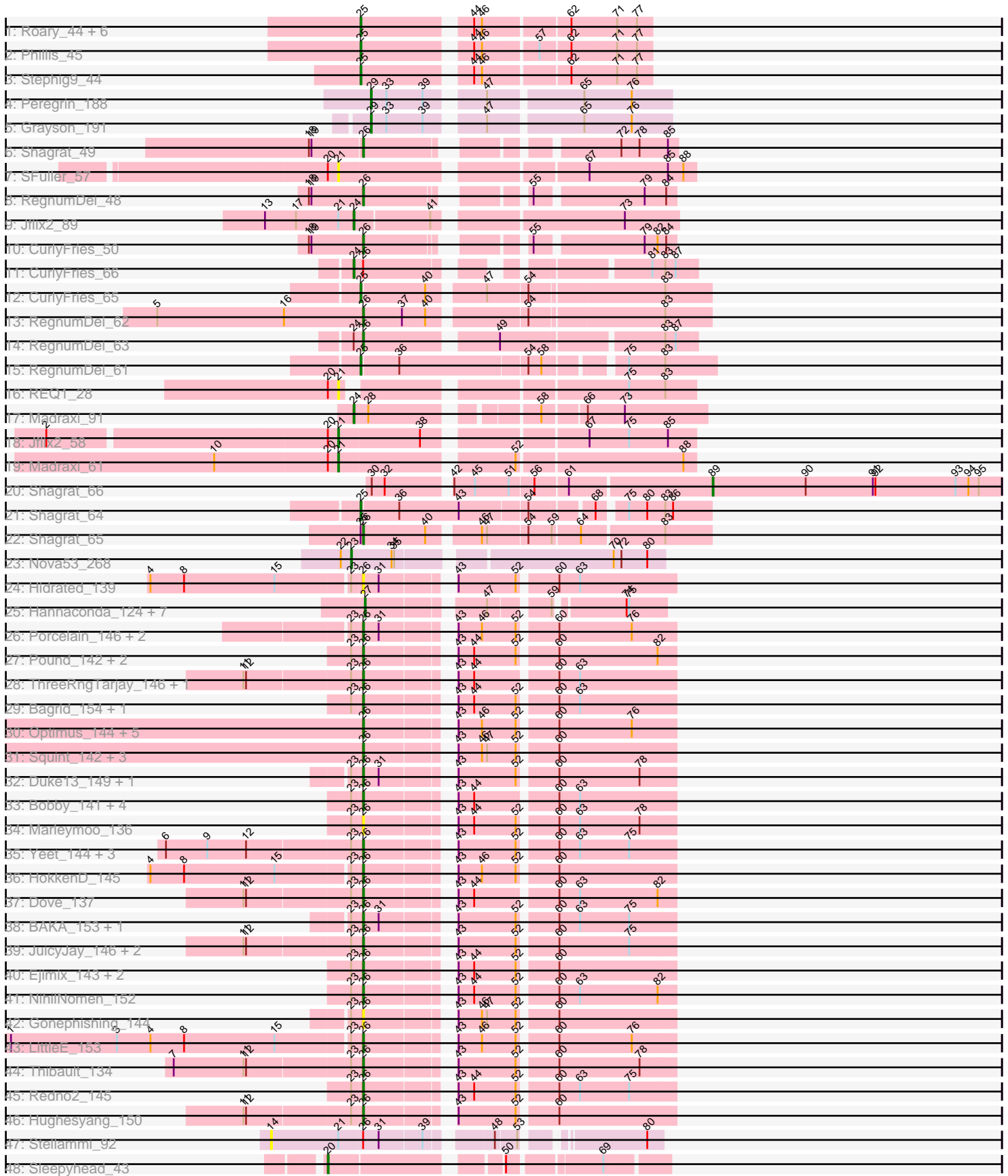


Pham 296460



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 296460 Report

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

Pham number 296460 has 88 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Roary_44, Smeadley_44, Astro_43, Danforth_43, Groundhog_42, Caitlin_42, Expelliarmus_43
- Track 2 : Phillis_45
- Track 3 : Stephig9_44
- Track 4 : Peregrin_188
- Track 5 : Grayson_191
- Track 6 : Shagrat_49
- Track 7 : SFuller_57
- Track 8 : RegnumDei_48
- Track 9 : Jflix2_89
- Track 10 : CurlyFries_50
- Track 11 : CurlyFries_66
- Track 12 : CurlyFries_65
- Track 13 : RegnumDei_62
- Track 14 : RegnumDei_63
- Track 15 : RegnumDei_61
- Track 16 : REQ1_28
- Track 17 : Madraxi_91
- Track 18 : Jflix2_58
- Track 19 : Madraxi_61
- Track 20 : Shagrat_66
- Track 21 : Shagrat_64
- Track 22 : Shagrat_65
- Track 23 : Nova53_268
- Track 24 : Hidrated_139
- Track 25 : Hannaconda_124, Odette_135, HokkenD_123, Yeet_125, Gonephishing_125, Rearden_129, Superphikiman_128, Courthouse_126
- Track 26 : Porcelain_146, MiaZeal_149, Lucky2013_142
- Track 27 : Pound_142, DmpstrDiver_151, Schatzie_146
- Track 28 : ThreeRngTarjay_146, Phoebus_151
- Track 29 : Bagrid_154, Constella_144
- Track 30 : Optimus_144, Omega_157, BronnyJames_145, Shaboozey_148, Odette_156, Nibley_144
- Track 31 : Squint_142, Nekros_148, Hannaconda_144, KashFlow_150
- Track 32 : Duke13_149, EricMillard_145
- Track 33 : Bobby_141, Wanda_150, Zelink_145, Minerva_150, Kalah2_142
- Track 34 : Marleymoo_136

