018), (45, 12114), (46, 12132), (50, 12168), (54, 12192), (56, 12204), (61, 12240), (65, 12270), (67, 12297), (75, 12363), (76, 12369), (78, 12378), (80, 12396), (85, 12420), (86, 12429), (87, 12432), (89, 12441), (103, 12519), (104, 12537), (105, 12540), (112, 12585), (126, 12684), (129, 12711), (132, 12762), (143, 12900), (149, 12993), (151, 13005), (152, 13011), (161, 13089), (171, 13164), (172, 13179), (174, 13200), (175, 13218), (180, 13242), (196, 13371),

Gene: Patbob_79 Start: 46680, Stop: 48245, Start Num: 16

Candidate Starts for Patbob_79:

(Start: 16 @46680 has 8 MA's), (20, 46740), (21, 46755), (22, 46758), (53, 46965), (70, 47106), (91, 47220), (97, 47271), (105, 47319), (133, 47559), (146, 47694), (151, 47757), (176, 47976), (191, 48102), (198, 48168),

Gene: PhedwardCullen_24 Start: 11681, Stop: 13150, Start Num: 19

Candidate Starts for PhedwardCullen_24:

(Start: 19 @11681 has 56 MA's), (Start: 26 @11738 has 1 MA's), (28, 11750), (30, 11762), (45, 11858), (46, 11876), (50, 11912), (54, 11936), (56, 11948), (61, 11984), (65, 12014), (67, 12041), (75, 12107), (76, 12113), (78, 12122), (80, 12140), (85, 12164), (86, 12173), (87, 12176), (89, 12185), (99, 12248), (103, 12263), (104, 12281), (105, 12284), (126, 12428), (129, 12455), (132, 12506), (143, 12644), (149, 12737), (151, 12749), (152, 12755), (161, 12833), (171, 12908), (172, 12923), (174, 12944), (175, 12962), (180, 12986), (196, 13115),

Gene: Phorgeous_24 Start: 11789, Stop: 13258, Start Num: 19

Candidate Starts for Phorgeous_24:

(Start: 19 @11789 has 56 MA's), (Start: 26 @11846 has 1 MA's), (28, 11858), (30, 11870), (45, 11966), (46, 11984), (50, 12020), (54, 12044), (56, 12056), (61, 12092), (65, 12122), (67, 12149), (75, 12215), (76, 12221), (78, 12230), (80, 12248), (85, 12272), (86, 12281), (87, 12284), (89, 12293), (99, 12356), (103, 12371), (104, 12389), (105, 12392), (126, 12536), (129, 12563), (132, 12614), (143, 12752), (149, 12845), (151, 12857), (152, 12863), (161, 12941), (171, 13016), (172, 13031), (174, 13052), (175, 13070), (180, 13094), (196, 13223),

Gene: Phrampa_72 Start: 43330, Stop: 44889, Start Num: 16

Candidate Starts for Phrampa_72:

(Start: 16 @43330 has 8 MA's), (20, 43390), (21, 43405), (53, 43615), (70, 43756), (91, 43870), (97, 43921), (105, 43969), (126, 44089), (133, 44203), (146, 44338), (185, 44668), (191, 44746), (198, 44812),

Gene: Phrancesco_25 Start: 12068, Stop: 13537, Start Num: 19

Candidate Starts for Phrancesco_25:

(Start: 19 @12068 has 56 MA's), (Start: 26 @12125 has 1 MA's), (28, 12137), (30, 12149), (45, 12245), (46, 12263), (50, 12299), (54, 12323), (56, 12335), (61, 12371), (65, 12401), (67, 12428), (75, 12494), (76, 12500), (78, 12509), (80, 12527), (85, 12551), (86, 12560), (87, 12563), (89, 12572), (103, 12650), (104, 12668), (105, 12671), (112, 12716), (126, 12815), (129, 12842), (132, 12893), (143, 13031), (149, 13124), (151, 13136), (152, 13142), (161, 13220), (171, 13295), (172, 13310), (174, 13331), (175, 13349), (180, 13373), (196, 13502),

Gene: PierreOrion_25 Start: 12092, Stop: 13561, Start Num: 19

Candidate Starts for PierreOrion_25:

