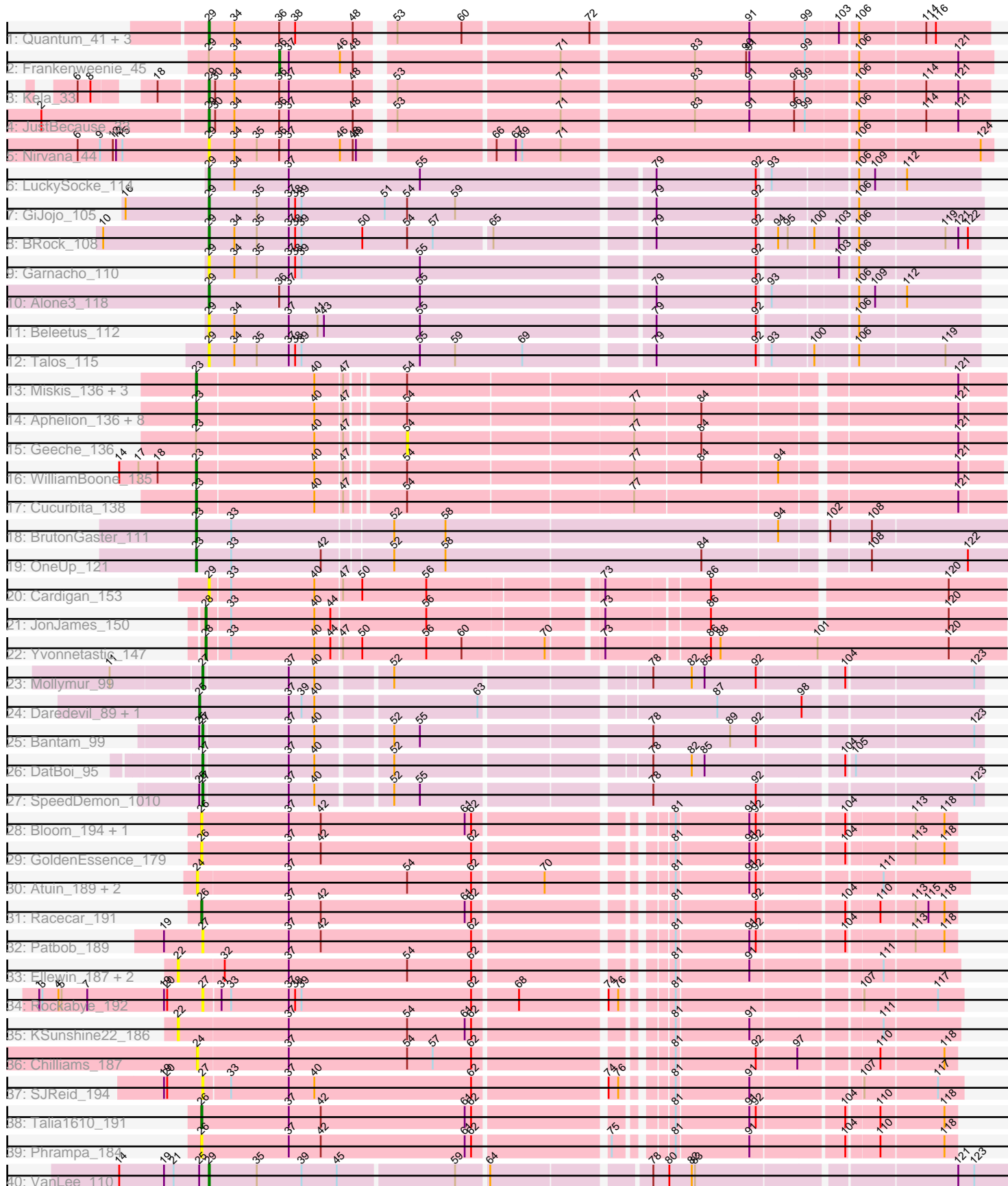


Pham 202958



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 202958 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202958 has 60 members, 25 are drafts.

