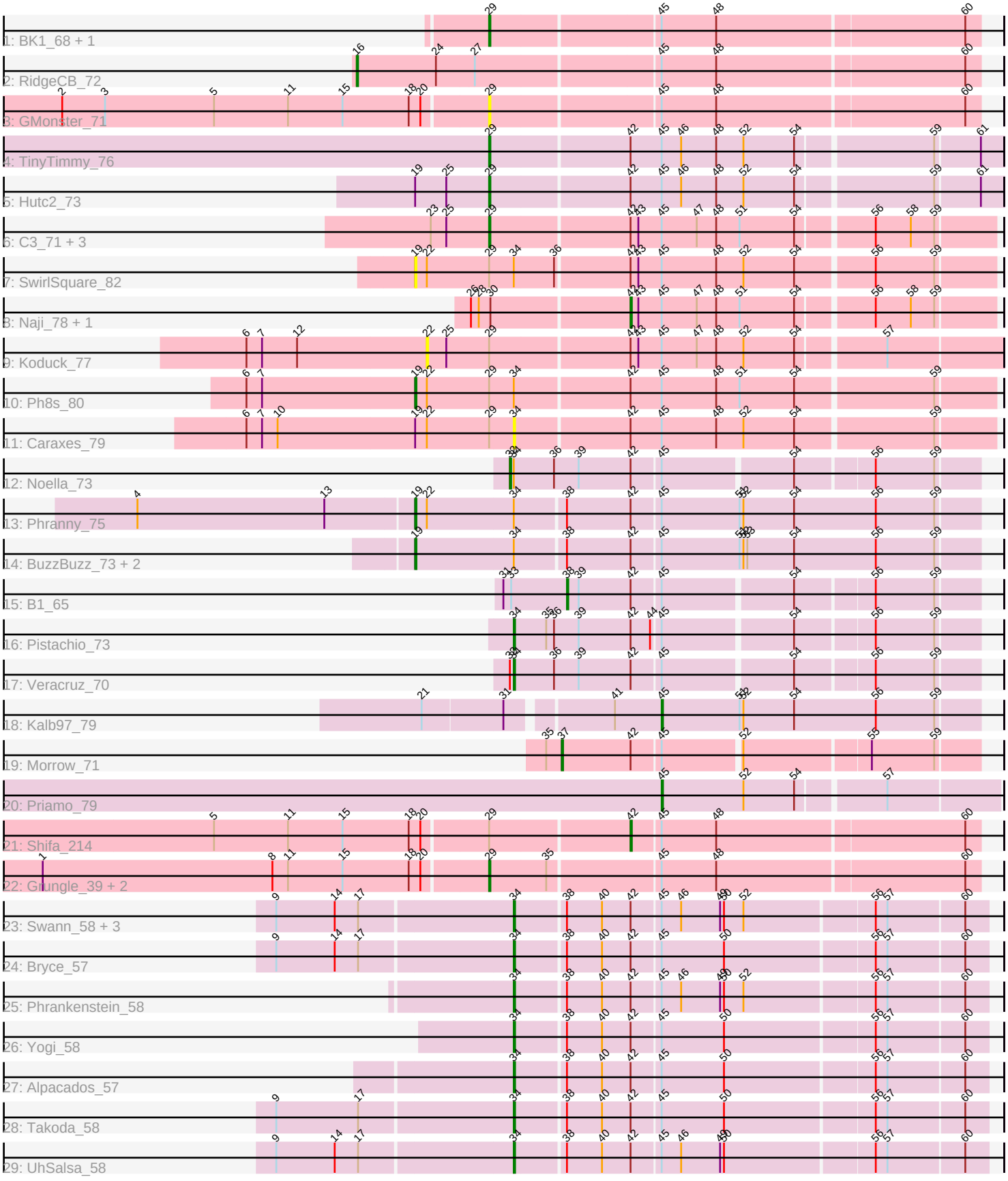
Pham 196656


1: BK1_68 + 1
2: RidgeCB_72
3: GMonster_71
4: TinyTimmy_76
5: Hutc2_73
6: C3_71 + 3
7: SwirlSquare_82
8: Naji_78 + 1
9: Koduck_77
10: Ph8s_80
11: Caraxes_79
12: Noella_73
13: Phranny_75
14: BuzzBuzz_73 + 2
15: B1_65
16: Pistachio_73
17: Veracruz_70
18: Kalb97_79
19: Morrow_71
20: Priamo_79
21: Shifa_214
22: Grungle_39 + 2
23: Swann_58 + 3
24: Bryce_57
25: Phrankenstein_58
26: Yogi_58
27: Alpacados_57
28: Takoda_58
29: UhSalsa_58