(Start: 19 @12092 has 56 MA's), (Start: 26 @12149 has 1 MA's), (28, 12161), (30, 12173), (45, 12269), (46, 12287), (50, 12323), (54, 12347), (56, 12359), (61, 12395), (65, 12425), (67, 12452), (75, 12518), (76, 12524), (78, 12533), (80, 12551), (85, 12575), (86, 12584), (87, 12587), (89, 12596), (103, 12674), (104, 12692), (105, 12695), (112, 12740), (126, 12839), (129, 12866), (132, 12917), (143, 13055), (149, 13148), (151, 13160), (152, 13166), (161, 13244), (171, 13319), (172, 13334), (174, 13355), (175, 13373), (180, 13397), (196, 13526),

Gene: PiperSansNom_25 Start: 12244, Stop: 13713, Start Num: 19

Candidate Starts for PiperSansNom_25:

(Start: 19 @12244 has 56 MA's), (Start: 26 @12301 has 1 MA's), (28, 12313), (30, 12325), (45, 12421), (46, 12439), (50, 12475), (54, 12499), (56, 12511), (61, 12547), (65, 12577), (67, 12604), (75, 12670), (76, 12676), (78, 12685), (80, 12703), (85, 12727), (86, 12736), (87, 12739), (89, 12748), (103, 12826), (104, 12844), (105, 12847), (112, 12892), (126, 12991), (129, 13018), (132, 13069), (143, 13207), (149, 13300), (151, 13312), (152, 13318), (161, 13396), (171, 13471), (172, 13486), (174, 13507), (175, 13525), (180, 13549), (196, 13678),

Gene: Piperis_25 Start: 11914, Stop: 13383, Start Num: 19

Candidate Starts for Piperis_25:

(Start: 19 @11914 has 56 MA's), (Start: 26 @11971 has 1 MA's), (28, 11983), (30, 11995), (45, 12091), (46, 12109), (50, 12145), (54, 12169), (56, 12181), (61, 12217), (65, 12247), (67, 12274), (75, 12340), (76, 12346), (78, 12355), (80, 12373), (85, 12397), (86, 12406), (87, 12409), (89, 12418), (103, 12496), (104, 12514), (105, 12517), (112, 12562), (126, 12661), (129, 12688), (132, 12739), (143, 12877), (149, 12970), (151, 12982), (152, 12988), (161, 13066), (171, 13141), (172, 13156), (174, 13177), (175, 13195), (180, 13219), (196, 13348),

Gene: Pulchra_26 Start: 12313, Stop: 13782, Start Num: 19

Candidate Starts for Pulchra_26:

(Start: 19 @12313 has 56 MA's), (Start: 26 @12370 has 1 MA's), (28, 12382), (30, 12394), (45, 12490), (46, 12508), (50, 12544), (54, 12568), (56, 12580), (61, 12616), (65, 12646), (67, 12673), (75, 12739), (76, 12745), (78, 12754), (80, 12772), (85, 12796), (86, 12805), (87, 12808), (89, 12817), (99, 12880), (103, 12895), (104, 12913), (105, 12916), (112, 12961), (126, 13060), (129, 13087), (132, 13138), (143, 13276), (149, 13369), (151, 13381), (152, 13387), (161, 13465), (171, 13540), (172, 13555), (174, 13576), (175, 13594), (180, 13618), (196, 13747),

Gene: Quhwah_27 Start: 12304, Stop: 13773, Start Num: 19

Candidate Starts for Quhwah_27:

(Start: 19 @12304 has 56 MA's), (Start: 26 @12361 has 1 MA's), (28, 12373), (30, 12385), (45, 12481), (46, 12499), (50, 12535), (54, 12559), (56, 12571), (61, 12607), (65, 12637), (67, 12664), (75, 12730), (76, 12736), (78, 12745), (80, 12763), (85, 12787), (86, 12796), (87, 12799), (89, 12808), (99, 12871), (103, 12886), (104, 12904), (105, 12907), (112, 12952), (126, 13051), (129, 13078), (132, 13129), (143, 13267), (149, 13360), (151, 13372), (152, 13378), (161, 13456), (171, 13531), (172, 13546), (174, 13567), (175, 13585), (180, 13609), (196, 13738),

Gene: Racecar_81 Start: 46467, Stop: 48026, Start Num: 16

Candidate Starts for Racecar_81:

(Start: 16 @46467 has 8 MA's), (20, 46527), (21, 46542), (53, 46752), (70, 46893), (91, 47007), (97, 47058), (105, 47106), (133, 47340), (146, 47475), (151, 47538), (176, 47757), (191, 47883), (198, 47949),

Gene: Ramiel05_24 Start: 11948, Stop: 13417, Start Num: 19

Candidate Starts for Ramiel05_24:

(Start: 19 @11948 has 56 MA's), (Start: 26 @12005 has 1 MA's), (28, 12017), (30, 12029), (45, 12125), (46, 12143), (50, 12179), (54, 12203), (56, 12215), (61, 12251), (65, 12281), (67, 12308), (75, 12374), (76, 12380), (78, 12389), (80, 12407), (85, 12431), (86, 12440), (87, 12443), (89, 12452), (99, 12515), (103, 12530), (104, 12548), (105, 12551), (112, 12596), (126, 12695), (129, 12722), (132, 12773), (143, 12911), (149, 13004), (151, 13016), (152, 13022), (161, 13100), (171, 13175), (172, 13190), (174, 13211), (175, 13229), (180, 13253), (196, 13382),

Gene: ReginaGlobina_80 Start: 46036, Stop: 47544, Start Num: 16

Candidate Starts for ReginaGlobina_80:

(11, 45994), (13, 45997), (Start: 16 @46036 has 8 MA's), (17, 46045), (20, 46096), (53, 46291), (55, 46303), (57, 46330), (70, 46432), (97, 46573), (106, 46624), (134, 46861), (148, 47011), (150, 47041), (168, 47194), (191, 47398), (198, 47464), (199, 47467),

Gene: RobsFeet_26 Start: 11796, Stop: 13289, Start Num: 19

Candidate Starts for RobsFeet_26:

(Start: 19 @11796 has 56 MA's), (Start: 26 @11853 has 1 MA's), (28, 11865), (30, 11877), (45, 11973), (46, 11991), (50, 12027), (54, 12051), (56, 12063), (61, 12099), (67, 12156), (71, 12192), (75, 12222), (76, 12228), (78, 12237), (80, 12255), (85, 12279), (86, 12288), (87, 12291), (103, 12378), (104, 12396), (105, 12399), (123, 12537), (132, 12642), (136, 12705), (145, 12801), (151, 12885), (152, 12891), (154, 12912), (160, 12957), (167, 13023), (172, 13059), (196, 13251),

Gene: Rockabye_82 Start: 48709, Stop: 50256, Start Num: 16

Candidate Starts for Rockabye_82:

(1, 48484), (2, 48523), (4, 48553), (5, 48589), (6, 48604), (11, 48667), (13, 48670), (Start: 16 @48709 has 8 MA's), (17, 48718), (20, 48769), (21, 48784), (35, 48874), (53, 48994), (59, 49039), (70, 49135), (88, 49222), (97, 49285), (105, 49333), (126, 49453), (134, 49573), (150, 49756), (188, 50089), (191, 50110), (198, 50176),

Gene: Rockwell_24 Start: 11948, Stop: 13417, Start Num: 19

Candidate Starts for Rockwell_24:

(Start: 19 @11948 has 56 MA's), (Start: 26 @12005 has 1 MA's), (28, 12017), (30, 12029), (45, 12125), (46, 12143), (50, 12179), (54, 12203), (56, 12215), (61, 12251), (65, 12281), (67, 12308), (75, 12374), (76, 12380), (78, 12389), (80, 12407), (85, 12431), (86, 12440), (87, 12443), (89, 12452), (99, 12515), (103, 12530), (104, 12548), (105, 12551), (112, 12596), (126, 12695), (129, 12722), (132, 12773), (143, 12911), (149, 13004), (151, 13016), (152, 13022), (161, 13100), (171, 13175), (172, 13190), (174, 13211), (175, 13229), (180, 13253), (196, 13382),

Gene: SJReid_83 Start: 47777, Stop: 49324, Start Num: 16

Candidate Starts for SJReid_83:

(6, 47672), (11, 47735), (13, 47738), (Start: 16 @47777 has 8 MA's), (17, 47786), (20, 47837), (21, 47852), (35, 47942), (42, 47981), (53, 48062), (59, 48107), (70, 48203), (88, 48290), (97, 48353), (105, 48401), (134, 48641), (187, 49130), (191, 49178), (198, 49244),

Gene: Savannah_24 Start: 11972, Stop: 13441, Start Num: 19

Candidate Starts for Savannah_24:

(Start: 19 @11972 has 56 MA's), (Start: 26 @12029 has 1 MA's), (28, 12041), (30, 12053), (45, 12149), (46, 12167), (50, 12203), (54, 12227), (56, 12239), (61, 12275), (65, 12305), (67, 12332), (75, 12398), (76, 12404), (78, 12413), (80, 12431), (85, 12455), (86, 12464), (87, 12467), (89, 12476), (99, 12539), (103, 12554), (104, 12572), (105, 12575), (112, 12620), (126, 12719), (129, 12746), (132, 12797), (143, 12935), (149, 13028), (151, 13040), (152, 13046), (161, 13124), (171, 13199), (172, 13214), (174, 13235), (175, 13253), (180, 13277), (196, 13406),

Gene: Scumberland_26 Start: 12163, Stop: 13632, Start Num: 19

Candidate Starts for Scumberland_26:

(Start: 19 @12163 has 56 MA's), (Start: 26 @12220 has 1 MA's), (28, 12232), (30, 12244), (45, 12340), (46, 12358), (50, 12394), (54, 12418), (56, 12430), (61, 12466), (65, 12496), (67, 12523), (75, 12589), (76, 12595), (78, 12604), (80, 12622), (85, 12646), (86, 12655), (87, 12658), (89, 12667), (99, 12730), (103, 12745), (104, 12763), (105, 12766), (112, 12811), (126, 12910), (129, 12937), (132, 12988), (143, 13126), (149, 13219), (151, 13231), (152, 13237), (161, 13315), (171, 13390), (172, 13405), (174, 13426), (175, 13444), (180, 13468), (196, 13597),

Gene: Selwyn23_26 Start: 12141, Stop: 13610, Start Num: 19

Candidate Starts for Selwyn23_26:

(Start: 19 @12141 has 56 MA's), (Start: 26 @12198 has 1 MA's), (28, 12210), (30, 12222), (45, 12318), (46, 12336), (50, 12372), (54, 12396), (56, 12408), (61, 12444), (65, 12474), (67, 12501), (75, 12567), (76, 12573), (78, 12582), (80, 12600), (85, 12624), (86, 12633), (87, 12636), (89, 12645), (99, 12708), (103, 12723), (104, 12741), (105, 12744), (112, 12789), (126, 12888), (129, 12915), (132, 12966), (143, 13104), (149, 13197), (151, 13209), (152, 13215), (161, 13293), (171, 13368), (172, 13383), (174, 13404), (175, 13422), (180, 13446), (196, 13575),

Gene: Shotgun_24 Start: 11770, Stop: 13239, Start Num: 19

Candidate Starts for Shotgun_24:

(Start: 19 @11770 has 56 MA's), (Start: 26 @11827 has 1 MA's), (28, 11839), (30, 11851), (45, 11947), (46, 11965), (50, 12001), (54, 12025), (56, 12037), (61, 12073), (65, 12103), (67, 12130), (75, 12196), (76, 12202), (78, 12211), (80, 12229), (85, 12253), (86, 12262), (87, 12265), (89, 12274), (99, 12337), (103, 12352), (104, 12370), (105, 12373), (112, 12418), (126, 12517), (129, 12544), (132, 12595), (143, 12733), (149, 12826), (151, 12838), (152, 12844), (161, 12922), (171, 12997), (172, 13012), (174, 13033), (175, 13051), (196, 13204),

Gene: Shrubaron_25 Start: 11431, Stop: 12921, Start Num: 19

Candidate Starts for Shrubaron_25:

(Start: 19 @11431 has 56 MA's), (Start: 26 @11488 has 1 MA's), (28, 11500), (30, 11512), (45, 11608), (46, 11626), (50, 11662), (54, 11686), (56, 11698), (61, 11734), (67, 11791), (71, 11827), (75, 11857), (76, 11863), (78, 11872), (80, 11890), (85, 11914), (86, 11923), (87, 11926), (103, 12013), (104, 12031), (105, 12034), (123, 12169), (132, 12274), (136, 12337), (145, 12433), (151, 12517), (152, 12523), (154, 12544), (160, 12589), (167, 12655), (172, 12691), (196, 12883),

Gene: SirFrank_24 Start: 11839, Stop: 13308, Start Num: 19

Candidate Starts for SirFrank_24:

(Start: 19 @11839 has 56 MA's), (Start: 26 @11896 has 1 MA's), (28, 11908), (30, 11920), (45, 12016), (46, 12034), (50, 12070), (54, 12094), (56, 12106), (61, 12142), (65, 12172), (67, 12199), (75, 12265), (76, 12271), (78, 12280), (80, 12298), (85, 12322), (86, 12331), (87, 12334), (99, 12403), (103, 12418), (104, 12436), (105, 12439), (112, 12484), (126, 12583), (129, 12610), (132, 12661), (144, 12805), (151, 12904), (152, 12910), (155, 12934), (161, 12988), (171, 13063), (175, 13117), (177, 13126), (180, 13141), (196, 13270),