Phages represented in each track:

- Track 1 : Quantum_41, Kradal_42, EhyElimayoE_42, Satis_42
- Track 2 : Frankenweenie_45
- Track 3 : Kela_33
- Track 4 : JustBecause_33
- Track 5 : Nirvana_44
- Track 6 : LuckySocke_114
- Track 7 : GiJojo_105
- Track 8 : BRock_108
- Track 9 : Garnacho_110
- Track 10 : Alone3_118
- Track 11 : Beleetus_112
- Track 12 : Talos_115
- Track 13 : Miskis_136, Toniann_137, PhinkBoden_136, ClubL_137
- Track 14 : Aphelion_136, Abscondus_136, Culver_136, Engineer_139, Bachita_140, Norvs_135, Smoothie_138, Lozinak_137, Dusty_133
- Track 15 : Geeche_136
- Track 16 : WilliamBoone_135
- Track 17 : Cucurbita_138
- Track 18 : BrutonGaster_111
- Track 19 : OneUp_121
- Track 20 : Cardigan_153
- Track 21 : JonJames_150
- Track 22 : Yvonnetastic_147
- Track 23 : Mollymur_99
- Track 24 : Daredevil_89, Towmatter_91
- Track 25 : Bantam_99
- Track 26 : DatBoi_95
- Track 27 : SpeedDemon_1010
- Track 28 : Bloom_194, Mimi_196
- Track 29 : GoldenEssence_179
- Track 30 : Atuin_189, LeoJr_192, ReginaGlobina_196
- Track 31 : Racecar_191
- Track 32 : Patbob_189
- Track 33 : Ellewin_187, WaddleDee_188, DunneganBoMo_188
- Track 34 : Rockabye_192
- Track 35 : KSunshine22_186
- Track 36 : Chilliams_187

- Track 37 : SJReid_194
- Track 38 : Talia1610_191
- Track 39 : Phrampa_184
- Track 40 : VanLee_110

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

The start number called the most often in the published annotations is 23, it was called in 14 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abscondus_136, Aphelion_136, Bachita_140, BrutonGaster_111, ClubL_137, Cucurbita_138, Culver_136, Dusty_133, Engineer_139, Lozinak_137, Miskis_136, Norvs_135, OneUp_121, PhinkBoden_136, Smoothie_138, Toniann_137, WilliamBoone_135,

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

- Geeche_136,

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

- Alone3_118, Atuin_189, BRock_108, Bantam_99, Beleetus_112, Bloom_194, Cardigan_153, Chilliams_187, Daredevil_89, DatBoi_95, DunneganBoMo_188, EhyElimayoE_42, Ellewin_187, Frankenweenie_45, Garnacho_110, GiJojo_105, GoldenEssence_179, JonJames_150, JustBecause_33, KSunshine22_186, Kela_33, Kradal_42, LeoJr_192, LuckySocke_114, Mimi_196, Mollymur_99, Nirvana_44, Patbob_189, Phrampa_184, Quantum_41, Racecar_191, ReginaGlobina_196, Rockabye_192, SJReid_194, Satis_42, SpeedDemon_1010, Talia1610_191, Talos_115, Towmatter_91, VanLee_110, WaddleDee_188, Yvonnetastic_147,

Summary by start number:

Start 22:

- Found in 4 of 60 (6.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DunneganBoMo_188 (FC), Ellewin_187 (FC), KSunshine22_186 (FC), WaddleDee_188 (FC),

Start 23:

- Found in 18 of 60 (30.0%) of genes in pham
- Manual Annotations of this start: 14 of 35
- Called 94.4% of time when present
- Phage (with cluster) where this start called: Abscondus_136 (CQ1), Aphelion_136 (CQ1), Bachita_140 (CQ1), BrutonGaster_111 (CQ2), ClubL_137 (CQ1), Cucurbita_138 (CQ1), Culver_136 (CQ1), Dusty_133 (CQ1), Engineer_139 (CQ1), Lozinak_137 (CQ1), Miskis_136 (CQ1), Norvs_135 (CQ1), OneUp_121 (CQ2), PhinkBoden_136 (CQ1), Smoothie_138 (CQ1), Toniann_137 (CQ1), WilliamBoone_135 (CQ1),

