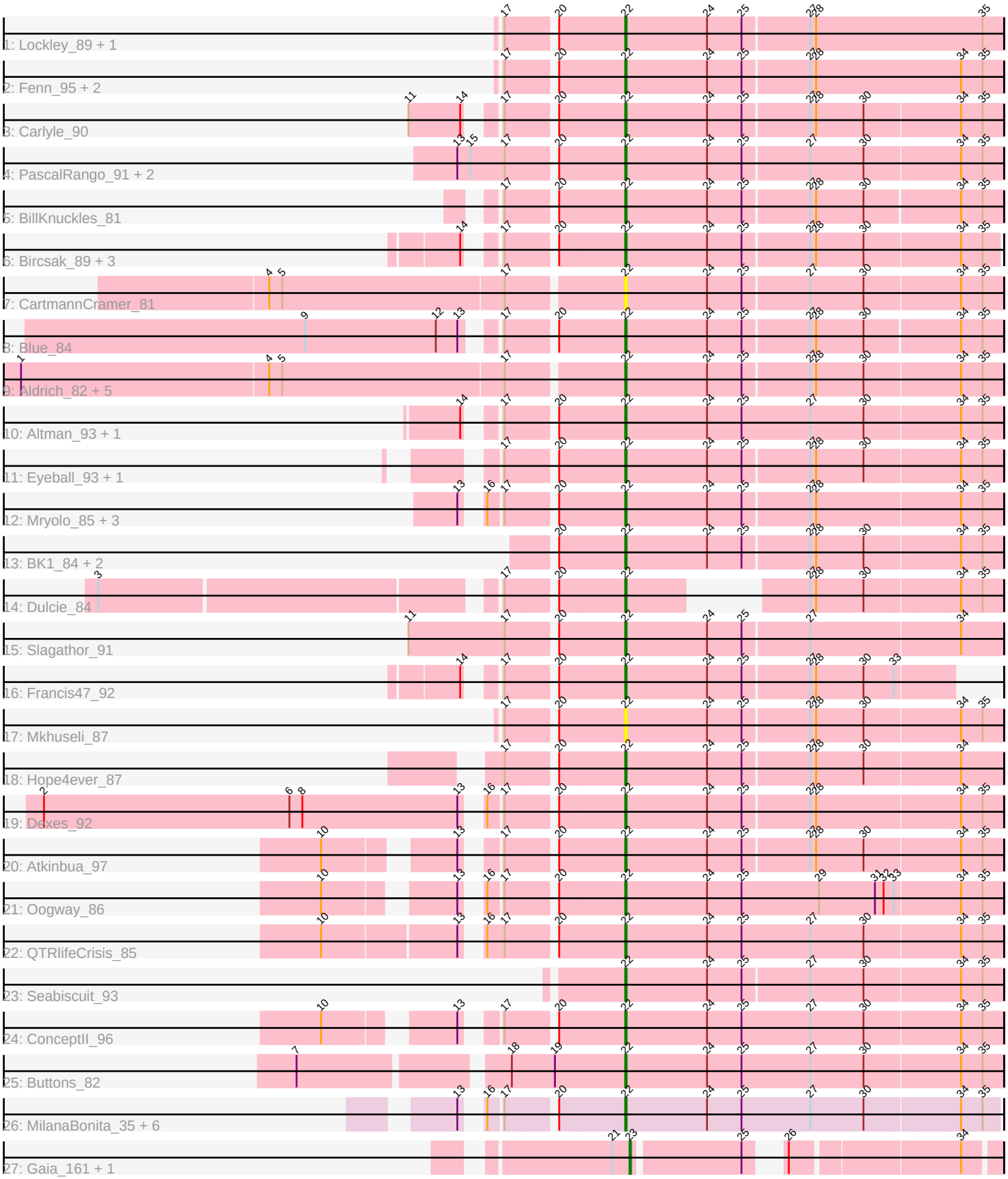
Pham 347682


1: Lockley_89 + 1
2: Fenn_95 + 2
3: Carlyle_90
4: PascalRango_91 + 2
5: BillKnuckles_81
6: Bircsak_89 + 3
7: CartmannCramer_81
8: Blue_84
9: Aldrich_82 + 5
10: Altman_93 + 1
11: Eyeball_93 + 1
12: Mryolo_85 + 3
13: BK1_84 + 2
14: Dulcie_84
15: Slagathor_91
16: Francis47_92
17: Mkhuseli_87
18: Hope4ever_87
19: Dexes_92
20: Atkinbua_97
21: Oogway_86
22: QTRlifeCrisis_85
23: Seabiscuit_93
24: ConceptII_96
25: Buttons_82
26: MilanaBonita_35 + 6
27: Gaia_161 + 1

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 347682 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347682 has 54 members, 9 are drafts.

Phages represented in each track:
• Track 1 : Lockley_89, Pari_90
• Track 2 : Fenn_95, Naira_94, Squee_90
• Track 3 : Carlyle_90
• Track 4 : PascalRango_91, BeesKnees_94, Switzer_90
• Track 5 : BillKnuckles_81
• Track 6 : Bircsak_89, Agaliana_86, Gompeii16_89, Noxious_88
• Track 7 : CartmannCramer_81
• Track 8 : Blue_84
• Track 9 : Aldrich_82, KikiBouba_86, CatBus_80, Hermia_83, GroundGoblin_82, DirtDevil_82
• Track 10 : Altman_93, Kanely_92
• Track 11 : Eyeball_93, Puppet_89
• Track 12 : Mryolo_85, Nerujay_94, Rhynn_86, Teodoridan_94
• Track 13 : BK1_84, A6_84, Magnar_90
• Track 14 : Dulcie_84
• Track 15 : Slagathor_91
• Track 16 : Francis47_92
• Track 17 : Mkhuseli_87