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 196656 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196656 has 41 members, 6 are drafts.

Phages represented in each track:
- Track 1 : BK1_68, A6_68
- Track 2 : RidgeCB_72
- Track 3 : GMonster_71
- Track 4 : TinyTimmy_76
- Track 5 : Hutc2_73
- Track 6 : C3_71, VC3_77, AN9_78, ANI8_78
- Track 7 : SwirlSquare_82
- Track 8 : Naji_78, D32_77
- Track 9 : Koduck_77
- Track 10 : Ph8s_80
- Track 11 : Caraxes_79
- Track 12 : Noella_73
- Track 13 : Phranny_75
- Track 14 : BuzzBuzz_73, Louie6_78, Bxz2_74
- Track 15 : B1_65
- Track 16 : Pistachio_73
- Track 17 : Veracruz_70
- Track 18 : Kalb97_79
- Track 19 : Morrow_71
- Track 20 : Priamo_79
- Track 21 : Shifa_214
- Track 22 : Grungle_39, Blackdragon_43, Halldule_42
- Track 23 : Swann_58, Bradshaw_58, Erik_58, Rasputin_58
- Track 24 : Bryce_57
- Track 25 : Phrankenstein_58
- Track 26 : Yogi_58
- Track 27 : Alpacados_57
- Track 28 : Takoda_58
- Track 29 : UhSalsa_58

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

The start number called the most often in the published annotations is 34, it was called in 12 of the 35 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Alpacados_57, Bradshaw_58, Bryce_57, Caraxes_79, Erik_58, Phrankenstein_58, Pistachio_73, Rasputin_58, Swann_58, Takoda_58, UhSalsa_58, Veracruz_70, Yogi_58,

Genes that have the "Most Annotated" start but do not call it:
• BuzzBuzz_73, Bxz2_74, Louie6_78, Noella_73, Ph8s_80, Phranny_75, SwirlSquare_82,

Genes that do not have the "Most Annotated" start:
• A6_68, AN9_78, ANI8_78, B1_65, BK1_68, Blackdragon_43, C3_71, D32_77, GMonster_71, Grungle_39, Halldule_42, Hutc2_73, Kalb97_79, Koduck_77, Morrow_71, Naji_78, Priamo_79, RidgeCB_72, Shifa_214, TinyTimmy_76, VC3_77,

Summary by start number:

Start 16:
• Found in 1 of 41 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: RidgeCB_72 (A1),

Start 19:
• Found in 8 of 41 (19.5%) of genes in pham
• Manual Annotations of this start: 5 of 35
• Called 75.0% of time when present
• Phage (with cluster) where this start called: BuzzBuzz_73 (A3), Bxz2_74 (A3), Louie6_78 (A3), Ph8s_80 (A2), Phranny_75 (A3), SwirlSquare_82 (A2),

Start 22:
• Found in 5 of 41 (12.2%) of genes in pham
• No Manual Annotations of this start.
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Koduck_77 (A2),

Start 29:
• Found in 17 of 41 (41.5%) of genes in pham
• Manual Annotations of this start: 9 of 35
• Called 70.6% of time when present
• Phage (with cluster) where this start called: A6_68 (A1), AN9_78 (A2), ANI8_78 (A2), BK1_68 (A1), Blackdragon_43 (C1), C3_71 (A2), GMonster_71 (A1), Grungle_39 (C1), Halldule_42 (C1), Hutc2_73 (A11), TinyTimmy_76 (A11), VC3_77 (A2),