Gene: Skugga_23 Start: 11150, Stop: 12640, Start Num: 19

Candidate Starts for Skugga_23:

(Start: 19 @11150 has 56 MA's), (Start: 26 @11207 has 1 MA's), (28, 11219), (30, 11231), (45, 11327), (46, 11345), (56, 11417), (61, 11453), (67, 11510), (75, 11576), (76, 11582), (78, 11591), (80, 11609), (85, 11633), (86, 11642), (87, 11645), (104, 11750), (105, 11753), (112, 11798), (123, 11891), (126, 11918), (132, 11996), (136, 12059), (145, 12155), (151, 12239), (152, 12245), (154, 12266), (160, 12311), (167, 12377), (180, 12476), (184, 12500), (196, 12605),

Gene: Smarties_33 Start: 13624, Stop: 15117, Start Num: 19

Candidate Starts for Smarties_33:

(Start: 19 @13624 has 56 MA's), (28, 13693), (30, 13705), (45, 13801), (46, 13819), (48, 13840), (56, 13891), (61, 13927), (67, 13984), (71, 14020), (73, 14044), (75, 14050), (76, 14056), (78, 14065), (85, 14107), (86, 14116), (87, 14119), (104, 14224), (105, 14227), (123, 14368), (136, 14536), (145, 14632), (151, 14716), (152, 14722), (154, 14743), (160, 14788), (164, 14845), (167, 14854), (172, 14890), (181, 14956), (196, 15082),

Gene: StAugustine_15 Start: 11415, Stop: 12941, Start Num: 10

Candidate Starts for StAugustine_15:

(Start: 10 @11415 has 2 MA's), (24, 11568), (28, 11601), (38, 11673), (44, 11712), (46, 11733), (56, 11793), (64, 11856), (70, 11922), (82, 11994), (112, 12156), (119, 12234), (138, 12456), (153, 12621), (155, 12627), (158, 12648), (193, 12930),

Gene: Stewart25555_71 Start: 42369, Stop: 43883, Start Num: 15

Candidate Starts for Stewart25555_71:

(3, 42207), (Start: 15 @42369 has 4 MA's), (18, 42402), (20, 42429), (33, 42486), (40, 42537), (44, 42555), (53, 42624), (55, 42636), (58, 42666), (70, 42765), (97, 42912), (98, 42918), (105, 42960), (134, 43200), (191, 43737), (194, 43749), (198, 43803),

Gene: Sunny_ Start: 12177, Stop: 13676, Start Num: 19

Candidate Starts for Sunny_:

(Start: 19 @12177 has 56 MA's), (28, 12246), (30, 12258), (45, 12354), (46, 12372), (57, 12465), (61, 12480), (67, 12537), (71, 12573), (75, 12603), (76, 12609), (78, 12618), (85, 12660), (86, 12669), (87, 12672), (90, 12684), (101, 12753), (105, 12783), (112, 12828), (120, 12906), (126, 12954), (132, 13032), (145, 13191), (149, 13263), (151, 13275), (152, 13281), (154, 13302), (155, 13305), (160, 13347), (170, 13428), (186, 13560), (196, 13641),

Gene: Talia1610_80 Start: 45832, Stop: 47391, Start Num: 16

Candidate Starts for Talia1610_80:

(Start: 16 @45832 has 8 MA's), (20, 45892), (21, 45907), (53, 46117), (70, 46258), (91, 46372), (97, 46423), (105, 46471), (133, 46705), (146, 46840), (151, 46903), (176, 47122), (191, 47248), (198, 47314),

Gene: Teamocil_26 Start: 11315, Stop: 12808, Start Num: 19

Candidate Starts for Teamocil_26:

(Start: 19 @11315 has 56 MA's), (Start: 26 @11372 has 1 MA's), (28, 11384), (30, 11396), (45, 11492), (46, 11510), (50, 11546), (56, 11582), (61, 11618), (67, 11675), (71, 11711), (75, 11741), (76, 11747), (78, 11756), (85, 11798), (86, 11807), (87, 11810), (88, 11816), (104, 11921), (105, 11924), (112, 11969), (123, 12059), (127, 12089), (136, 12227), (145, 12323), (151, 12407), (152, 12413), (154, 12434), (160, 12479), (167, 12545), (196, 12773),