• Track 18 : Hope4ever_87
• Track 19 : Dexes_92
• Track 20 : Atkinbua_97
• Track 21 : Oogway_86
• Track 22 : QTRlifeCrisis_85
• Track 23 : Seabiscuit_93
• Track 24 : ConceptII_96
• Track 25 : Buttons_82
• Track 26 : MilanaBonita_35, Enzomatic_48, LunaBlu_45, Polo2Bam_47, Batiatus_41, Akhila_35, SeaLumen_46
• Track 27 : Gaia_161, Nebkiss_157

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

The start number called the most often in the published annotations is 22, it was called in 43 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• A6_84, Agaliana_86, Akhila_35, Aldrich_82, Altman_93, Atkinbua_97, BK1_84, Batiatus_41, BeesKnees_94, BillKnuckles_81, Bircsak_89, Blue_84, Buttons_82, Carlyle_90, CartmannCramer_81, CatBus_80, ConceptII_96, Dexes_92, DirtDevil_82, Dulcie_84, Enzomatic_48, Eyeball_93, Fenn_95, Francis47_92, Gompeii16_89, GroundGoblin_82, Hermia_83, Hope4ever_87, Kanely_92, KikiBouba_86, Lockley_89, LunaBlu_45, Magnar_90, MilanaBonita_35, Mkhuseli_87, Mryolo_85, Naira_94, Nerujay_94, Noxious_88, Oogway_86, Pari_90, PascalRango_91, Polo2Bam_47, Puppet_89, QTRlifeCrisis_85, Rhynn_86, SeaLumen_46, Seabiscuit_93, Slagathor_91, Squee_90, Switzer_90, Teodoridan_94,

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

Genes that do not have the "Most Annotated" start:
• Gaia_161, Nebkiss_157,

Summary by start number:

Start 22:
• Found in 52 of 54 (96.3%) of genes in pham
• Manual Annotations of this start: 43 of 45
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A6_84 (A1), Agaliana_86 (A1), Akhila_35 (F1), Aldrich_82 (A1), Altman_93 (A1), Atkinbua_97 (A1), BK1_84 (A1), Batiatus_41 (F1), BeesKnees_94 (A1), BillKnuckles_81 (A1), Bircsak_89 (A1), Blue_84 (A1), Buttons_82 (A1), Carlyle_90 (A1), CartmannCramer_81 (A1), CatBus_80 (A1), ConceptII_96 (A1), Dexes_92 (A1), DirtDevil_82 (A1), Dulcie_84 (A1), Enzomatic_48 (F1), Eyeball_93 (A1), Fenn_95 (A1), Francis47_92 (A1), Gompeii16_89 (A1), GroundGoblin_82 (A1), Hermia_83 (A1), Hope4ever_87 (A1), Kanely_92 (A1), KikiBouba_86 (A1), Lockley_89 (A1), LunaBlu_45 (F1), Magnar_90 (A1), MilanaBonita_35 (F1), Mkhuseli_87 (A1), Mryolo_85 (A1), Naira_94 (A1), Nerujay_94 (A1), Noxious_88 (A1), Oogway_86 (A1), Pari_90 (A1), PascalRango_91 (A1), Polo2Bam_47 (F1), Puppet_89 (A1), QTRlifeCrisis_85 (A1), Rhynn_86 (A1), SeaLumen_46 (F1), Seabiscuit_93 (A1), Slagathor_91 (A1), Squee_90 (A1), Switzer_90 (A1), Teodoridan_94 (A1),

Start 23:
• Found in 2 of 54 (3.7%) of genes in pham
• Manual Annotations of this start: 2 of 45
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gaia_161 (X), Nebkiss_157 (X),

Summary by clusters:

There are 3 clusters represented in this pham: A1, X, F1,

Info for manual annotations of cluster A1:
•Start number 22 was manually annotated 39 times for cluster A1.

Info for manual annotations of cluster F1:
•Start number 22 was manually annotated 4 times for cluster F1.

Info for manual annotations of cluster X:
•Start number 23 was manually annotated 2 times for cluster X.

Gene Information:

Gene: A6_84 Start: 48975, Stop: 48721, Start Num: 22
Candidate Starts for A6_84:
(20, 49020), (Start: 22 @48975 has 43 MA's), (24, 48918), (25, 48894), (27, 48849), (28, 48846), (30, 48813), (34, 48750), (35, 48735),

Gene: Agaliana_86 Start: 48958, Stop: 48707, Start Num: 22
Candidate Starts for Agaliana_86:
(14, 49045), (17, 49033), (20, 49003), (Start: 22 @48958 has 43 MA's), (24, 48901), (25, 48877), (27, 48832), (28, 48829), (30, 48796), (34, 48733), (35, 48718),

Gene: Akhila_35 Start: 27884, Stop: 27630, Start Num: 22
Candidate Starts for Akhila_35:
(13, 27974), (16, 27968), (17, 27959), (20, 27929), (Start: 22 @27884 has 43 MA's), (24, 27827), (25, 27803), (27, 27755), (30, 27719), (34, 27656), (35, 27641),

Gene: Aldrich_82 Start: 48724, Stop: 48470, Start Num: 22
Candidate Starts for Aldrich_82:
(1, 49132), (4, 48961), (5, 48952), (17, 48799), (Start: 22 @48724 has 43 MA's), (24, 48667), (25, 48643), (27, 48598), (28, 48595), (30, 48562), (34, 48499), (35, 48484),

Gene: Altman_93 Start: 51784, Stop: 51527, Start Num: 22
Candidate Starts for Altman_93:
(14, 51871), (17, 51859), (20, 51829), (Start: 22 @51784 has 43 MA's), (24, 51727), (25, 51703), (27, 51655), (30, 51619), (34, 51556), (35, 51541),

Gene: Atkinbua_97 Start: 52217, Stop: 51963, Start Num: 22
Candidate Starts for Atkinbua_97:
(10, 52382), (13, 52307), (17, 52292), (20, 52262), (Start: 22 @52217 has 43 MA's), (24, 52160), (25, 52136), (27, 52091), (28, 52088), (30, 52055), (34, 51992), (35, 51977),

Gene: BK1_84 Start: 48975, Stop: 48721, Start Num: 22
Candidate Starts for BK1_84:
(20, 49020), (Start: 22 @48975 has 43 MA's), (24, 48918), (25, 48894), (27, 48849), (28, 48846), (30, 48813), (34, 48750), (35, 48735),