- Track 35 : Yeet_144, Superphikiman_147, Ariel_149, Courthouse_145
- Track 36 : HokkenD_145
- Track 37 : Dove_137
- Track 38 : BAKA_153, Klein_150
- Track 39 : JuicyJay_146, Bombitas_138, Beem_153
- Track 40 : Ejimix_143, Halley_152, Dallas_151
- Track 41 : NihilNomen_152
- Track 42 : Gonephishing_144
- Track 43 : LittleE_153
- Track 44 : Thibault_134
- Track 45 : Redno2_145
- Track 46 : Hughesyang_150
- Track 47 : Stellammi_92
- Track 48 : Sleepyhead_43

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

The start number called the most often in the published annotations is 26, it was called in 46 of the 72 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Ariel_149, BAKA_153, Bagrid_154, Beem_153, Bobby_141, Bombitas_138, BronnyJames_145, Constella_144, Courthouse_145, CurlyFries_50, Dallas_151, DmpstrDiver_151, Dove_137, Duke13_149, Ejimix_143, EricMillard_145, Gonephishing_144, Halley_152, Hannaconda_144, Hidrated_139, HokkenD_145, Hughesyang_150, JuicyJay_146, Kalah2_142, KashFlow_150, Klein_150, LittleE_153, Lucky2013_142, Marleymoo_136, MiaZeal_149, Minerva_150, Nekros_148, Nibley_144, NihilNomen_152, Odette_156, Omega_157, Optimus_144, Phoebus_151, Porcelain_146, Pound_142, Redno2_145, RegnumDei_48, RegnumDei_62, RegnumDei_63, Schatzie_146, Shaboozey_148, Shagrat_49, Shagrat_65, Squint_142, Superphikiman_147, Thibault_134, ThreeRngTarjay_146, Wanda_150, Yeet_144, Zelink_145,

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

- CurlyFries_66, Stellammi_92,

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

- Astro_43, Caitlin_42, Courthouse_126, CurlyFries_65, Danforth_43, Expelliarmus_43, Gonephishing_125, Grayson_191, Groundhog_42, Hannaconda_124, HokkenD_123, Jflix2_58, Jflix2_89, Madraxi_61, Madraxi_91, Nova53_268, Odette_135, Peregrin_188, Phillis_45, REQ1_28, Rearden_129, RegnumDei_61, Roary_44, SFuller_57, Shagrat_64, Shagrat_66, Sleepyhead_43, Smeadley_44, Stephig9_44, Superphikiman_128, Yeet_125,

Summary by start number:

Start 14:

- Found in 1 of 88 (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: Stellammi_92 (UNK),

Start 20:

- Found in 5 of 88 (5.7%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 20.0% of time when present
- Phage (with cluster) where this start called: Sleepyhead_43 (singleton),

Start 21:

- Found in 6 of 88 (6.8%) of genes in pham
- Manual Annotations of this start: 2 of 72
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Jflix2_58 (CF), Madraxi_61 (CF), REQ1_28 (CF), SFuller_57 (CF),

Start 23:

- Found in 40 of 88 (45.5%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Nova53_268 (CG),

Start 24:

- Found in 4 of 88 (4.5%) of genes in pham
- Manual Annotations of this start: 3 of 72
- Called 75.0% of time when present
- Phage (with cluster) where this start called: CurlyFries_66 (CF), Jflix2_89 (CF), Madraxi_91 (CF),

Start 25:

- Found in 13 of 88 (14.8%) of genes in pham
- Manual Annotations of this start: 11 of 72
- Called 92.3% of time when present
- Phage (with cluster) where this start called: Astro_43 (A8), Caitlin_42 (A8), CurlyFries_65 (CF), Danforth_43 (A8), Expelliarmus_43 (A8), Groundhog_42 (A8), Phillis_45 (A8), RegnumDei_61 (CF), Roary_44 (A8), Shagrat_64 (CF), Smeadley_44 (A8), Stephig9_44 (A8),

Start 26:

- Found in 57 of 88 (64.8%) of genes in pham
- Manual Annotations of this start: 46 of 72
- Called 96.5% of time when present
- Phage (with cluster) where this start called: Ariel_149 (J), BAKA_153 (J), Bagrid_154 (J), Beem_153 (J), Bobby_141 (J), Bombitas_138 (J), BronnyJames_145 (J), Constella_144 (J), Courthouse_145 (J), CurlyFries_50 (CF), Dallas_151 (J), DmpstrDiver_151 (J), Dove_137 (J), Duke13_149 (J), Ejimix_143 (J), EricMillard_145 (J), Gonephishing_144 (J), Halley_152 (J), Hannaconda_144 (J), Hidrated_139 (J), HokkenD_145 (J), Hughesyang_150 (J), JuicyJay_146 (J), Kalah2_142 (J), KashFlow_150 (J), Klein_150 (J), LittleE_153 (J), Lucky2013_142 (J), Marleymoo_136 (J), MiaZeal_149 (J), Minerva_150 (J), Nekros_148 (J), Nibley_144 (J), NihilNomen_152 (J), Odette_156 (J), Omega_157 (J), Optimus_144 (J), Phoebus_151 (J), Porcelain_146 (J), Pound_142 (J), Redno2_145 (J), RegnumDei_48 (CF), RegnumDei_62 (CF), RegnumDei_63 (CF), Schatzie_146 (J), Shaboozey_148 (J), Shagrat_49 (CF), Shagrat_65 (CF), Squint_142 (J),

Superphikiman_147 (J), Thibault_134 (J), ThreeRngTarjay_146 (J), Wanda_150 (J), Yeet_144 (J), Zelink_145 (J),

Start 27:

- Found in 8 of 88 (9.1%) of genes in pham
- Manual Annotations of this start: 5 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Courthouse_126 (J), Gonephishing_125 (J), Hannaconda_124 (J), HokkenD_123 (J), Odette_135 (J), Rearden_129 (J), Superphikiman_128 (J), Yeet_125 (J),

Start 29:

- Found in 2 of 88 (2.3%) of genes in pham
- Manual Annotations of this start: 2 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Grayson_191 (CB), Peregrin_188 (CB),

Start 89:

- Found in 1 of 88 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 72
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Shagrat_66 (CF),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, CB, J, CG, CF, A8, UNK,

Info for manual annotations of cluster A8:

- Start number 25 was manually annotated 8 times for cluster A8.

Info for manual annotations of cluster CB:

- Start number 29 was manually annotated 2 times for cluster CB.

Info for manual annotations of cluster CF:

- Start number 21 was manually annotated 2 times for cluster CF.
- Start number 24 was manually annotated 3 times for cluster CF.
- Start number 25 was manually annotated 3 times for cluster CF.
- Start number 26 was manually annotated 6 times for cluster CF.
- Start number 89 was manually annotated 1 time for cluster CF.

Info for manual annotations of cluster CG:

- Start number 23 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster J:

- Start number 26 was manually annotated 40 times for cluster J.
- Start number 27 was manually annotated 5 times for cluster J.

Gene Information:

Gene: Ariel_149 Start: 76661, Stop: 76984, Start Num: 26

Candidate Starts for Ariel_149:

(6, 76439), (9, 76487), (12, 76532), (Start: 23 @76649 has 1 MA's), (Start: 26 @76661 has 46 MA's), (43, 76745), (52, 76811), (60, 76850), (63, 76874), (75, 76931),

Gene: Astro_43 Start: 30852, Stop: 30550, Start Num: 25

Candidate Starts for Astro_43:

(Start: 25 @30852 has 11 MA's), (44, 30741), (46, 30732), (62, 30639), (71, 30588), (77, 30567),

Gene: BAKA_153 Start: 81330, Stop: 81653, Start Num: 26

Candidate Starts for BAKA_153:

(Start: 23 @81318 has 1 MA's), (Start: 26 @81330 has 46 MA's), (31, 81348), (43, 81414), (52, 81480), (60, 81519), (63, 81543), (75, 81600),

Gene: Bagrid_154 Start: 82037, Stop: 82360, Start Num: 26

Candidate Starts for Bagrid_154:

(Start: 23 @82025 has 1 MA's), (Start: 26 @82037 has 46 MA's), (43, 82121), (44, 82139), (52, 82187), (60, 82226), (63, 82250),

Gene: Beem_153 Start: 81458, Stop: 81781, Start Num: 26

Candidate Starts for Beem_153:

(11, 81326), (12, 81329), (Start: 23 @81446 has 1 MA's), (Start: 26 @81458 has 46 MA's), (43, 81542), (52, 81608), (60, 81647), (75, 81728),

Gene: Bobby_141 Start: 81455, Stop: 81778, Start Num: 26

Candidate Starts for Bobby_141:

(Start: 23 @81443 has 1 MA's), (Start: 26 @81455 has 46 MA's), (43, 81539), (44, 81557), (60, 81644), (63, 81668),

