

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 304966 Report

This analysis was run 06/08/26 on database version 649.

Pham number 304966 has 76 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Phillis_45
- Track 2 : Astro_43, Danforth_43, Expelliarmus_43, Smeadley_44, Roary_44, Groundhog_42, Caitlin_42
- Track 3 : Stephig9_44
- Track 4 : RegnumDei_62
- Track 5 : Shagrat_64
- Track 6 : Jflix2_89
- Track 7 : CurlyFries_65
- Track 8 : Madraxi_91
- Track 9 : RegnumDei_61
- Track 10 : Shagrat_65
- Track 11 : Nova53_268
- Track 12 : Nova53_257
- Track 13 : Omega_157, Odette_156, BronnyJames_145, Optimus_144, Nibley_144, Shaboozey_148
- Track 14 : Constella_144, Bagrid_154
- Track 15 : LittleE_153
- Track 16 : MiaZeal_149, Porcelain_146, Lucky2013_142
- Track 17 : Ariel_149, Yeet_144, Courthouse_145, Superphikiman_147
- Track 18 : Minerva_150, Bobby_141, Wanda_150, Zelink_145, Kalah2_142
- Track 19 : Hidrated_139
- Track 20 : Hannaconda_124, Yeet_125, Courthouse_126, Rearden_129, Superphikiman_128, Odette_135, Gonephishing_125, HokkenD_123
- Track 21 : Ejimix_143, Halley_152, Dallas_151
- Track 22 : Nekros_148, Hannaconda_144, KashFlow_150, Squint_142
- Track 23 : DmpstrDiver_151, Pound_142, Schatzie_146
- Track 24 : NihilNomen_152
- Track 25 : JuicyJay_146, Beem_153, Bombitas_138
- Track 26 : Marleymoo_136
- Track 27 : Dove_137
- Track 28 : Phoebus_151, ThreeRngTarjay_146
- Track 29 : HokkenD_145
- Track 30 : EricMillard_145, Duke13_149
- Track 31 : Thibault_134
- Track 32 : Redno2_145
- Track 33 : BAKA_153, Klein_150
- Track 34 : Gonephishing_144

- Track 35 : Hughesyang_150
- Track 36 : Stellammi_85

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

The start number called the most often in the published annotations is 25, it was called in 41 of the 63 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, 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, Schatzie_146, Shaboozey_148, Squint_142, Stellammi_85, Superphikiman_147, Thibault_134, ThreeRngTarjay_146, Wanda_150, Yeet_144, Zelink_145,

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:

- Astro_43, Caitlin_42, Courthouse_126, CurlyFries_65, Danforth_43, Expelliarmus_43, Gonephishing_125, Groundhog_42, Hannaconda_124, HokkenD_123, Jflix2_89, Madraxi_91, Nova53_257, Nova53_268, Odette_135, Phillis_45, Rearden_129, RegnumDei_61, RegnumDei_62, Roary_44, Shagrat_64, Shagrat_65, Smeadley_44, Stephig9_44, Superphikiman_128, Yeet_125,

Summary by start number:

Start 16:

- Found in 4 of 76 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 63
- Called 75.0% of time when present
- Phage (with cluster) where this start called: CurlyFries_65 (CF), RegnumDei_61 (CF), Shagrat_64 (CF),

Start 18:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RegnumDei_62 (CF), Shagrat_65 (CF),

Start 20:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Nova53_257 (CG),

Start 22:

- Found in 40 of 76 (52.6%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 2.5% of time when present
- Phage (with cluster) where this start called: Nova53_268 (CG),

Start 23:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Jflix2_89 (CF), Madraxi_91 (CF),

Start 24:

- Found in 9 of 76 (11.8%) of genes in pham
- Manual Annotations of this start: 8 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Astro_43 (A8), Caitlin_42 (A8), Danforth_43 (A8), Expelliarmus_43 (A8), Groundhog_42 (A8), Phillis_45 (A8), Roary_44 (A8), Smeadley_44 (A8), Stephig9_44 (A8),

Start 25:

- Found in 50 of 76 (65.8%) of genes in pham
- Manual Annotations of this start: 41 of 63
- Called 100.0% 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), 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), Schatzie_146 (J), Shaboozey_148 (J), Squint_142 (J), Stellammi_85 (UNK), Superphikiman_147 (J), Thibault_134 (J), ThreeRngTarjay_146 (J), Wanda_150 (J), Yeet_144 (J), Zelink_145 (J),

Start 26:

- Found in 8 of 76 (10.5%) of genes in pham
- Manual Annotations of this start: 5 of 63
- 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),

Summary by clusters:

There are 5 clusters represented in this pham: A8, UNK, J, CG, CF,

Info for manual annotations of cluster A8:

- Start number 24 was manually annotated 8 times for cluster A8.

Info for manual annotations of cluster CF:

- Start number 16 was manually annotated 3 times for cluster CF.
- Start number 18 was manually annotated 2 times for cluster CF.
- Start number 23 was manually annotated 2 times for cluster CF.

Info for manual annotations of cluster CG:

- Start number 20 was manually annotated 1 time for cluster CG.
- Start number 22 was manually annotated 1 time for cluster CG.

Info for manual annotations of cluster J:

- Start number 25 was manually annotated 40 times for cluster J.
- Start number 26 was manually annotated 5 times for cluster J.

Info for manual annotations of cluster UNK:

- Start number 25 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: Ariel_149 Start: 76661, Stop: 76984, Start Num: 25

Candidate Starts for Ariel_149:

(5, 76439), (8, 76487), (10, 76532), (Start: 22 @76649 has 1 MA's), (Start: 25 @76661 has 41 MA's), (39, 76745), (46, 76811), (53, 76850), (56, 76874), (61, 76931),

Gene: Astro_43 Start: 30852, Stop: 30550, Start Num: 24

Candidate Starts for Astro_43:

(Start: 24 @30852 has 8 MA's), (40, 30741), (42, 30732), (57, 30639), (63, 30588), (66, 30567),

Gene: BAKA_153 Start: 81330, Stop: 81653, Start Num: 25

Candidate Starts for BAKA_153:

(Start: 22 @81318 has 1 MA's), (Start: 25 @81330 has 41 MA's), (30, 81348), (39, 81414), (46, 81480), (53, 81519), (56, 81543), (61, 81600),

Gene: Bagrid_154 Start: 82037, Stop: 82360, Start Num: 25

Candidate Starts for Bagrid_154:

(Start: 22 @82025 has 1 MA's), (Start: 25 @82037 has 41 MA's), (39, 82121), (41, 82139), (46, 82187), (53, 82226), (56, 82250),

Gene: Beem_153 Start: 81458, Stop: 81781, Start Num: 25

Candidate Starts for Beem_153:

(9, 81326), (10, 81329), (Start: 22 @81446 has 1 MA's), (Start: 25 @81458 has 41 MA's), (39, 81542), (46, 81608), (53, 81647), (61, 81728),

Gene: Bobby_141 Start: 81455, Stop: 81778, Start Num: 25

Candidate Starts for Bobby_141:

(Start: 22 @81443 has 1 MA's), (Start: 25 @81455 has 41 MA's), (39, 81539), (41, 81557), (53, 81644), (56, 81668),

Gene: Bombitas_138 Start: 78311, Stop: 78634, Start Num: 25

Candidate Starts for Bombitas_138:

(9, 78179), (10, 78182), (Start: 22 @78299 has 1 MA's), (Start: 25 @78311 has 41 MA's), (39, 78395), (46, 78461), (53, 78500), (61, 78581),

Gene: BronnyJames_145 Start: 77611, Stop: 77934, Start Num: 25

Candidate Starts for BronnyJames_145:

(Start: 25 @77611 has 41 MA's), (39, 77695), (42, 77722), (46, 77761), (53, 77800), (62, 77884),

Gene: Caitlin_42 Start: 30845, Stop: 30543, Start Num: 24

Candidate Starts for Caitlin_42:

(Start: 24 @30845 has 8 MA's), (40, 30734), (42, 30725), (57, 30632), (63, 30581), (66, 30560),

Gene: Constella_144 Start: 79520, Stop: 79843, Start Num: 25

Candidate Starts for Constella_144:

(Start: 22 @79508 has 1 MA's), (Start: 25 @79520 has 41 MA's), (39, 79604), (41, 79622), (46, 79670), (53, 79709), (56, 79733),

Gene: Courthouse_126 Start: 68736, Stop: 69029, Start Num: 26

Candidate Starts for Courthouse_126:

(Start: 26 @68736 has 5 MA's), (43, 68853), (51, 68913), (60, 68985), (61, 68988),

Gene: Courthouse_145 Start: 76519, Stop: 76842, Start Num: 25

Candidate Starts for Courthouse_145:

(5, 76297), (8, 76345), (10, 76390), (Start: 22 @76507 has 1 MA's), (Start: 25 @76519 has 41 MA's), (39, 76603), (46, 76669), (53, 76708), (56, 76732), (61, 76789),

Gene: CurlyFries_65 Start: 39422, Stop: 39799, Start Num: 16

Candidate Starts for CurlyFries_65:

(Start: 16 @39422 has 3 MA's), (31, 39494), (39, 39551), (44, 39596), (61, 39746),

Gene: Dallas_151 Start: 80367, Stop: 80690, Start Num: 25

Candidate Starts for Dallas_151:

(Start: 22 @80355 has 1 MA's), (Start: 25 @80367 has 41 MA's), (39, 80451), (41, 80469), (46, 80517), (53, 80556),

Gene: Danforth_43 Start: 30881, Stop: 30579, Start Num: 24

Candidate Starts for Danforth_43:

(Start: 24 @30881 has 8 MA's), (40, 30770), (42, 30761), (57, 30668), (63, 30617), (66, 30596),

Gene: DmpstrDiver_151 Start: 80286, Stop: 80609, Start Num: 25

Candidate Starts for DmpstrDiver_151:

(Start: 22 @80274 has 1 MA's), (Start: 25 @80286 has 41 MA's), (39, 80370), (41, 80388), (46, 80436), (53, 80475), (67, 80589),

Gene: Dove_137 Start: 76474, Stop: 76797, Start Num: 25

Candidate Starts for Dove_137:

(9, 76342), (10, 76345), (Start: 22 @76462 has 1 MA's), (Start: 25 @76474 has 41 MA's), (39, 76558), (41, 76576), (53, 76663), (56, 76687), (67, 76777),

Gene: Duke13_149 Start: 79615, Stop: 79938, Start Num: 25

Candidate Starts for Duke13_149:

(Start: 22 @79603 has 1 MA's), (Start: 25 @79615 has 41 MA's), (30, 79633), (39, 79699), (46, 79765), (53, 79804), (64, 79897),

Gene: Ejimix_143 Start: 80435, Stop: 80758, Start Num: 25

Candidate Starts for Ejimix_143:

(Start: 22 @80423 has 1 MA's), (Start: 25 @80435 has 41 MA's), (39, 80519), (41, 80537), (46, 80585), (53, 80624),

Gene: EricMillard_145 Start: 80967, Stop: 81290, Start Num: 25

Candidate Starts for EricMillard_145:

(Start: 22 @80955 has 1 MA's), (Start: 25 @80967 has 41 MA's), (30, 80985), (39, 81051), (46, 81117), (53, 81156), (64, 81249),

Gene: Expelliarmus_43 Start: 30910, Stop: 30608, Start Num: 24

Candidate Starts for Expelliarmus_43:

(Start: 24 @30910 has 8 MA's), (40, 30799), (42, 30790), (57, 30697), (63, 30646), (66, 30625),

Gene: Gonephishing_125 Start: 68379, Stop: 68672, Start Num: 26

Candidate Starts for Gonephishing_125:

(Start: 26 @68379 has 5 MA's), (43, 68496), (51, 68556), (60, 68628), (61, 68631),