Gene: Batiatus_41 Start: 31862, Stop: 31608, Start Num: 22
Candidate Starts for Batiatus_41:
(13, 31952), (16, 31946), (17, 31937), (20, 31907), (Start: 22 @31862 has 43 MA's), (24, 31805), (25, 31781), (27, 31733), (30, 31697), (34, 31634), (35, 31619),

Gene: BeesKnees_94 Start: 50722, Stop: 50468, Start Num: 22
Candidate Starts for BeesKnees_94:
(13, 50830), (15, 50821), (17, 50797), (20, 50767), (Start: 22 @50722 has 43 MA's), (24, 50665), (25, 50641), (27, 50596), (30, 50560), (34, 50497), (35, 50482),

Gene: BillKnuckles_81 Start: 50042, Stop: 49788, Start Num: 22
Candidate Starts for BillKnuckles_81:
(17, 50117), (20, 50087), (Start: 22 @50042 has 43 MA's), (24, 49985), (25, 49961), (27, 49916), (28, 49913), (30, 49880), (34, 49817), (35, 49802),

Gene: Bircsak_89 Start: 52486, Stop: 52235, Start Num: 22
Candidate Starts for Bircsak_89:
(14, 52573), (17, 52561), (20, 52531), (Start: 22 @52486 has 43 MA's), (24, 52429), (25, 52405), (27, 52360), (28, 52357), (30, 52324), (34, 52261), (35, 52246),

Gene: Blue_84 Start: 50474, Stop: 50220, Start Num: 22
Candidate Starts for Blue_84:
(9, 50669), (12, 50579), (13, 50564), (17, 50549), (20, 50519), (Start: 22 @50474 has 43 MA's), (24, 50417), (25, 50393), (27, 50348), (28, 50345), (30, 50312), (34, 50249), (35, 50234),

Gene: Buttons_82 Start: 47652, Stop: 47395, Start Num: 22
Candidate Starts for Buttons_82:
(7, 47862), (18, 47730), (19, 47700), (Start: 22 @47652 has 43 MA's), (24, 47595), (25, 47571), (27, 47523), (30, 47487), (34, 47424), (35, 47409),

Gene: Carlyle_90 Start: 50491, Stop: 50237, Start Num: 22
Candidate Starts for Carlyle_90:
(11, 50614), (14, 50578), (17, 50566), (20, 50536), (Start: 22 @50491 has 43 MA's), (24, 50434), (25, 50410), (27, 50365), (28, 50362), (30, 50329), (34, 50266), (35, 50251),

Gene: CartmannCramer_81 Start: 50034, Stop: 49780, Start Num: 22
Candidate Starts for CartmannCramer_81:
(4, 50271), (5, 50262), (17, 50109), (Start: 22 @50034 has 43 MA's), (24, 49977), (25, 49953), (27, 49908), (30, 49872), (34, 49809), (35, 49794),

Gene: CatBus_80 Start: 48916, Stop: 48662, Start Num: 22
Candidate Starts for CatBus_80:
(1, 49324), (4, 49153), (5, 49144), (17, 48991), (Start: 22 @48916 has 43 MA's), (24, 48859), (25, 48835), (27, 48790), (28, 48787), (30, 48754), (34, 48691), (35, 48676),

Gene: ConceptII_96 Start: 52549, Stop: 52292, Start Num: 22
Candidate Starts for ConceptII_96:
(10, 52714), (13, 52639), (17, 52624), (20, 52594), (Start: 22 @52549 has 43 MA's), (24, 52492), (25, 52468), (27, 52420), (30, 52384), (34, 52321), (35, 52306),

Gene: Dexes_92 Start: 53613, Stop: 53359, Start Num: 22
Candidate Starts for Dexes_92:
(2, 53991), (6, 53820), (8, 53811), (13, 53703), (16, 53697), (17, 53688), (20, 53658), (Start: 22 @53613 has 43 MA's), (24, 53556), (25, 53532), (27, 53487), (28, 53484), (34, 53388), (35, 53373),