Gene: Bombitas_138 Start: 78311, Stop: 78634, Start Num: 26

Candidate Starts for Bombitas_138:

(11, 78179), (12, 78182), (Start: 23 @78299 has 1 MA's), (Start: 26 @78311 has 46 MA's), (43, 78395), (52, 78461), (60, 78500), (75, 78581),

Gene: BronnyJames_145 Start: 77611, Stop: 77934, Start Num: 26

Candidate Starts for BronnyJames_145:

(Start: 26 @77611 has 46 MA's), (43, 77695), (46, 77722), (52, 77761), (60, 77800), (76, 77884),

Gene: Caitlin_42 Start: 30845, Stop: 30543, Start Num: 25

Candidate Starts for Caitlin_42:

(Start: 25 @30845 has 11 MA's), (44, 30734), (46, 30725), (62, 30632), (71, 30581), (77, 30560),

Gene: Constella_144 Start: 79520, Stop: 79843, Start Num: 26

Candidate Starts for Constella_144:

(Start: 23 @79508 has 1 MA's), (Start: 26 @79520 has 46 MA's), (43, 79604), (44, 79622), (52, 79670), (60, 79709), (63, 79733),

Gene: Courthouse_145 Start: 76519, Stop: 76842, Start Num: 26

Candidate Starts for Courthouse_145:

(6, 76297), (9, 76345), (12, 76390), (Start: 23 @76507 has 1 MA's), (Start: 26 @76519 has 46 MA's), (43, 76603), (52, 76669), (60, 76708), (63, 76732), (75, 76789),

Gene: Courthouse_126 Start: 68736, Stop: 69029, Start Num: 27

Candidate Starts for Courthouse_126:

(Start: 27 @68736 has 5 MA's), (47, 68853), (59, 68913), (74, 68985), (75, 68988),

Gene: CurlyFries_50 Start: 35699, Stop: 35998, Start Num: 26

Candidate Starts for CurlyFries_50:

(18, 35636), (19, 35639), (Start: 26 @35699 has 46 MA's), (55, 35846), (79, 35963), (82, 35978), (84, 35987),

Gene: CurlyFries_66 Start: 39792, Stop: 40115, Start Num: 24

Candidate Starts for CurlyFries_66:

(Start: 24 @39792 has 3 MA's), (Start: 26 @39801 has 46 MA's), (81, 40065), (83, 40080), (87, 40092),

Gene: CurlyFries_65 Start: 39422, Stop: 39799, Start Num: 25

Candidate Starts for CurlyFries_65:

(Start: 25 @39422 has 11 MA's), (40, 39494), (47, 39551), (54, 39596), (83, 39746),

Gene: Dallas_151 Start: 80367, Stop: 80690, Start Num: 26

Candidate Starts for Dallas_151:

(Start: 23 @80355 has 1 MA's), (Start: 26 @80367 has 46 MA's), (43, 80451), (44, 80469), (52, 80517), (60, 80556),

Gene: Danforth_43 Start: 30881, Stop: 30579, Start Num: 25

Candidate Starts for Danforth_43:

(Start: 25 @30881 has 11 MA's), (44, 30770), (46, 30761), (62, 30668), (71, 30617), (77, 30596),

Gene: DmpstrDiver_151 Start: 80286, Stop: 80609, Start Num: 26

Candidate Starts for DmpstrDiver_151:

(Start: 23 @80274 has 1 MA's), (Start: 26 @80286 has 46 MA's), (43, 80370), (44, 80388), (52, 80436), (60, 80475), (82, 80589),

Gene: Dove_137 Start: 76474, Stop: 76797, Start Num: 26

Candidate Starts for Dove_137:

(11, 76342), (12, 76345), (Start: 23 @76462 has 1 MA's), (Start: 26 @76474 has 46 MA's), (43, 76558), (44, 76576), (60, 76663), (63, 76687), (82, 76777),

Gene: Duke13_149 Start: 79615, Stop: 79938, Start Num: 26

Candidate Starts for Duke13_149:

(Start: 23 @79603 has 1 MA's), (Start: 26 @79615 has 46 MA's), (31, 79633), (43, 79699), (52, 79765), (60, 79804), (78, 79897),

Gene: Ejimix_143 Start: 80435, Stop: 80758, Start Num: 26

Candidate Starts for Ejimix_143:

(Start: 23 @80423 has 1 MA's), (Start: 26 @80435 has 46 MA's), (43, 80519), (44, 80537), (52, 80585), (60, 80624),

Gene: EricMillard_145 Start: 80967, Stop: 81290, Start Num: 26

Candidate Starts for EricMillard_145:

(Start: 23 @80955 has 1 MA's), (Start: 26 @80967 has 46 MA's), (31, 80985), (43, 81051), (52, 81117), (60, 81156), (78, 81249),