Start 32:
• Found in 2 of 41 (4.9%) of genes in pham
• Manual Annotations of this start: 1 of 35
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Noella_73 (A3),

Start 34:
• Found in 20 of 41 (48.8%) of genes in pham

• Manual Annotations of this start: 12 of 35
• Called 65.0% of time when present
• Phage (with cluster) where this start called: Alpacados_57 (CA), Bradshaw_58 (CA), Bryce_57 (CA), Caraxes_79 (A2), Erik_58 (CA), Phrankenstein_58 (CA), Pistachio_73 (A3), Rasputin_58 (CA), Swann_58 (CA), Takoda_58 (CA), UhSalsa_58 (CA), Veracruz_70 (A3), Yogi_58 (CA),

Start 37:
• Found in 1 of 41 (2.4%) of genes in pham
• Manual Annotations of this start: 1 of 35
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Morrow_71 (A4),

Start 38:
• Found in 15 of 41 (36.6%) of genes in pham
• Manual Annotations of this start: 1 of 35
• Called 6.7% of time when present
• Phage (with cluster) where this start called: B1_65 (A3),

Start 42:
• Found in 32 of 41 (78.0%) of genes in pham
• Manual Annotations of this start: 3 of 35
• Called 9.4% of time when present
• Phage (with cluster) where this start called: D32_77 (A2), Naji_78 (A2), Shifa_214 (C1),

Start 45:
• Found in 41 of 41 (100.0%) of genes in pham
• Manual Annotations of this start: 2 of 35
• Called 4.9% of time when present
• Phage (with cluster) where this start called: Kalb97_79 (A3), Priamo_79 (A6),

Summary by clusters:

There are 8 clusters represented in this pham: A11, CA, A1, A3, A2, A4, A6, C1,

Info for manual annotations of cluster A1:
•Start number 16 was manually annotated 1 time for cluster A1.
•Start number 29 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster A11:
•Start number 29 was manually annotated 2 times for cluster A11.

Info for manual annotations of cluster A2:
•Start number 19 was manually annotated 1 time for cluster A2.
•Start number 29 was manually annotated 4 times for cluster A2.
•Start number 42 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A3:
•Start number 19 was manually annotated 4 times for cluster A3.
•Start number 32 was manually annotated 1 time for cluster A3.
•Start number 34 was manually annotated 2 times for cluster A3.
•Start number 38 was manually annotated 1 time for cluster A3.

•Start number 45 was manually annotated 1 time for cluster A3.

Info for manual annotations of cluster A4:
•Start number 37 was manually annotated 1 time for cluster A4.

Info for manual annotations of cluster A6:
•Start number 45 was manually annotated 1 time for cluster A6.

Info for manual annotations of cluster C1:
•Start number 29 was manually annotated 1 time for cluster C1.
•Start number 42 was manually annotated 1 time for cluster C1.

Info for manual annotations of cluster CA:
•Start number 34 was manually annotated 10 times for cluster CA.

Gene Information:

Gene: A6_68 Start: 43794, Stop: 43432, Start Num: 29
Candidate Starts for A6_68:
(Start: 29 @43794 has 9 MA's), (Start: 45 @43671 has 2 MA's), (48, 43629), (60, 43443),

Gene: AN9_78 Start: 45224, Stop: 44853, Start Num: 29
Candidate Starts for AN9_78:
(23, 45269), (25, 45257), (Start: 29 @45224 has 9 MA's), (Start: 42 @45122 has 3 MA's), (43, 45116), (Start: 45 @45098 has 2 MA's), (47, 45071), (48, 45056), (51, 45038), (54, 44996), (56, 44942), (58, 44915), (59, 44897),

Gene: ANI8_78 Start: 45224, Stop: 44853, Start Num: 29
Candidate Starts for ANI8_78:
(23, 45269), (25, 45257), (Start: 29 @45224 has 9 MA's), (Start: 42 @45122 has 3 MA's), (43, 45116), (Start: 45 @45098 has 2 MA's), (47, 45071), (48, 45056), (51, 45038), (54, 44996), (56, 44942), (58, 44915), (59, 44897),