Gene: DirtDevil_82 Start: 48724, Stop: 48470, Start Num: 22
Candidate Starts for DirtDevil_82:
(1, 49132), (4, 48961), (5, 48952), (17, 48799), (Start: 22 @48724 has 43 MA's), (24, 48667), (25, 48643), (27, 48598), (28, 48595), (30, 48562), (34, 48499), (35, 48484),

Gene: Dulcie_84 Start: 50542, Stop: 50339, Start Num: 22
Candidate Starts for Dulcie_84:

(3, 50875), (17, 50617), (20, 50587), (Start: 22 @50542 has 43 MA's), (27, 50467), (28, 50464), (30, 50431), (34, 50368), (35, 50353),

Gene: Enzomatic_48 Start: 32058, Stop: 31804, Start Num: 22
Candidate Starts for Enzomatic_48:
(13, 32148), (16, 32142), (17, 32133), (20, 32103), (Start: 22 @32058 has 43 MA's), (24, 32001), (25, 31977), (27, 31929), (30, 31893), (34, 31830), (35, 31815),

Gene: Eyeball_93 Start: 51506, Stop: 51252, Start Num: 22
Candidate Starts for Eyeball_93:
(17, 51581), (20, 51551), (Start: 22 @51506 has 43 MA's), (24, 51449), (25, 51425), (27, 51380), (28, 51377), (30, 51344), (34, 51281), (35, 51266),

Gene: Fenn_95 Start: 52290, Stop: 52033, Start Num: 22
Candidate Starts for Fenn_95:
(17, 52365), (20, 52335), (Start: 22 @52290 has 43 MA's), (24, 52233), (25, 52209), (27, 52164), (28, 52161), (34, 52062), (35, 52047),

Gene: Francis47_92 Start: 53229, Stop: 53008, Start Num: 22
Candidate Starts for Francis47_92:
(14, 53316), (17, 53304), (20, 53274), (Start: 22 @53229 has 43 MA's), (24, 53172), (25, 53148), (27, 53103), (28, 53100), (30, 53067), (33, 53046),

Gene: Gaia_161 Start: 81793, Stop: 81578, Start Num: 23
Candidate Starts for Gaia_161:
(21, 81805), (Start: 23 @81793 has 2 MA's), (25, 81721), (26, 81709), (34, 81601),

Gene: Gompeii16_89 Start: 52487, Stop: 52236, Start Num: 22
Candidate Starts for Gompeii16_89:
(14, 52574), (17, 52562), (20, 52532), (Start: 22 @52487 has 43 MA's), (24, 52430), (25, 52406), (27, 52361), (28, 52358), (30, 52325), (34, 52262), (35, 52247),

Gene: GroundGoblin_82 Start: 48866, Stop: 48612, Start Num: 22
Candidate Starts for GroundGoblin_82:
(1, 49274), (4, 49103), (5, 49094), (17, 48941), (Start: 22 @48866 has 43 MA's), (24, 48809), (25, 48785), (27, 48740), (28, 48737), (30, 48704), (34, 48641), (35, 48626),

Gene: Hermia_83 Start: 48916, Stop: 48662, Start Num: 22
Candidate Starts for Hermia_83:
(1, 49324), (4, 49153), (5, 49144), (17, 48991), (Start: 22 @48916 has 43 MA's), (24, 48859), (25, 48835), (27, 48790), (28, 48787), (30, 48754), (34, 48691), (35, 48676),

Gene: Hope4ever_87 Start: 49787, Stop: 49533, Start Num: 22
Candidate Starts for Hope4ever_87:
(17, 49862), (20, 49832), (Start: 22 @49787 has 43 MA's), (24, 49730), (25, 49706), (27, 49661), (28, 49658), (30, 49625), (34, 49562),

Gene: Kanely_92 Start: 51561, Stop: 51304, Start Num: 22
Candidate Starts for Kanely_92:
(14, 51648), (17, 51636), (20, 51606), (Start: 22 @51561 has 43 MA's), (24, 51504), (25, 51480), (27, 51432), (30, 51396), (34, 51333), (35, 51318),