Gene: Expelliarmus_43 Start: 30910, Stop: 30608, Start Num: 25

Candidate Starts for Expelliarmus_43:

(Start: 25 @30910 has 11 MA's), (44, 30799), (46, 30790), (62, 30697), (71, 30646), (77, 30625),

Gene: Gonephishing_125 Start: 68379, Stop: 68672, Start Num: 27
Candidate Starts for Gonephishing_125:
(Start: 27 @68379 has 5 MA's), (47, 68496), (59, 68556), (74, 68628), (75, 68631),

Gene: Gonephishing_144 Start: 78607, Stop: 78930, Start Num: 26
Candidate Starts for Gonephishing_144:
(Start: 23 @78595 has 1 MA's), (Start: 26 @78607 has 46 MA's), (43, 78691), (46, 78718), (47, 78724),
(52, 78757), (60, 78796),

Gene: Grayson_191 Start: 99709, Stop: 100023, Start Num: 29
Candidate Starts for Grayson_191:
(Start: 29 @99709 has 2 MA's), (33, 99727), (39, 99769), (47, 99823), (65, 99925), (76, 99979),

Gene: Groundhog_42 Start: 30817, Stop: 30515, Start Num: 25
Candidate Starts for Groundhog_42:
(Start: 25 @30817 has 11 MA's), (44, 30706), (46, 30697), (62, 30604), (71, 30553), (77, 30532),

Gene: Halley_152 Start: 80751, Stop: 81074, Start Num: 26
Candidate Starts for Halley_152:
(Start: 23 @80739 has 1 MA's), (Start: 26 @80751 has 46 MA's), (43, 80835), (44, 80853), (52, 80901),
(60, 80940),

Gene: Hannaconda_124 Start: 69032, Stop: 69325, Start Num: 27
Candidate Starts for Hannaconda_124:
(Start: 27 @69032 has 5 MA's), (47, 69149), (59, 69209), (74, 69281), (75, 69284),

Gene: Hannaconda_144 Start: 79540, Stop: 79863, Start Num: 26
Candidate Starts for Hannaconda_144:
(Start: 26 @79540 has 46 MA's), (43, 79624), (46, 79651), (47, 79657), (52, 79690), (60, 79729),

Gene: Hidrated_139 Start: 79925, Stop: 80248, Start Num: 26
Candidate Starts for Hidrated_139:
(4, 79688), (8, 79727), (15, 79832), (Start: 23 @79913 has 1 MA's), (Start: 26 @79925 has 46 MA's),
(31, 79943), (43, 80009), (52, 80075), (60, 80114), (63, 80138),

Gene: HokkenD_123 Start: 71913, Stop: 72206, Start Num: 27
Candidate Starts for HokkenD_123:
(Start: 27 @71913 has 5 MA's), (47, 72030), (59, 72090), (74, 72162), (75, 72165),

Gene: HokkenD_145 Start: 81876, Stop: 82199, Start Num: 26
Candidate Starts for HokkenD_145:
(4, 81639), (8, 81678), (15, 81783), (Start: 23 @81864 has 1 MA's), (Start: 26 @81876 has 46 MA's),
(43, 81960), (46, 81987), (52, 82026), (60, 82065),

Gene: Hughesyang_150 Start: 81110, Stop: 81433, Start Num: 26
Candidate Starts for Hughesyang_150:
(11, 80978), (12, 80981), (Start: 23 @81098 has 1 MA's), (Start: 26 @81110 has 46 MA's), (43, 81194),
(52, 81260), (60, 81299),

Gene: Jflix2_89 Start: 50660, Stop: 51001, Start Num: 24
Candidate Starts for Jflix2_89:
(13, 50558), (17, 50594), (Start: 21 @50642 has 2 MA's), (Start: 24 @50660 has 3 MA's), (41, 50741),
(73, 50939),

Gene: Jflix2_58 Start: 39721, Stop: 40101, Start Num: 21

Candidate Starts for Jflix2_58:

(2, 39397), (Start: 20 @39709 has 1 MA's), (Start: 21 @39721 has 2 MA's), (38, 39814), (67, 39979), (75, 40024), (85, 40069),

Gene: JuicyJay_146 Start: 82036, Stop: 82359, Start Num: 26

Candidate Starts for JuicyJay_146:

(11, 81904), (12, 81907), (Start: 23 @82024 has 1 MA's), (Start: 26 @82036 has 46 MA's), (43, 82120), (52, 82186), (60, 82225), (75, 82306),

Gene: Kalah2_142 Start: 80240, Stop: 80563, Start Num: 26

Candidate Starts for Kalah2_142:

(Start: 23 @80228 has 1 MA's), (Start: 26 @80240 has 46 MA's), (43, 80324), (44, 80342), (60, 80429), (63, 80453),

Gene: KashFlow_150 Start: 79539, Stop: 79862, Start Num: 26

Candidate Starts for KashFlow_150:

(Start: 26 @79539 has 46 MA's), (43, 79623), (46, 79650), (47, 79656), (52, 79689), (60, 79728),

Gene: Klein_150 Start: 80105, Stop: 80428, Start Num: 26

Candidate Starts for Klein_150:

(Start: 23 @80093 has 1 MA's), (Start: 26 @80105 has 46 MA's), (31, 80123), (43, 80189), (52, 80255), (60, 80294), (63, 80318), (75, 80375),

Gene: LittleE_153 Start: 80985, Stop: 81308, Start Num: 26

Candidate Starts for LittleE_153:

(1, 80586), (3, 80709), (4, 80748), (8, 80787), (15, 80892), (Start: 23 @80973 has 1 MA's), (Start: 26 @80985 has 46 MA's), (43, 81069), (46, 81096), (52, 81135), (60, 81174), (76, 81258),

Gene: Lucky2013_142 Start: 75897, Stop: 76220, Start Num: 26

Candidate Starts for Lucky2013_142:

(Start: 23 @75885 has 1 MA's), (Start: 26 @75897 has 46 MA's), (31, 75915), (43, 75981), (46, 76008), (52, 76047), (60, 76086), (76, 76170),

Gene: Madraxi_91 Start: 52811, Stop: 53170, Start Num: 24

Candidate Starts for Madraxi_91:

(Start: 24 @52811 has 3 MA's), (28, 52826), (58, 52988), (66, 53033), (73, 53075),

Gene: Madraxi_61 Start: 42224, Stop: 42604, Start Num: 21

Candidate Starts for Madraxi_61:

(10, 42083), (Start: 20 @42212 has 1 MA's), (Start: 21 @42224 has 2 MA's), (52, 42407), (88, 42590),

Gene: Marleymoo_136 Start: 77201, Stop: 77524, Start Num: 26

Candidate Starts for Marleymoo_136:

(Start: 23 @77189 has 1 MA's), (Start: 26 @77201 has 46 MA's), (43, 77285), (44, 77303), (52, 77351), (60, 77390), (63, 77414), (78, 77483),

Gene: MiaZeal_149 Start: 77044, Stop: 77367, Start Num: 26

Candidate Starts for MiaZeal_149:

(Start: 23 @77032 has 1 MA's), (Start: 26 @77044 has 46 MA's), (31, 77062), (43, 77128), (46, 77155), (52, 77194), (60, 77233), (76, 77317),

Gene: Minerva_150 Start: 80059, Stop: 80382, Start Num: 26
Candidate Starts for Minerva_150:
(Start: 23 @80047 has 1 MA's), (Start: 26 @80059 has 46 MA's), (43, 80143), (44, 80161), (60, 80248),
(63, 80272),

Gene: Nekros_148 Start: 79933, Stop: 80256, Start Num: 26
Candidate Starts for Nekros_148:
(Start: 26 @79933 has 46 MA's), (43, 80017), (46, 80044), (47, 80050), (52, 80083), (60, 80122),

Gene: Nibley_144 Start: 77188, Stop: 77511, Start Num: 26
Candidate Starts for Nibley_144:
(Start: 26 @77188 has 46 MA's), (43, 77272), (46, 77299), (52, 77338), (60, 77377), (76, 77461),

Gene: NihilNomen_152 Start: 79960, Stop: 80283, Start Num: 26
Candidate Starts for NihilNomen_152:
(Start: 23 @79948 has 1 MA's), (Start: 26 @79960 has 46 MA's), (43, 80044), (44, 80062), (52, 80110),
(60, 80149), (63, 80173), (82, 80263),

Gene: Nova53_268 Start: 131044, Stop: 131379, Start Num: 23
Candidate Starts for Nova53_268:
(22, 131032), (Start: 23 @131044 has 1 MA's), (34, 131089), (35, 131092), (70, 131320), (72, 131329),
(80, 131359),

Gene: Odette_135 Start: 73830, Stop: 74123, Start Num: 27
Candidate Starts for Odette_135:
(Start: 27 @73830 has 5 MA's), (47, 73947), (59, 74007), (74, 74079), (75, 74082),

Gene: Odette_156 Start: 82653, Stop: 82976, Start Num: 26
Candidate Starts for Odette_156:
(Start: 26 @82653 has 46 MA's), (43, 82737), (46, 82764), (52, 82803), (60, 82842), (76, 82926),

Gene: Omega_157 Start: 82149, Stop: 82472, Start Num: 26
Candidate Starts for Omega_157:
(Start: 26 @82149 has 46 MA's), (43, 82233), (46, 82260), (52, 82299), (60, 82338), (76, 82422),

Gene: Optimus_144 Start: 79658, Stop: 79981, Start Num: 26
Candidate Starts for Optimus_144:
(Start: 26 @79658 has 46 MA's), (43, 79742), (46, 79769), (52, 79808), (60, 79847), (76, 79931),