Gene: Alpacados_57 Start: 39918, Stop: 39571, Start Num: 34
Candidate Starts for Alpacados_57:
(Start: 34 @39918 has 12 MA's), (Start: 38 @39882 has 1 MA's), (40, 39855), (Start: 42 @39834 has 3 MA's), (Start: 45 @39813 has 2 MA's), (50, 39765), (56, 39654), (57, 39645), (60, 39588),

Gene: B1_65 Start: 42656, Stop: 42357, Start Num: 38
Candidate Starts for B1_65:
(31, 42704), (33, 42698), (Start: 38 @42656 has 1 MA's), (39, 42647), (Start: 42 @42608 has 3 MA's), (Start: 45 @42587 has 2 MA's), (54, 42491), (56, 42434), (59, 42389),

Gene: BK1_68 Start: 43794, Stop: 43432, Start Num: 29
Candidate Starts for BK1_68:
(Start: 29 @43794 has 9 MA's), (Start: 45 @43671 has 2 MA's), (48, 43629), (60, 43443),

Gene: Blackdragon_43 Start: 14520, Stop: 14882, Start Num: 29
Candidate Starts for Blackdragon_43:
(1, 14181), (8, 14358), (11, 14370), (15, 14412), (18, 14463), (20, 14472), (Start: 29 @14520 has 9 MA's), (35, 14562), (Start: 45 @14643 has 2 MA's), (48, 14685), (60, 14871),

Gene: Bradshaw_58 Start: 39958, Stop: 39611, Start Num: 34
Candidate Starts for Bradshaw_58:
(9, 40135), (14, 40090), (17, 40072), (Start: 34 @39958 has 12 MA's), (Start: 38 @39922 has 1 MA's), (40, 39895), (Start: 42 @39874 has 3 MA's), (Start: 45 @39853 has 2 MA's), (46, 39838), (49, 39808), (50, 39805), (52, 39790), (56, 39694), (57, 39685), (60, 39628),

Gene: Bryce_57 Start: 39703, Stop: 39356, Start Num: 34
Candidate Starts for Bryce_57:
(9, 39880), (14, 39835), (17, 39817), (Start: 34 @39703 has 12 MA's), (Start: 38 @39667 has 1 MA's), (40, 39640), (Start: 42 @39619 has 3 MA's), (Start: 45 @39598 has 2 MA's), (50, 39550), (56, 39439), (57, 39430), (60, 39373),

Gene: BuzzBuzz_73 Start: 44946, Stop: 44524, Start Num: 19
Candidate Starts for BuzzBuzz_73:
(Start: 19 @44946 has 5 MA's), (Start: 34 @44871 has 12 MA's), (Start: 38 @44835 has 1 MA's), (Start: 42 @44787 has 3 MA's), (Start: 45 @44766 has 2 MA's), (51, 44706), (52, 44703), (53, 44700), (54, 44664), (56, 44601), (59, 44556),

Gene: Bxz2_74 Start: 44953, Stop: 44531, Start Num: 19
Candidate Starts for Bxz2_74:
(Start: 19 @44953 has 5 MA's), (Start: 34 @44878 has 12 MA's), (Start: 38 @44842 has 1 MA's), (Start: 42 @44794 has 3 MA's), (Start: 45 @44773 has 2 MA's), (51, 44713), (52, 44710), (53, 44707), (54, 44671), (56, 44608), (59, 44563),

Gene: C3_71 Start: 45224, Stop: 44853, Start Num: 29
Candidate Starts for C3_71:
(23, 45269), (25, 45257), (Start: 29 @45224 has 9 MA's), (Start: 42 @45122 has 3 MA's), (43, 45116), (Start: 45 @45098 has 2 MA's), (47, 45071), (48, 45056), (51, 45038), (54, 44996), (56, 44942), (58, 44915), (59, 44897),