Gene: Gonephishing_144 Start: 78607, Stop: 78930, Start Num: 25

Candidate Starts for Gonephishing_144:

(Start: 22 @78595 has 1 MA's), (Start: 25 @78607 has 41 MA's), (39, 78691), (42, 78718), (43, 78724), (46, 78757), (53, 78796),

Gene: Groundhog_42 Start: 30817, Stop: 30515, Start Num: 24

Candidate Starts for Groundhog_42:

(Start: 24 @30817 has 8 MA's), (40, 30706), (42, 30697), (57, 30604), (63, 30553), (66, 30532),

Gene: Halley_152 Start: 80751, Stop: 81074, Start Num: 25

Candidate Starts for Halley_152:

(Start: 22 @80739 has 1 MA's), (Start: 25 @80751 has 41 MA's), (39, 80835), (41, 80853), (46, 80901), (53, 80940),

Gene: Hannaconda_124 Start: 69032, Stop: 69325, Start Num: 26

Candidate Starts for Hannaconda_124:

(Start: 26 @69032 has 5 MA's), (43, 69149), (51, 69209), (60, 69281), (61, 69284),

Gene: Hannaconda_144 Start: 79540, Stop: 79863, Start Num: 25

Candidate Starts for Hannaconda_144:

(Start: 25 @79540 has 41 MA's), (39, 79624), (42, 79651), (43, 79657), (46, 79690), (53, 79729),

Gene: Hidrated_139 Start: 79925, Stop: 80248, Start Num: 25

Candidate Starts for Hidrated_139:

(4, 79688), (7, 79727), (14, 79832), (Start: 22 @79913 has 1 MA's), (Start: 25 @79925 has 41 MA's), (30, 79943), (39, 80009), (46, 80075), (53, 80114), (56, 80138),

Gene: HokkenD_145 Start: 81876, Stop: 82199, Start Num: 25

Candidate Starts for HokkenD_145:

(4, 81639), (7, 81678), (14, 81783), (Start: 22 @81864 has 1 MA's), (Start: 25 @81876 has 41 MA's), (39, 81960), (42, 81987), (46, 82026), (53, 82065),

Gene: HokkenD_123 Start: 71913, Stop: 72206, Start Num: 26

Candidate Starts for HokkenD_123:

(Start: 26 @71913 has 5 MA's), (43, 72030), (51, 72090), (60, 72162), (61, 72165),

Gene: Hughesyang_150 Start: 81110, Stop: 81433, Start Num: 25

Candidate Starts for Hughesyang_150:

(9, 80978), (10, 80981), (Start: 22 @81098 has 1 MA's), (Start: 25 @81110 has 41 MA's), (39, 81194), (46, 81260), (53, 81299),

Gene: Jflix2_89 Start: 50660, Stop: 51001, Start Num: 23

Candidate Starts for Jflix2_89:

(12, 50558), (15, 50594), (19, 50642), (Start: 23 @50660 has 2 MA's), (37, 50741), (61, 50939),

Gene: JuicyJay_146 Start: 82036, Stop: 82359, Start Num: 25

Candidate Starts for JuicyJay_146:

(9, 81904), (10, 81907), (Start: 22 @82024 has 1 MA's), (Start: 25 @82036 has 41 MA's), (39, 82120), (46, 82186), (53, 82225), (61, 82306),

Gene: Kalah2_142 Start: 80240, Stop: 80563, Start Num: 25

Candidate Starts for Kalah2_142:

(Start: 22 @80228 has 1 MA's), (Start: 25 @80240 has 41 MA's), (39, 80324), (41, 80342), (53, 80429), (56, 80453),

Gene: KashFlow_150 Start: 79539, Stop: 79862, Start Num: 25

Candidate Starts for KashFlow_150:

(Start: 25 @79539 has 41 MA's), (39, 79623), (42, 79650), (43, 79656), (46, 79689), (53, 79728),

Gene: Klein_150 Start: 80105, Stop: 80428, Start Num: 25

Candidate Starts for Klein_150:

(Start: 22 @80093 has 1 MA's), (Start: 25 @80105 has 41 MA's), (30, 80123), (39, 80189), (46, 80255), (53, 80294), (56, 80318), (61, 80375),

Gene: LittleE_153 Start: 80985, Stop: 81308, Start Num: 25

Candidate Starts for LittleE_153:

(1, 80586), (2, 80709), (4, 80748), (7, 80787), (14, 80892), (Start: 22 @80973 has 1 MA's), (Start: 25 @80985 has 41 MA's), (39, 81069), (42, 81096), (46, 81135), (53, 81174), (62, 81258),

Gene: Lucky2013_142 Start: 75897, Stop: 76220, Start Num: 25

Candidate Starts for Lucky2013_142:

(Start: 22 @75885 has 1 MA's), (Start: 25 @75897 has 41 MA's), (30, 75915), (39, 75981), (42, 76008), (46, 76047), (53, 76086), (62, 76170),

Gene: Madraxi_91 Start: 52811, Stop: 53170, Start Num: 23

Candidate Starts for Madraxi_91:

(Start: 23 @52811 has 2 MA's), (28, 52826), (50, 52988), (58, 53033), (61, 53075),

Gene: Marleymoo_136 Start: 77201, Stop: 77524, Start Num: 25

Candidate Starts for Marleymoo_136:

(Start: 22 @77189 has 1 MA's), (Start: 25 @77201 has 41 MA's), (39, 77285), (41, 77303), (46, 77351), (53, 77390), (56, 77414), (64, 77483),

Gene: MiaZeal_149 Start: 77044, Stop: 77367, Start Num: 25

Candidate Starts for MiaZeal_149:

(Start: 22 @77032 has 1 MA's), (Start: 25 @77044 has 41 MA's), (30, 77062), (39, 77128), (42, 77155), (46, 77194), (53, 77233), (62, 77317),

Gene: Minerva_150 Start: 80059, Stop: 80382, Start Num: 25
Candidate Starts for Minerva_150:
(Start: 22 @80047 has 1 MA's), (Start: 25 @80059 has 41 MA's), (39, 80143), (41, 80161), (53, 80248),
(56, 80272),

Gene: Nekros_148 Start: 79933, Stop: 80256, Start Num: 25
Candidate Starts for Nekros_148:
(Start: 25 @79933 has 41 MA's), (39, 80017), (42, 80044), (43, 80050), (46, 80083), (53, 80122),

Gene: Nibley_144 Start: 77188, Stop: 77511, Start Num: 25
Candidate Starts for Nibley_144:
(Start: 25 @77188 has 41 MA's), (39, 77272), (42, 77299), (46, 77338), (53, 77377), (62, 77461),

Gene: NihilNomen_152 Start: 79960, Stop: 80283, Start Num: 25
Candidate Starts for NihilNomen_152:
(Start: 22 @79948 has 1 MA's), (Start: 25 @79960 has 41 MA's), (39, 80044), (41, 80062), (46, 80110),
(53, 80149), (56, 80173), (67, 80263),

Gene: Nova53_268 Start: 131044, Stop: 131379, Start Num: 22
Candidate Starts for Nova53_268:
(21, 131032), (Start: 22 @131044 has 1 MA's), (31, 131089), (32, 131092), (62, 131320), (64, 131329),
(68, 131359),

Gene: Nova53_257 Start: 128188, Stop: 128547, Start Num: 20
Candidate Starts for Nova53_257:
(17, 128170), (Start: 20 @128188 has 1 MA's), (33, 128254), (35, 128284), (55, 128434), (67, 128533),

Gene: Odette_156 Start: 82653, Stop: 82976, Start Num: 25
Candidate Starts for Odette_156:
(Start: 25 @82653 has 41 MA's), (39, 82737), (42, 82764), (46, 82803), (53, 82842), (62, 82926),

Gene: Odette_135 Start: 73830, Stop: 74123, Start Num: 26
Candidate Starts for Odette_135:
(Start: 26 @73830 has 5 MA's), (43, 73947), (51, 74007), (60, 74079), (61, 74082),