Start 24:

- Found in 4 of 60 (6.7%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Atuin_189 (FC), Chilliams_187 (FC), LeoJr_192 (FC), ReginaGlobina_196 (FC),

Start 25:

- Found in 5 of 60 (8.3%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Daredevil_89 (DL), Towmatter_91 (DL),

Start 26:

- Found in 6 of 60 (10.0%) of genes in pham
- Manual Annotations of this start: 2 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bloom_194 (FC), GoldenEssence_179 (FC), Mimi_196 (FC), Phrampa_184 (FC), Racecar_191 (FC), Talia1610_191 (FC),

Start 27:

- Found in 7 of 60 (11.7%) of genes in pham
- Manual Annotations of this start: 4 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam_99 (DL), DatBoi_95 (DL), Mollymur_99 (DL), Patbob_189 (FC), Rockabye_192 (FC), SJReid_194 (FC), SpeedDemon_1010 (DL),

Start 28:

- Found in 2 of 60 (3.3%) of genes in pham
- Manual Annotations of this start: 2 of 35
- Called 100.0% of time when present
- Phage (with cluster) where this start called: JonJames_150 (DD), Yvonnetastic_147 (DD),

Start 29:

- Found in 17 of 60 (28.3%) of genes in pham
- Manual Annotations of this start: 11 of 35
- Called 94.1% of time when present
- Phage (with cluster) where this start called: Alone3_118 (BS), BRock_108 (BS), Beleetus_112 (BS), Cardigan_153 (DD), EhyElimayoE_42 (BM), Garnacho_110 (BS), GiJojo_105 (BS), JustBecause_33 (BM), Kela_33 (BM), Kradal_42 (BM), LuckySocke_114 (BS), Nirvana_44 (BM), Quantum_41 (BM), Satis_42 (BM), Talos_115 (BS), VanLee_110 (singleton),

Start 36:

- Found in 9 of 60 (15.0%) of genes in pham
- Manual Annotations of this start: 1 of 35
- Called 11.1% of time when present
- Phage (with cluster) where this start called: Frankenweenie_45 (BM),

Start 54:

- Found in 26 of 60 (43.3%) of genes in pham
- No Manual Annotations of this start.

- Called 3.8% of time when present
- Phage (with cluster) where this start called: Geeche_136 (CQ1),

Summary by clusters:

There are 8 clusters represented in this pham: DL, BM, DD, singleton, FC, BS, CQ2, CQ1,

Info for manual annotations of cluster BM:

- Start number 29 was manually annotated 6 times for cluster BM.
- Start number 36 was manually annotated 1 time for cluster BM.

Info for manual annotations of cluster BS:

- Start number 29 was manually annotated 4 times for cluster BS.

Info for manual annotations of cluster CQ1:

- Start number 23 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster CQ2:

- Start number 23 was manually annotated 2 times for cluster CQ2.

Info for manual annotations of cluster DD:

- Start number 28 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 25 was manually annotated 1 time for cluster DL.
- Start number 27 was manually annotated 4 times for cluster DL.

Info for manual annotations of cluster FC:

- Start number 26 was manually annotated 2 times for cluster FC.

Gene Information:

Gene: Abscondus_136 Start: 75128, Stop: 75835, Start Num: 23

Candidate Starts for Abscondus_136:

(Start: 23 @75128 has 14 MA's), (40, 75236), (47, 75260), (54, 75308), (77, 75512), (84, 75572), (121, 75794),

Gene: Alone3_118 Start: 63397, Stop: 64086, Start Num: 29

Candidate Starts for Alone3_118:

(Start: 29 @63397 has 11 MA's), (Start: 36 @63463 has 1 MA's), (37, 63472), (55, 63595), (79, 63802), (92, 63895), (93, 63904), (106, 63976), (109, 63991), (112, 64018),