Gene: Peregrin_188 Start: 100106, Stop: 100420, Start Num: 29
Candidate Starts for Peregrin_188:
(Start: 29 @100106 has 2 MA's), (33, 100124), (39, 100166), (47, 100220), (65, 100322), (76, 100376),

Gene: Phillis_45 Start: 31235, Stop: 30933, Start Num: 25
Candidate Starts for Phillis_45:
(Start: 25 @31235 has 11 MA's), (44, 31124), (46, 31115), (57, 31055), (62, 31022), (71, 30971), (77,
30950),

Gene: Phoebus_151 Start: 82464, Stop: 82787, Start Num: 26
Candidate Starts for Phoebus_151:
(11, 82332), (12, 82335), (Start: 23 @82452 has 1 MA's), (Start: 26 @82464 has 46 MA's), (43, 82548),
(44, 82566), (60, 82653), (63, 82677),

Gene: Porcelain_146 Start: 76843, Stop: 77166, Start Num: 26

Candidate Starts for Porcelain_146:

(Start: 23 @76831 has 1 MA's), (Start: 26 @76843 has 46 MA's), (31, 76861), (43, 76927), (46, 76954), (52, 76993), (60, 77032), (76, 77116),

Gene: Pound_142 Start: 79694, Stop: 80017, Start Num: 26

Candidate Starts for Pound_142:

(Start: 23 @79682 has 1 MA's), (Start: 26 @79694 has 46 MA's), (43, 79778), (44, 79796), (52, 79844), (60, 79883), (82, 79997),

Gene: REQ1_28 Start: 11269, Stop: 11631, Start Num: 21

Candidate Starts for REQ1_28:

(Start: 20 @11257 has 1 MA's), (Start: 21 @11269 has 2 MA's), (75, 11554), (83, 11596),

Gene: Rearden_129 Start: 69937, Stop: 70230, Start Num: 27

Candidate Starts for Rearden_129:

(Start: 27 @69937 has 5 MA's), (47, 70054), (59, 70114), (74, 70186), (75, 70189),

Gene: Redno2_145 Start: 77962, Stop: 78285, Start Num: 26

Candidate Starts for Redno2_145:

(Start: 23 @77950 has 1 MA's), (Start: 26 @77962 has 46 MA's), (43, 78046), (44, 78064), (52, 78112), (60, 78151), (63, 78175), (75, 78232),

Gene: RegnumDei_48 Start: 35958, Stop: 36257, Start Num: 26

Candidate Starts for RegnumDei_48:

(18, 35895), (19, 35898), (Start: 26 @35958 has 46 MA's), (55, 36105), (79, 36222), (84, 36246),

Gene: RegnumDei_62 Start: 40266, Stop: 40643, Start Num: 26

Candidate Starts for RegnumDei_62:

(5, 40029), (16, 40176), (Start: 26 @40266 has 46 MA's), (37, 40311), (40, 40338), (54, 40440), (83, 40590),

Gene: RegnumDei_63 Start: 40645, Stop: 40995, Start Num: 26

Candidate Starts for RegnumDei_63:

(Start: 24 @40636 has 3 MA's), (Start: 26 @40645 has 46 MA's), (49, 40783), (83, 40960), (87, 40972),

Gene: RegnumDei_61 Start: 39892, Stop: 40269, Start Num: 25

Candidate Starts for RegnumDei_61:

(Start: 25 @39892 has 11 MA's), (36, 39934), (54, 40078), (58, 40093), (75, 40168), (83, 40210),

Gene: Roary_44 Start: 30866, Stop: 30564, Start Num: 25

Candidate Starts for Roary_44:

(Start: 25 @30866 has 11 MA's), (44, 30755), (46, 30746), (62, 30653), (71, 30602), (77, 30581),

Gene: SFuller_57 Start: 39913, Stop: 40293, Start Num: 21

Candidate Starts for SFuller_57:

(Start: 20 @39901 has 1 MA's), (Start: 21 @39913 has 2 MA's), (67, 40171), (85, 40261), (88, 40279),

Gene: Schatzie_146 Start: 80543, Stop: 80866, Start Num: 26

Candidate Starts for Schatzie_146:

(Start: 23 @80531 has 1 MA's), (Start: 26 @80543 has 46 MA's), (43, 80627), (44, 80645), (52, 80693), (60, 80732), (82, 80846),

Gene: Shaboozey_148 Start: 77632, Stop: 77955, Start Num: 26
Candidate Starts for Shaboozey_148:
(Start: 26 @77632 has 46 MA's), (43, 77716), (46, 77743), (52, 77782), (60, 77821), (76, 77905),

Gene: Shagrat_49 Start: 36435, Stop: 36740, Start Num: 26
Candidate Starts for Shagrat_49:
(18, 36375), (19, 36378), (Start: 26 @36435 has 46 MA's), (72, 36675), (78, 36696), (85, 36729),