Gene: KikiBouba_86 Start: 48725, Stop: 48471, Start Num: 22

Candidate Starts for KikiBouba_86:
(1, 49133), (4, 48962), (5, 48953), (17, 48800), (Start: 22 @48725 has 43 MA's), (24, 48668), (25, 48644), (27, 48599), (28, 48596), (30, 48563), (34, 48500), (35, 48485),

Gene: Lockley_89 Start: 50614, Stop: 50357, Start Num: 22
Candidate Starts for Lockley_89:
(17, 50689), (20, 50659), (Start: 22 @50614 has 43 MA's), (24, 50557), (25, 50533), (27, 50488), (28, 50485), (35, 50371),

Gene: LunaBlu_45 Start: 32894, Stop: 32640, Start Num: 22
Candidate Starts for LunaBlu_45:
(13, 32984), (16, 32978), (17, 32969), (20, 32939), (Start: 22 @32894 has 43 MA's), (24, 32837), (25, 32813), (27, 32765), (30, 32729), (34, 32666), (35, 32651),

Gene: Magnar_90 Start: 50682, Stop: 50428, Start Num: 22
Candidate Starts for Magnar_90:
(20, 50727), (Start: 22 @50682 has 43 MA's), (24, 50625), (25, 50601), (27, 50556), (28, 50553), (30, 50520), (34, 50457), (35, 50442),

Gene: MilanaBonita_35 Start: 27884, Stop: 27630, Start Num: 22
Candidate Starts for MilanaBonita_35:
(13, 27974), (16, 27968), (17, 27959), (20, 27929), (Start: 22 @27884 has 43 MA's), (24, 27827), (25, 27803), (27, 27755), (30, 27719), (34, 27656), (35, 27641),

Gene: Mkhuseli_87 Start: 48741, Stop: 48487, Start Num: 22
Candidate Starts for Mkhuseli_87:
(17, 48816), (20, 48786), (Start: 22 @48741 has 43 MA's), (24, 48684), (25, 48660), (27, 48615), (28, 48612), (30, 48579), (34, 48516), (35, 48501),

Gene: Mryolo_85 Start: 49110, Stop: 49364, Start Num: 22
Candidate Starts for Mryolo_85:
(13, 49020), (16, 49026), (17, 49035), (20, 49065), (Start: 22 @49110 has 43 MA's), (24, 49167), (25, 49191), (27, 49236), (28, 49239), (34, 49335), (35, 49350),

Gene: Naira_94 Start: 52422, Stop: 52165, Start Num: 22
Candidate Starts for Naira_94:
(17, 52497), (20, 52467), (Start: 22 @52422 has 43 MA's), (24, 52365), (25, 52341), (27, 52296), (28, 52293), (34, 52194), (35, 52179),

Gene: Nebkiss_157 Start: 77284, Stop: 77069, Start Num: 23
Candidate Starts for Nebkiss_157:
(21, 77296), (Start: 23 @77284 has 2 MA's), (25, 77212), (26, 77200), (34, 77092),

Gene: Nerujay_94 Start: 52064, Stop: 52318, Start Num: 22
Candidate Starts for Nerujay_94:
(13, 51974), (16, 51980), (17, 51989), (20, 52019), (Start: 22 @52064 has 43 MA's), (24, 52121), (25, 52145), (27, 52190), (28, 52193), (34, 52289), (35, 52304),

Gene: Noxious_88 Start: 49262, Stop: 49008, Start Num: 22
Candidate Starts for Noxious_88:
(14, 49349), (17, 49337), (20, 49307), (Start: 22 @49262 has 43 MA's), (24, 49205), (25, 49181), (27, 49136), (28, 49133), (30, 49100), (34, 49037), (35, 49022),

Gene: Oogway_86 Start: 51017, Stop: 50757, Start Num: 22
Candidate Starts for Oogway_86:
(10, 51182), (13, 51107), (16, 51101), (17, 51092), (20, 51062), (Start: 22 @51017 has 43 MA's), (24, 50960), (25, 50936), (29, 50882), (31, 50843), (32, 50837), (33, 50831), (34, 50786), (35, 50771),