Gene: Aphelion_136 Start: 76000, Stop: 76707, Start Num: 23

Candidate Starts for Aphelion_136:

(Start: 23 @76000 has 14 MA's), (40, 76108), (47, 76132), (54, 76180), (77, 76384), (84, 76444), (121, 76666),

Gene: Atuin_189 Start: 129201, Stop: 129866, Start Num: 24

Candidate Starts for Atuin_189:

(24, 129201), (37, 129285), (54, 129396), (62, 129456), (70, 129519), (81, 129612), (91, 129678), (92, 129684), (111, 129789),

Gene: BRock_108 Start: 57585, Stop: 58268, Start Num: 29

Candidate Starts for BRock_108:

(10, 57486), (Start: 29 @57585 has 11 MA's), (34, 57609), (35, 57630), (37, 57660), (38, 57666), (39, 57672), (50, 57729), (54, 57771), (57, 57795), (65, 57846), (79, 57984), (92, 58077), (94, 58092), (95, 58101), (100, 58122), (103, 58143), (106, 58158), (119, 58236), (121, 58248), (122, 58257),

Gene: Bachita_140 Start: 76138, Stop: 76845, Start Num: 23

Candidate Starts for Bachita_140:

(Start: 23 @76138 has 14 MA's), (40, 76246), (47, 76270), (54, 76318), (77, 76522), (84, 76582), (121, 76804),

Gene: Bantam_99 Start: 65318, Stop: 65998, Start Num: 27

Candidate Starts for Bantam_99:

(Start: 25 @65315 has 1 MA's), (Start: 27 @65318 has 4 MA's), (37, 65396), (40, 65420), (52, 65483), (55, 65507), (78, 65708), (89, 65780), (92, 65804), (123, 65990),

Gene: Beleetus_112 Start: 61004, Stop: 61693, Start Num: 29

Candidate Starts for Beleetus_112:

(Start: 29 @61004 has 11 MA's), (34, 61028), (37, 61079), (41, 61106), (43, 61112), (55, 61202), (79, 61409), (92, 61502), (106, 61583),

Gene: Bloom_194 Start: 131939, Stop: 132589, Start Num: 26

Candidate Starts for Bloom_194:

(Start: 26 @131939 has 2 MA's), (37, 132020), (42, 132050), (61, 132185), (62, 132191), (81, 132347), (91, 132413), (92, 132419), (104, 132494), (113, 132551), (118, 132578),

Gene: BrutonGaster_111 Start: 69747, Stop: 70487, Start Num: 23

Candidate Starts for BrutonGaster_111:

(Start: 23 @69747 has 14 MA's), (33, 69780), (52, 69924), (58, 69972), (94, 70278), (102, 70314), (108, 70350),

Gene: Cardigan_153 Start: 82886, Stop: 83590, Start Num: 29

Candidate Starts for Cardigan_153:

(Start: 29 @82886 has 11 MA's), (33, 82904), (40, 82982), (47, 83006), (50, 83024), (56, 83084), (73, 83234), (86, 83324), (120, 83537),

Gene: Chilliams_187 Start: 126484, Stop: 127137, Start Num: 24

Candidate Starts for Chilliams_187:

(24, 126484), (37, 126568), (54, 126679), (57, 126703), (62, 126739), (81, 126895), (92, 126967), (97, 127003), (110, 127069), (118, 127126),

Gene: ClubL_137 Start: 74712, Stop: 75419, Start Num: 23

Candidate Starts for ClubL_137:

(Start: 23 @74712 has 14 MA's), (40, 74820), (47, 74844), (54, 74892), (121, 75378),

Gene: Cucurbita_138 Start: 76451, Stop: 77158, Start Num: 23

Candidate Starts for Cucurbita_138:

(Start: 23 @76451 has 14 MA's), (40, 76559), (47, 76583), (54, 76631), (77, 76835), (121, 77117),

Gene: Culver_136 Start: 74454, Stop: 75161, Start Num: 23

Candidate Starts for Culver_136:

(Start: 23 @74454 has 14 MA's), (40, 74562), (47, 74586), (54, 74634), (77, 74838), (84, 74898), (121, 75120),

Gene: Daredevil_89 Start: 61004, Stop: 61684, Start Num: 25

Candidate Starts for Daredevil_89:

(Start: 25 @61004 has 1 MA's), (37, 61088), (39, 61100), (40, 61112), (63, 61253), (87, 61454), (98, 61529),

Gene: DatBoi_95 Start: 64460, Stop: 65134, Start Num: 27

Candidate Starts for DatBoi_95:

(Start: 27 @64460 has 4 MA's), (37, 64538), (40, 64562), (52, 64625), (78, 64844), (82, 64880), (85, 64892), (104, 65012), (105, 65018),

Gene: DunneganBoMo_188 Start: 133952, Stop: 134626, Start Num: 22

Candidate Starts for DunneganBoMo_188:

(22, 133952), (32, 133994), (37, 134054), (54, 134165), (62, 134225), (81, 134381), (91, 134447), (111, 134558),

Gene: Dusty_133 Start: 74690, Stop: 75397, Start Num: 23

Candidate Starts for Dusty_133:

(Start: 23 @74690 has 14 MA's), (40, 74798), (47, 74822), (54, 74870), (77, 75074), (84, 75134), (121, 75356),

Gene: EhyElimayoE_42 Start: 24210, Stop: 23518, Start Num: 29

Candidate Starts for EhyElimayoE_42:

(Start: 29 @24210 has 11 MA's), (34, 24186), (Start: 36 @24144 has 1 MA's), (38, 24129), (48, 24075), (53, 24048), (60, 23988), (72, 23874), (91, 23733), (99, 23682), (103, 23652), (106, 23637), (114, 23577), (116, 23568),

Gene: Ellewin_187 Start: 134030, Stop: 134704, Start Num: 22

Candidate Starts for Ellewin_187:

(22, 134030), (32, 134072), (37, 134132), (54, 134243), (62, 134303), (81, 134459), (91, 134525), (111, 134636),

Gene: Engineer_139 Start: 76111, Stop: 76818, Start Num: 23

Candidate Starts for Engineer_139:

(Start: 23 @76111 has 14 MA's), (40, 76219), (47, 76243), (54, 76291), (77, 76495), (84, 76555), (121, 76777),

Gene: Frankenweenie_45 Start: 24877, Stop: 24248, Start Num: 36

Candidate Starts for Frankenweenie_45:

(Start: 29 @24943 has 11 MA's), (34, 24919), (Start: 36 @24877 has 1 MA's), (37, 24868), (46, 24820), (48, 24808), (71, 24634), (83, 24517), (90, 24469), (91, 24466), (99, 24415), (106, 24370), (121, 24280),

Gene: Garnacho_110 Start: 61225, Stop: 61914, Start Num: 29

Candidate Starts for Garnacho_110:

(Start: 29 @61225 has 11 MA's), (34, 61249), (35, 61270), (37, 61300), (38, 61306), (39, 61312), (55, 61423), (92, 61723), (103, 61789), (106, 61804),

Gene: Geeche_136 Start: 75093, Stop: 75620, Start Num: 54

Candidate Starts for Geeche_136:

(Start: 23 @74913 has 14 MA's), (40, 75021), (47, 75045), (54, 75093), (77, 75297), (84, 75357), (121, 75579),

Gene: GiJojo_105 Start: 62109, Stop: 62801, Start Num: 29

Candidate Starts for GiJojo_105:

(16, 62031), (Start: 29 @62109 has 11 MA's), (35, 62154), (37, 62184), (38, 62190), (39, 62196), (51, 62274), (54, 62295), (59, 62340), (79, 62514), (92, 62607), (106, 62688),

Gene: GoldenEssence_179 Start: 126151, Stop: 126801, Start Num: 26

Candidate Starts for GoldenEssence_179:

(Start: 26 @126151 has 2 MA's), (37, 126232), (42, 126262), (62, 126403), (81, 126559), (91, 126625), (92, 126631), (104, 126706), (113, 126763), (118, 126790),

Gene: JonJames_150 Start: 83739, Stop: 84446, Start Num: 28

Candidate Starts for JonJames_150:

(Start: 28 @83739 has 2 MA's), (33, 83760), (40, 83838), (44, 83853), (56, 83940), (73, 84090), (86, 84180), (120, 84393),

Gene: JustBecause_33 Start: 20081, Stop: 19389, Start Num: 29

Candidate Starts for JustBecause_33:

(2, 20231), (Start: 29 @20081 has 11 MA's), (30, 20075), (34, 20057), (Start: 36 @20015 has 1 MA's), (37, 20006), (48, 19946), (53, 19919), (71, 19772), (83, 19655), (91, 19604), (96, 19562), (99, 19553), (106, 19508), (114, 19448), (121, 19418),

Gene: KSunshine22_186 Start: 133047, Stop: 133721, Start Num: 22

Candidate Starts for KSunshine22_186:

(22, 133047), (37, 133149), (54, 133260), (61, 133314), (62, 133320), (81, 133476), (91, 133542), (111, 133653),

Gene: Kela_33 Start: 20036, Stop: 19344, Start Num: 29

Candidate Starts for Kela_33:

(6, 20126), (8, 20117), (18, 20078), (Start: 29 @20036 has 11 MA's), (30, 20030), (34, 20012), (Start: 36 @19970 has 1 MA's), (37, 19961), (48, 19901), (53, 19874), (71, 19727), (83, 19610), (91, 19559), (96, 19517), (99, 19508), (106, 19463), (114, 19403), (121, 19373),

Gene: Kradal_42 Start: 24210, Stop: 23518, Start Num: 29

Candidate Starts for Kradal_42:

(Start: 29 @24210 has 11 MA's), (34, 24186), (Start: 36 @24144 has 1 MA's), (38, 24129), (48, 24075), (53, 24048), (60, 23988), (72, 23874), (91, 23733), (99, 23682), (103, 23652), (106, 23637), (114, 23577), (116, 23568),

Gene: LeoJr_192 Start: 129755, Stop: 130420, Start Num: 24

Candidate Starts for LeoJr_192:

(24, 129755), (37, 129839), (54, 129950), (62, 130010), (70, 130073), (81, 130166), (91, 130232), (92, 130238), (111, 130343),

Gene: Lozinak_137 Start: 75782, Stop: 76489, Start Num: 23

Candidate Starts for Lozinak_137:

(Start: 23 @75782 has 14 MA's), (40, 75890), (47, 75914), (54, 75962), (77, 76166), (84, 76226), (121, 76448),

Gene: LuckySocke_114 Start: 61556, Stop: 62245, Start Num: 29

Candidate Starts for LuckySocke_114:

(Start: 29 @61556 has 11 MA's), (34, 61580), (37, 61631), (55, 61754), (79, 61961), (92, 62054), (93, 62063), (106, 62135), (109, 62150), (112, 62177),

Gene: Mimi_196 Start: 131559, Stop: 132209, Start Num: 26

Candidate Starts for Mimi_196:

(Start: 26 @131559 has 2 MA's), (37, 131640), (42, 131670), (61, 131805), (62, 131811), (81, 131967), (91, 132033), (92, 132039), (104, 132114), (113, 132171), (118, 132198),

Gene: Miskis_136 Start: 75213, Stop: 75920, Start Num: 23

Candidate Starts for Miskis_136:

(Start: 23 @75213 has 14 MA's), (40, 75321), (47, 75345), (54, 75393), (121, 75879),

Gene: Mollymur_99 Start: 66160, Stop: 66834, Start Num: 27

Candidate Starts for Mollymur_99:

(11, 66079), (Start: 27 @66160 has 4 MA's), (37, 66238), (40, 66262), (52, 66325), (78, 66544), (82, 66580), (85, 66592), (92, 66640), (104, 66712), (123, 66826),