Gene: Caraxes_79 Start: 44850, Stop: 44494, Start Num: 34
Candidate Starts for Caraxes_79:
(6, 45054), (7, 45042), (10, 45030), (Start: 19 @44925 has 5 MA's), (22, 44916), (Start: 29 @44868 has 9 MA's), (Start: 34 @44850 has 12 MA's), (Start: 42 @44766 has 3 MA's), (Start: 45 @44742 has 2 MA's), (48, 44700), (52, 44679), (54, 44640), (59, 44538),

Gene: D32_77 Start: 45602, Stop: 45333, Start Num: 42
Candidate Starts for D32_77:
(26, 45719), (28, 45713), (30, 45704), (Start: 42 @45602 has 3 MA's), (43, 45596), (Start: 45 @45578 has 2 MA's), (47, 45551), (48, 45536), (51, 45518), (54, 45476), (56, 45422), (58, 45395), (59, 45377),

Gene: Erik_58 Start: 39881, Stop: 39534, Start Num: 34
Candidate Starts for Erik_58:
(9, 40058), (14, 40013), (17, 39995), (Start: 34 @39881 has 12 MA's), (Start: 38 @39845 has 1 MA's), (40, 39818), (Start: 42 @39797 has 3 MA's), (Start: 45 @39776 has 2 MA's), (46, 39761), (49, 39731), (50, 39728), (52, 39713), (56, 39617), (57, 39608), (60, 39551),

Gene: GMonster_71 Start: 46084, Stop: 45722, Start Num: 29
Candidate Starts for GMonster_71:
(2, 46408), (3, 46375), (5, 46291), (11, 46234), (15, 46192), (18, 46141), (20, 46132), (Start: 29 @46084 has 9 MA's), (Start: 45 @45961 has 2 MA's), (48, 45919), (60, 45733),

Gene: Grungle_39 Start: 13010, Stop: 13372, Start Num: 29
Candidate Starts for Grungle_39:
(1, 12671), (8, 12848), (11, 12860), (15, 12902), (18, 12953), (20, 12962), (Start: 29 @13010 has 9 MA's), (35, 13052), (Start: 45 @13133 has 2 MA's), (48, 13175), (60, 13361),

Gene: Halldule_42 Start: 13459, Stop: 13821, Start Num: 29
Candidate Starts for Halldule_42:
(1, 13120), (8, 13297), (11, 13309), (15, 13351), (18, 13402), (20, 13411), (Start: 29 @13459 has 9 MA's), (35, 13501), (Start: 45 @13582 has 2 MA's), (48, 13624), (60, 13810),

Gene: Hutc2_73 Start: 43599, Stop: 43222, Start Num: 29
Candidate Starts for Hutc2_73:
(Start: 19 @43656 has 5 MA's), (25, 43632), (Start: 29 @43599 has 9 MA's), (Start: 42 @43497 has 3 MA's), (Start: 45 @43473 has 2 MA's), (46, 43458), (48, 43431), (52, 43410), (54, 43371), (59, 43272), (61, 43239),

Gene: Kalb97_79 Start: 44548, Stop: 44306, Start Num: 45
Candidate Starts for Kalb97_79:
(21, 44716), (31, 44656), (41, 44584), (Start: 45 @44548 has 2 MA's), (51, 44488), (52, 44485), (54, 44446), (56, 44383), (59, 44338),

Gene: Koduck_77 Start: 44603, Stop: 44178, Start Num: 22
Candidate Starts for Koduck_77:
(6, 44741), (7, 44729), (12, 44702), (22, 44603), (25, 44588), (Start: 29 @44555 has 9 MA's), (Start: 42 @44453 has 3 MA's), (43, 44447), (Start: 45 @44429 has 2 MA's), (47, 44402), (48, 44387), (52, 44366), (54, 44327), (57, 44264),

Gene: Louie6_78 Start: 44948, Stop: 44526, Start Num: 19
Candidate Starts for Louie6_78:
(Start: 19 @44948 has 5 MA's), (Start: 34 @44873 has 12 MA's), (Start: 38 @44837 has 1 MA's), (Start: 42 @44789 has 3 MA's), (Start: 45 @44768 has 2 MA's), (51, 44708), (52, 44705), (53, 44702), (54, 44666), (56, 44603), (59, 44558),