Gene: Shagrat_66 Start: 40915, Stop: 41250, Start Num: 89
Candidate Starts for Shagrat_66:
(30, 40549), (32, 40564), (42, 40630), (45, 40654), (51, 40693), (56, 40720), (61, 40756), (Start: 89 @40915 has 1 MA's), (90, 41023), (91, 41101), (92, 41104), (93, 41197), (94, 41212), (95, 41224),

Gene: Shagrat_64 Start: 40165, Stop: 40536, Start Num: 25
Candidate Starts for Shagrat_64:
(Start: 25 @40165 has 11 MA's), (36, 40207), (43, 40276), (54, 40351), (68, 40414), (75, 40441), (80, 40462), (83, 40483), (86, 40492),

Gene: Shagrat_65 Start: 40539, Stop: 40913, Start Num: 26
Candidate Starts for Shagrat_65:
(Start: 25 @40536 has 11 MA's), (Start: 26 @40539 has 46 MA's), (40, 40611), (46, 40662), (47, 40668), (54, 40713), (59, 40740), (64, 40770), (83, 40860),

Gene: Sleepyhead_43 Start: 31028, Stop: 31363, Start Num: 20
Candidate Starts for Sleepyhead_43:
(Start: 20 @31028 has 1 MA's), (50, 31199), (69, 31295),

Gene: Smeadley_44 Start: 31032, Stop: 30730, Start Num: 25
Candidate Starts for Smeadley_44:
(Start: 25 @31032 has 11 MA's), (44, 30921), (46, 30912), (62, 30819), (71, 30768), (77, 30747),

Gene: Squint_142 Start: 76328, Stop: 76651, Start Num: 26
Candidate Starts for Squint_142:
(Start: 26 @76328 has 46 MA's), (43, 76412), (46, 76439), (47, 76445), (52, 76478), (60, 76517),

Gene: Stellammi_92 Start: 44459, Stop: 44845, Start Num: 14
Candidate Starts for Stellammi_92:
(14, 44459), (Start: 21 @44537 has 2 MA's), (Start: 26 @44564 has 46 MA's), (31, 44582), (39, 44630), (48, 44690), (53, 44711), (80, 44828),

Gene: Stephig9_44 Start: 30891, Stop: 30589, Start Num: 25
Candidate Starts for Stephig9_44:
(Start: 25 @30891 has 11 MA's), (44, 30780), (46, 30771), (62, 30678), (71, 30627), (77, 30606),

Gene: Superphikiman_147 Start: 76801, Stop: 77124, Start Num: 26
Candidate Starts for Superphikiman_147:
(6, 76579), (9, 76627), (12, 76672), (Start: 23 @76789 has 1 MA's), (Start: 26 @76801 has 46 MA's), (43, 76885), (52, 76951), (60, 76990), (63, 77014), (75, 77071),

Gene: Superphikiman_128 Start: 69018, Stop: 69311, Start Num: 27
Candidate Starts for Superphikiman_128:
(Start: 27 @69018 has 5 MA's), (47, 69135), (59, 69195), (74, 69267), (75, 69270),

Gene: Thibault_134 Start: 77417, Stop: 77740, Start Num: 26

Candidate Starts for Thibault_134:

(7, 77204), (11, 77285), (12, 77288), (Start: 23 @77405 has 1 MA's), (Start: 26 @77417 has 46 MA's), (43, 77501), (52, 77567), (60, 77606), (78, 77699),

Gene: ThreeRngTarjay_146 Start: 81055, Stop: 81378, Start Num: 26

Candidate Starts for ThreeRngTarjay_146:

(11, 80923), (12, 80926), (Start: 23 @81043 has 1 MA's), (Start: 26 @81055 has 46 MA's), (43, 81139), (44, 81157), (60, 81244), (63, 81268),

Gene: Wanda_150 Start: 78530, Stop: 78853, Start Num: 26

Candidate Starts for Wanda_150:

(Start: 23 @78518 has 1 MA's), (Start: 26 @78530 has 46 MA's), (43, 78614), (44, 78632), (60, 78719), (63, 78743),

Gene: Yeet_125 Start: 71942, Stop: 72235, Start Num: 27

Candidate Starts for Yeet_125:

(Start: 27 @71942 has 5 MA's), (47, 72059), (59, 72119), (74, 72191), (75, 72194),

Gene: Yeet_144 Start: 79906, Stop: 80229, Start Num: 26

Candidate Starts for Yeet_144:

(6, 79684), (9, 79732), (12, 79777), (Start: 23 @79894 has 1 MA's), (Start: 26 @79906 has 46 MA's), (43, 79990), (52, 80056), (60, 80095), (63, 80119), (75, 80176),

Gene: Zelink_145 Start: 81372, Stop: 81695, Start Num: 26

Candidate Starts for Zelink_145:

(Start: 23 @81360 has 1 MA's), (Start: 26 @81372 has 46 MA's), (43, 81456), (44, 81474), (60, 81561), (63, 81585),