Gene: Terij_20 Start: 11194, Stop: 12684, Start Num: 19

Candidate Starts for Terij_20:

(Start: 19 @11194 has 56 MA's), (32, 11311), (43, 11368), (46, 11398), (57, 11494), (67, 11566), (75, 11632), (78, 11647), (80, 11665), (86, 11689), (102, 11749), (105, 11776), (109, 11797), (110, 11806), (111, 11815), (112, 11821), (114, 11854), (115, 11872), (130, 11983), (132, 12031), (143, 12169), (145, 12190), (152, 12280), (161, 12358), (165, 12409), (172, 12448), (179, 12508), (181, 12514), (182, 12520), (187, 12568), (189, 12604), (192, 12616), (195, 12634), (196, 12640),

Gene: Tyrumbra_23 Start: 10872, Stop: 12365, Start Num: 19

Candidate Starts for Tyrumbra_23:

(Start: 19 @10872 has 56 MA's), (Start: 26 @10929 has 1 MA's), (28, 10941), (30, 10953), (45, 11049), (46, 11067), (50, 11103), (54, 11127), (56, 11139), (61, 11175), (67, 11232), (71, 11268), (75, 11298), (76, 11304), (78, 11313), (80, 11331), (85, 11355), (86, 11364), (87, 11367), (103, 11454), (104, 11472), (105, 11475), (123, 11613), (132, 11718), (136, 11781), (145, 11877), (151, 11961), (152, 11967), (154, 11988), (160, 12033), (167, 12099), (172, 12135), (196, 12327),

Gene: WaddleDee_68 Start: 41867, Stop: 43381, Start Num: 15

Candidate Starts for WaddleDee_68:

(7, 41774), (Start: 15 @41867 has 4 MA's), (18, 41900), (20, 41927), (40, 42035), (44, 42053), (47, 42092), (53, 42122), (55, 42134), (58, 42164), (70, 42263), (97, 42410), (98, 42416), (105, 42458), (126, 42578), (134, 42698), (191, 43235), (198, 43301),

Gene: Yeti_25 Start: 11944, Stop: 13413, Start Num: 19

Candidate Starts for Yeti_25:

(Start: 19 @11944 has 56 MA's), (Start: 26 @12001 has 1 MA's), (28, 12013), (30, 12025), (45, 12121), (46, 12139), (50, 12175), (54, 12199), (56, 12211), (61, 12247), (67, 12304), (75, 12370), (76, 12376), (78, 12385), (80, 12403), (85, 12427), (86, 12436), (87, 12439), (89, 12448), (103, 12526), (104, 12544), (105, 12547), (112, 12592), (126, 12691), (129, 12718), (132, 12769), (143, 12907), (149, 13000), (151, 13012), (152, 13018), (161, 13096), (171, 13171), (172, 13186), (174, 13207), (175, 13225), (180, 13249), (196, 13378),

Gene: Zapato_24 Start: 11539, Stop: 13032, Start Num: 19

Candidate Starts for Zapato_24:

(Start: 19 @11539 has 56 MA's), (30, 11620), (45, 11716), (46, 11734), (56, 11806), (61, 11842), (67, 11899), (75, 11965), (76, 11971), (78, 11980), (80, 11998), (85, 12022), (86, 12031), (87, 12034), (104, 12139), (105, 12142), (112, 12187), (121, 12265), (123, 12283), (132, 12388), (136, 12451), (145, 12547), (151, 12631), (152, 12637), (154, 12658), (160, 12703), (167, 12769), (179, 12865), (180, 12868), (181, 12871), (186, 12916), (196, 12997),

Gene: phiAsp2_7 Start: 3884, Stop: 5326, Start Num: 37

Candidate Starts for phiAsp2_7:

(14, 3638), (25, 3785), (27, 3791), (37, 3884), (39, 3905), (51, 3977), (57, 4031), (59, 4037), (60, 4043), (65, 4082), (68, 4121), (69, 4133), (70, 4142), (74, 4172), (77, 4187), (80, 4208), (83, 4220), (90, 4256), (93, 4286), (94, 4289), (96, 4310), (108, 4376), (110, 4391), (116, 4466), (122, 4520), (125, 4538), (128, 4565), (132, 4634), (135, 4685), (139, 4745), (145, 4790), (148, 4835), (149, 4859), (155, 4901), (156, 4904), (162, 4967), (169, 5015), (178, 5099), (183, 5126), (197, 5258),