Gene: Nirvana_44 Start: 25143, Stop: 24448, Start Num: 29

Candidate Starts for Nirvana_44:

(6, 25266), (9, 25245), (12, 25233), (13, 25230), (15, 25224), (Start: 29 @25143 has 11 MA's), (34, 25119), (35, 25098), (Start: 36 @25077 has 1 MA's), (37, 25068), (46, 25020), (48, 25008), (49, 25005), (66, 24894), (67, 24876), (69, 24870), (71, 24834), (106, 24570), (124, 24459),

Gene: Norvs_135 Start: 75176, Stop: 75883, Start Num: 23

Candidate Starts for Norvs_135:

(Start: 23 @75176 has 14 MA's), (40, 75284), (47, 75308), (54, 75356), (77, 75560), (84, 75620), (121, 75842),

Gene: OneUp_121 Start: 73707, Stop: 74444, Start Num: 23

Candidate Starts for OneUp_121:

(Start: 23 @73707 has 14 MA's), (33, 73740), (42, 73824), (52, 73884), (58, 73932), (84, 74169), (108, 74310), (122, 74400),

Gene: Patbob_189 Start: 131947, Stop: 132597, Start Num: 27

Candidate Starts for Patbob_189:

(19, 131911), (Start: 27 @131947 has 4 MA's), (37, 132028), (42, 132058), (62, 132199), (81, 132355), (91, 132421), (92, 132427), (104, 132502), (113, 132559), (118, 132586),

Gene: PhinkBoden_136 Start: 76041, Stop: 76748, Start Num: 23

Candidate Starts for PhinkBoden_136:

(Start: 23 @76041 has 14 MA's), (40, 76149), (47, 76173), (54, 76221), (121, 76707),

Gene: Phrampa_184 Start: 131310, Stop: 131960, Start Num: 26

Candidate Starts for Phrampa_184:

(Start: 26 @131310 has 2 MA's), (37, 131391), (42, 131421), (61, 131556), (62, 131562), (75, 131679), (81, 131718), (91, 131784), (104, 131865), (110, 131892), (118, 131949),

Gene: Quantum_41 Start: 24210, Stop: 23518, Start Num: 29

Candidate Starts for Quantum_41:

(Start: 29 @24210 has 11 MA's), (34, 24186), (Start: 36 @24144 has 1 MA's), (38, 24129), (48, 24075), (53, 24048), (60, 23988), (72, 23874), (91, 23733), (99, 23682), (103, 23652), (106, 23637), (114, 23577), (116, 23568),

Gene: Racecar_191 Start: 131722, Stop: 132372, Start Num: 26

Candidate Starts for Racecar_191:

(Start: 26 @131722 has 2 MA's), (37, 131803), (42, 131833), (61, 131968), (62, 131974), (81, 132130), (92, 132202), (104, 132277), (110, 132304), (113, 132334), (115, 132346), (118, 132361),

Gene: ReginaGlobina_196 Start: 131038, Stop: 131703, Start Num: 24

Candidate Starts for ReginaGlobina_196:

(24, 131038), (37, 131122), (54, 131233), (62, 131293), (70, 131356), (81, 131449), (91, 131515), (92, 131521), (111, 131626),

Gene: Rockabye_192 Start: 125265, Stop: 125918, Start Num: 27

Candidate Starts for Rockabye_192:

(1, 125112), (3, 125115), (4, 125130), (5, 125133), (7, 125157), (19, 125229), (20, 125232), (Start: 27 @125265 has 4 MA's), (31, 125280), (33, 125289), (37, 125343), (38, 125349), (39, 125355), (62, 125514), (68, 125553), (74, 125628), (76, 125637), (81, 125670), (107, 125829), (117, 125895),

Gene: SJReid_194 Start: 123863, Stop: 124516, Start Num: 27

Candidate Starts for SJReid_194:

(19, 123827), (20, 123830), (Start: 27 @123863 has 4 MA's), (33, 123887), (37, 123941), (40, 123965), (62, 124112), (74, 124226), (76, 124235), (81, 124268), (91, 124334), (107, 124427), (117, 124493),