Gene: Pari_90 Start: 49619, Stop: 49362, Start Num: 22
Candidate Starts for Pari_90:
(17, 49694), (20, 49664), (Start: 22 @49619 has 43 MA's), (24, 49562), (25, 49538), (27, 49493), (28, 49490), (35, 49376),

Gene: PascalRango_91 Start: 51715, Stop: 51461, Start Num: 22
Candidate Starts for PascalRango_91:
(13, 51823), (15, 51814), (17, 51790), (20, 51760), (Start: 22 @51715 has 43 MA's), (24, 51658), (25, 51634), (27, 51589), (30, 51553), (34, 51490), (35, 51475),

Gene: Polo2Bam_47 Start: 32058, Stop: 31804, Start Num: 22
Candidate Starts for Polo2Bam_47:
(13, 32148), (16, 32142), (17, 32133), (20, 32103), (Start: 22 @32058 has 43 MA's), (24, 32001), (25, 31977), (27, 31929), (30, 31893), (34, 31830), (35, 31815),

Gene: Puppet_89 Start: 51373, Stop: 51119, Start Num: 22
Candidate Starts for Puppet_89:
(17, 51448), (20, 51418), (Start: 22 @51373 has 43 MA's), (24, 51316), (25, 51292), (27, 51247), (28, 51244), (30, 51211), (34, 51148), (35, 51133),

Gene: QTRlifeCrisis_85 Start: 48887, Stop: 48630, Start Num: 22
Candidate Starts for QTRlifeCrisis_85:
(10, 49070), (13, 48980), (16, 48974), (17, 48962), (20, 48932), (Start: 22 @48887 has 43 MA's), (24, 48830), (25, 48806), (27, 48758), (30, 48722), (34, 48659), (35, 48644),

Gene: Rhynn_86 Start: 51064, Stop: 51318, Start Num: 22
Candidate Starts for Rhynn_86:
(13, 50974), (16, 50980), (17, 50989), (20, 51019), (Start: 22 @51064 has 43 MA's), (24, 51121), (25, 51145), (27, 51190), (28, 51193), (34, 51289), (35, 51304),

Gene: SeaLumen_46 Start: 32058, Stop: 31804, Start Num: 22
Candidate Starts for SeaLumen_46:
(13, 32148), (16, 32142), (17, 32133), (20, 32103), (Start: 22 @32058 has 43 MA's), (24, 32001), (25, 31977), (27, 31929), (30, 31893), (34, 31830), (35, 31815),

Gene: Seabiscuit_93 Start: 50753, Stop: 50499, Start Num: 22
Candidate Starts for Seabiscuit_93:
(Start: 22 @50753 has 43 MA's), (24, 50696), (25, 50672), (27, 50627), (30, 50591), (34, 50528), (35, 50513),

Gene: Slagathor_91 Start: 51233, Stop: 50979, Start Num: 22
Candidate Starts for Slagathor_91:
(11, 51374), (17, 51308), (20, 51278), (Start: 22 @51233 has 43 MA's), (24, 51176), (25, 51152), (27, 51107), (34, 51008),

Gene: Squee_90 Start: 51392, Stop: 51135, Start Num: 22
Candidate Starts for Squee_90:

(17, 51467), (20, 51437), (Start: 22 @51392 has 43 MA's), (24, 51335), (25, 51311), (27, 51266), (28, 51263), (34, 51164), (35, 51149),

Gene: Switzer_90 Start: 51546, Stop: 51292, Start Num: 22
Candidate Starts for Switzer_90:
(13, 51654), (15, 51645), (17, 51621), (20, 51591), (Start: 22 @51546 has 43 MA's), (24, 51489), (25, 51465), (27, 51420), (30, 51384), (34, 51321), (35, 51306),

Gene: Teodoridan_94 Start: 50836, Stop: 51090, Start Num: 22
Candidate Starts for Teodoridan_94:
(13, 50746), (16, 50752), (17, 50761), (20, 50791), (Start: 22 @50836 has 43 MA's), (24, 50893), (25, 50917), (27, 50962), (28, 50965), (34, 51061), (35, 51076),