Gene: Morrow_71 Start: 44003, Stop: 43701, Start Num: 37
Candidate Starts for Morrow_71:
(35, 44015), (Start: 37 @44003 has 1 MA's), (Start: 42 @43952 has 3 MA's), (Start: 45 @43931 has 2 MA's), (52, 43874), (55, 43781), (59, 43733),

Gene: Naji_78 Start: 45602, Stop: 45333, Start Num: 42
Candidate Starts for Naji_78:
(26, 45719), (28, 45713), (30, 45704), (Start: 42 @45602 has 3 MA's), (43, 45596), (Start: 45 @45578 has 2 MA's), (47, 45551), (48, 45536), (51, 45518), (54, 45476), (56, 45422), (58, 45395), (59, 45377),

Gene: Noella_73 Start: 44480, Stop: 44139, Start Num: 32
Candidate Starts for Noella_73:
(Start: 32 @44480 has 1 MA's), (Start: 34 @44477 has 12 MA's), (36, 44447), (39, 44429), (Start: 42 @44390 has 3 MA's), (Start: 45 @44369 has 2 MA's), (54, 44273), (56, 44216), (59, 44171),

Gene: Ph8s_80 Start: 45284, Stop: 44853, Start Num: 19
Candidate Starts for Ph8s_80:
(6, 45413), (7, 45401), (Start: 19 @45284 has 5 MA's), (22, 45275), (Start: 29 @45227 has 9 MA's), (Start: 34 @45209 has 12 MA's), (Start: 42 @45125 has 3 MA's), (Start: 45 @45101 has 2 MA's), (48, 45059), (51, 45041), (54, 44999), (59, 44897),

Gene: Phrankenstein_58 Start: 39895, Stop: 39548, Start Num: 34
Candidate Starts for Phrankenstein_58:
(Start: 34 @39895 has 12 MA's), (Start: 38 @39859 has 1 MA's), (40, 39832), (Start: 42 @39811 has 3 MA's), (Start: 45 @39790 has 2 MA's), (46, 39775), (49, 39745), (50, 39742), (52, 39727), (56, 39631), (57, 39622), (60, 39565),

Gene: Phranny_75 Start: 43896, Stop: 43474, Start Num: 19
Candidate Starts for Phranny_75:
(4, 44106), (13, 43962), (Start: 19 @43896 has 5 MA's), (22, 43887), (Start: 34 @43821 has 12 MA's), (Start: 38 @43785 has 1 MA's), (Start: 42 @43737 has 3 MA's), (Start: 45 @43716 has 2 MA's), (51, 43656), (52, 43653), (54, 43614), (56, 43551), (59, 43506),

Gene: Pistachio_73 Start: 44065, Stop: 43727, Start Num: 34
Candidate Starts for Pistachio_73:
(Start: 34 @44065 has 12 MA's), (35, 44041), (36, 44035), (39, 44017), (Start: 42 @43978 has 3 MA's), (44, 43963), (Start: 45 @43957 has 2 MA's), (54, 43861), (56, 43804), (59, 43759),

Gene: Priamo_79 Start: 44200, Stop: 43952, Start Num: 45
Candidate Starts for Priamo_79:
(Start: 45 @44200 has 2 MA's), (52, 44137), (54, 44098), (57, 44035),

Gene: Rasputin_58 Start: 39919, Stop: 39572, Start Num: 34
Candidate Starts for Rasputin_58:
(9, 40096), (14, 40051), (17, 40033), (Start: 34 @39919 has 12 MA's), (Start: 38 @39883 has 1 MA's), (40, 39856), (Start: 42 @39835 has 3 MA's), (Start: 45 @39814 has 2 MA's), (46, 39799), (49, 39769), (50, 39766), (52, 39751), (56, 39655), (57, 39646), (60, 39589),

Gene: RidgeCB_72 Start: 45253, Stop: 44792, Start Num: 16
Candidate Starts for RidgeCB_72:
(Start: 16 @45253 has 1 MA's), (24, 45193), (27, 45166), (Start: 45 @45031 has 2 MA's), (48, 44989), (60, 44803),