Gene: Satis_42 Start: 24206, Stop: 23514, Start Num: 29

Candidate Starts for Satis_42:

(Start: 29 @24206 has 11 MA's), (34, 24182), (Start: 36 @24140 has 1 MA's), (38, 24125), (48, 24071), (53, 24044), (60, 23984), (72, 23870), (91, 23729), (99, 23678), (103, 23648), (106, 23633), (114, 23573), (116, 23564),

Gene: Smoothie_138 Start: 75782, Stop: 76489, Start Num: 23

Candidate Starts for Smoothie_138:

(Start: 23 @75782 has 14 MA's), (40, 75890), (47, 75914), (54, 75962), (77, 76166), (84, 76226), (121, 76448),

Gene: SpeedDemon_1010 Start: 67850, Stop: 68530, Start Num: 27

Candidate Starts for SpeedDemon_1010:

(Start: 25 @67847 has 1 MA's), (Start: 27 @67850 has 4 MA's), (37, 67928), (40, 67952), (52, 68015), (55, 68039), (78, 68240), (92, 68336), (123, 68522),

Gene: Talia1610_191 Start: 132018, Stop: 132668, Start Num: 26

Candidate Starts for Talia1610_191:

(Start: 26 @132018 has 2 MA's), (37, 132099), (42, 132129), (61, 132264), (62, 132270), (81, 132426), (91, 132492), (92, 132498), (104, 132573), (110, 132600), (118, 132657),

Gene: Talos_115 Start: 61418, Stop: 62107, Start Num: 29

Candidate Starts for Talos_115:

(Start: 29 @61418 has 11 MA's), (34, 61442), (35, 61463), (37, 61493), (38, 61499), (39, 61505), (55, 61616), (59, 61649), (69, 61712), (79, 61823), (92, 61916), (93, 61925), (100, 61961), (106, 61997), (119, 62075),

Gene: Toniann_137 Start: 75311, Stop: 76018, Start Num: 23

Candidate Starts for Toniann_137:

(Start: 23 @75311 has 14 MA's), (40, 75419), (47, 75443), (54, 75491), (121, 75977),

Gene: Towmatter_91 Start: 61086, Stop: 61766, Start Num: 25

Candidate Starts for Towmatter_91:

(Start: 25 @61086 has 1 MA's), (37, 61170), (39, 61182), (40, 61194), (63, 61335), (87, 61536), (98, 61611),

Gene: VanLee_110 Start: 57959, Stop: 58672, Start Num: 29

Candidate Starts for VanLee_110:

(14, 57878), (19, 57920), (21, 57929), (Start: 25 @57953 has 1 MA's), (Start: 29 @57959 has 11 MA's), (35, 58004), (39, 58046), (45, 58079), (59, 58184), (64, 58211), (78, 58346), (80, 58361), (82, 58382), (83, 58385), (121, 58613), (123, 58628),

Gene: WaddleDee_188 Start: 133225, Stop: 133899, Start Num: 22

Candidate Starts for WaddleDee_188:

(22, 133225), (32, 133267), (37, 133327), (54, 133438), (62, 133498), (81, 133654), (91, 133720), (111, 133831),

Gene: WilliamBoone_135 Start: 72980, Stop: 73684, Start Num: 23

Candidate Starts for WilliamBoone_135:

(14, 72908), (17, 72926), (18, 72944), (Start: 23 @72980 has 14 MA's), (40, 73088), (47, 73112), (54, 73160), (77, 73364), (84, 73424), (94, 73493), (121, 73646),

Gene: Yvonnetastic_147 Start: 80424, Stop: 81140, Start Num: 28

Candidate Starts for Yvonnetastic_147:

(Start: 28 @80424 has 2 MA's), (33, 80445), (40, 80523), (44, 80538), (47, 80547), (50, 80565), (56, 80625), (60, 80658), (70, 80730), (73, 80775), (86, 80865), (88, 80874), (101, 80964), (120, 81087),