Gene: Omega_157 Start: 82149, Stop: 82472, Start Num: 25
Candidate Starts for Omega_157:
(Start: 25 @82149 has 41 MA's), (39, 82233), (42, 82260), (46, 82299), (53, 82338), (62, 82422),

Gene: Optimus_144 Start: 79658, Stop: 79981, Start Num: 25
Candidate Starts for Optimus_144:
(Start: 25 @79658 has 41 MA's), (39, 79742), (42, 79769), (46, 79808), (53, 79847), (62, 79931),

Gene: Phillis_45 Start: 31235, Stop: 30933, Start Num: 24
Candidate Starts for Phillis_45:
(Start: 24 @31235 has 8 MA's), (40, 31124), (42, 31115), (49, 31055), (57, 31022), (63, 30971), (66,
30950),

Gene: Phoebus_151 Start: 82464, Stop: 82787, Start Num: 25
Candidate Starts for Phoebus_151:
(9, 82332), (10, 82335), (Start: 22 @82452 has 1 MA's), (Start: 25 @82464 has 41 MA's), (39, 82548),
(41, 82566), (53, 82653), (56, 82677),

Gene: Porcelain_146 Start: 76843, Stop: 77166, Start Num: 25

Candidate Starts for Porcelain_146:

(Start: 22 @76831 has 1 MA's), (Start: 25 @76843 has 41 MA's), (30, 76861), (39, 76927), (42, 76954), (46, 76993), (53, 77032), (62, 77116),

Gene: Pound_142 Start: 79694, Stop: 80017, Start Num: 25

Candidate Starts for Pound_142:

(Start: 22 @79682 has 1 MA's), (Start: 25 @79694 has 41 MA's), (39, 79778), (41, 79796), (46, 79844), (53, 79883), (67, 79997),

Gene: Rearden_129 Start: 69937, Stop: 70230, Start Num: 26

Candidate Starts for Rearden_129:

(Start: 26 @69937 has 5 MA's), (43, 70054), (51, 70114), (60, 70186), (61, 70189),

Gene: Redno2_145 Start: 77962, Stop: 78285, Start Num: 25

Candidate Starts for Redno2_145:

(Start: 22 @77950 has 1 MA's), (Start: 25 @77962 has 41 MA's), (39, 78046), (41, 78064), (46, 78112), (53, 78151), (56, 78175), (61, 78232),

Gene: RegnumDei_62 Start: 40266, Stop: 40643, Start Num: 18

Candidate Starts for RegnumDei_62:

(3, 40029), (11, 40176), (Start: 18 @40266 has 2 MA's), (29, 40311), (31, 40338), (44, 40440), (61, 40590),

Gene: RegnumDei_61 Start: 39892, Stop: 40269, Start Num: 16

Candidate Starts for RegnumDei_61:

(Start: 16 @39892 has 3 MA's), (27, 39934), (44, 40078), (45, 40093), (58, 40168), (61, 40210),

Gene: Roary_44 Start: 30866, Stop: 30564, Start Num: 24

Candidate Starts for Roary_44:

(Start: 24 @30866 has 8 MA's), (40, 30755), (42, 30746), (57, 30653), (63, 30602), (66, 30581),

Gene: Schatzie_146 Start: 80543, Stop: 80866, Start Num: 25

Candidate Starts for Schatzie_146:

(Start: 22 @80531 has 1 MA's), (Start: 25 @80543 has 41 MA's), (39, 80627), (41, 80645), (46, 80693), (53, 80732), (67, 80846),

Gene: Shaboozey_148 Start: 77632, Stop: 77955, Start Num: 25

Candidate Starts for Shaboozey_148:

(Start: 25 @77632 has 41 MA's), (39, 77716), (42, 77743), (46, 77782), (53, 77821), (62, 77905),

Gene: Shagrat_64 Start: 40165, Stop: 40536, Start Num: 16

Candidate Starts for Shagrat_64:

(Start: 16 @40165 has 3 MA's), (27, 40207), (34, 40276), (44, 40351), (54, 40414), (58, 40441), (59, 40462), (61, 40483), (63, 40492),