Gene: Shifa_214 Start: 131617, Stop: 131877, Start Num: 42
Candidate Starts for Shifa_214:
(5, 131308), (11, 131365), (15, 131407), (18, 131458), (20, 131467), (Start: 29 @131515 has 9 MA's), (Start: 42 @131617 has 3 MA's), (Start: 45 @131638 has 2 MA's), (48, 131680), (60, 131866),

Gene: Swann_58 Start: 39947, Stop: 39600, Start Num: 34
Candidate Starts for Swann_58:
(9, 40124), (14, 40079), (17, 40061), (Start: 34 @39947 has 12 MA's), (Start: 38 @39911 has 1 MA's), (40, 39884), (Start: 42 @39863 has 3 MA's), (Start: 45 @39842 has 2 MA's), (46, 39827), (49, 39797), (50, 39794), (52, 39779), (56, 39683), (57, 39674), (60, 39617),

Gene: SwirlSquare_82 Start: 44722, Stop: 44291, Start Num: 19
Candidate Starts for SwirlSquare_82:
(Start: 19 @44722 has 5 MA's), (22, 44713), (Start: 29 @44665 has 9 MA's), (Start: 34 @44647 has 12 MA's), (36, 44617), (Start: 42 @44563 has 3 MA's), (43, 44557), (Start: 45 @44539 has 2 MA's), (48, 44497), (52, 44476), (54, 44437), (56, 44380), (59, 44335),

Gene: Takoda_58 Start: 40134, Stop: 39787, Start Num: 34
Candidate Starts for Takoda_58:

(9, 40311), (17, 40248), (Start: 34 @40134 has 12 MA's), (Start: 38 @40098 has 1 MA's), (40, 40071), (Start: 42 @40050 has 3 MA's), (Start: 45 @40029 has 2 MA's), (50, 39981), (56, 39870), (57, 39861), (60, 39804),

Gene: TinyTimmy_76 Start: 44421, Stop: 44044, Start Num: 29
Candidate Starts for TinyTimmy_76:
(Start: 29 @44421 has 9 MA's), (Start: 42 @44319 has 3 MA's), (Start: 45 @44295 has 2 MA's), (46, 44280), (48, 44253), (52, 44232), (54, 44193), (59, 44094), (61, 44061),

Gene: UhSalsa_58 Start: 39888, Stop: 39541, Start Num: 34
Candidate Starts for UhSalsa_58:
(9, 40065), (14, 40020), (17, 40002), (Start: 34 @39888 has 12 MA's), (Start: 38 @39852 has 1 MA's), (40, 39825), (Start: 42 @39804 has 3 MA's), (Start: 45 @39783 has 2 MA's), (46, 39768), (49, 39738), (50, 39735), (56, 39624), (57, 39615), (60, 39558),

Gene: VC3_77 Start: 45224, Stop: 44853, Start Num: 29
Candidate Starts for VC3_77:
(23, 45269), (25, 45257), (Start: 29 @45224 has 9 MA's), (Start: 42 @45122 has 3 MA's), (43, 45116), (Start: 45 @45098 has 2 MA's), (47, 45071), (48, 45056), (51, 45038), (54, 44996), (56, 44942), (58, 44915), (59, 44897),

Gene: Veracruz_70 Start: 44476, Stop: 44138, Start Num: 34
Candidate Starts for Veracruz_70:
(Start: 32 @44479 has 1 MA's), (Start: 34 @44476 has 12 MA's), (36, 44446), (39, 44428), (Start: 42 @44389 has 3 MA's), (Start: 45 @44368 has 2 MA's), (54, 44272), (56, 44215), (59, 44170),

Gene: Yogi_58 Start: 40300, Stop: 39953, Start Num: 34
Candidate Starts for Yogi_58:
(Start: 34 @40300 has 12 MA's), (Start: 38 @40264 has 1 MA's), (40, 40237), (Start: 42 @40216 has 3 MA's), (Start: 45 @40195 has 2 MA's), (50, 40147), (56, 40036), (57, 40027), (60, 39970),