Gene: Shagrat_65 Start: 40539, Stop: 40913, Start Num: 18

Candidate Starts for Shagrat_65:

(Start: 16 @40536 has 3 MA's), (Start: 18 @40539 has 2 MA's), (31, 40611), (38, 40662), (39, 40668), (44, 40713), (47, 40740), (52, 40770), (61, 40860),

Gene: Smeadley_44 Start: 31032, Stop: 30730, Start Num: 24

Candidate Starts for Smeadley_44:

(Start: 24 @31032 has 8 MA's), (40, 30921), (42, 30912), (57, 30819), (63, 30768), (66, 30747),

Gene: Squint_142 Start: 76328, Stop: 76651, Start Num: 25

Candidate Starts for Squint_142:

(Start: 25 @76328 has 41 MA's), (39, 76412), (42, 76439), (43, 76445), (46, 76478), (53, 76517),

Gene: Stellammi_85 Start: 44564, Stop: 44845, Start Num: 25

Candidate Starts for Stellammi_85:

(13, 44459), (Start: 20 @44537 has 1 MA's), (Start: 25 @44564 has 41 MA's), (30, 44582), (36, 44630), (44, 44690), (48, 44711), (65, 44828),

Gene: Stephig9_44 Start: 30891, Stop: 30589, Start Num: 24

Candidate Starts for Stephig9_44:

(Start: 24 @30891 has 8 MA's), (40, 30780), (42, 30771), (57, 30678), (63, 30627), (66, 30606),

Gene: Superphikiman_128 Start: 69018, Stop: 69311, Start Num: 26

Candidate Starts for Superphikiman_128:

(Start: 26 @69018 has 5 MA's), (43, 69135), (51, 69195), (60, 69267), (61, 69270),

Gene: Superphikiman_147 Start: 76801, Stop: 77124, Start Num: 25

Candidate Starts for Superphikiman_147:

(5, 76579), (8, 76627), (10, 76672), (Start: 22 @76789 has 1 MA's), (Start: 25 @76801 has 41 MA's), (39, 76885), (46, 76951), (53, 76990), (56, 77014), (61, 77071),

Gene: Thibault_134 Start: 77417, Stop: 77740, Start Num: 25

Candidate Starts for Thibault_134:

(6, 77204), (9, 77285), (10, 77288), (Start: 22 @77405 has 1 MA's), (Start: 25 @77417 has 41 MA's), (39, 77501), (46, 77567), (53, 77606), (64, 77699),

Gene: ThreeRngTarjay_146 Start: 81055, Stop: 81378, Start Num: 25

Candidate Starts for ThreeRngTarjay_146:

(9, 80923), (10, 80926), (Start: 22 @81043 has 1 MA's), (Start: 25 @81055 has 41 MA's), (39, 81139), (41, 81157), (53, 81244), (56, 81268),

Gene: Wanda_150 Start: 78530, Stop: 78853, Start Num: 25

Candidate Starts for Wanda_150:

(Start: 22 @78518 has 1 MA's), (Start: 25 @78530 has 41 MA's), (39, 78614), (41, 78632), (53, 78719), (56, 78743),

Gene: Yeet_125 Start: 71942, Stop: 72235, Start Num: 26

Candidate Starts for Yeet_125:

(Start: 26 @71942 has 5 MA's), (43, 72059), (51, 72119), (60, 72191), (61, 72194),

Gene: Yeet_144 Start: 79906, Stop: 80229, Start Num: 25

Candidate Starts for Yeet_144:

(5, 79684), (8, 79732), (10, 79777), (Start: 22 @79894 has 1 MA's), (Start: 25 @79906 has 41 MA's), (39, 79990), (46, 80056), (53, 80095), (56, 80119), (61, 80176),

Gene: Zelink_145 Start: 81372, Stop: 81695, Start Num: 25

Candidate Starts for Zelink_145:

(Start: 22 @81360 has 1 MA's), (Start: 25 @81372 has 41 MA's), (39, 81456), (41, 81474), (53, 81561), (56, 81585),