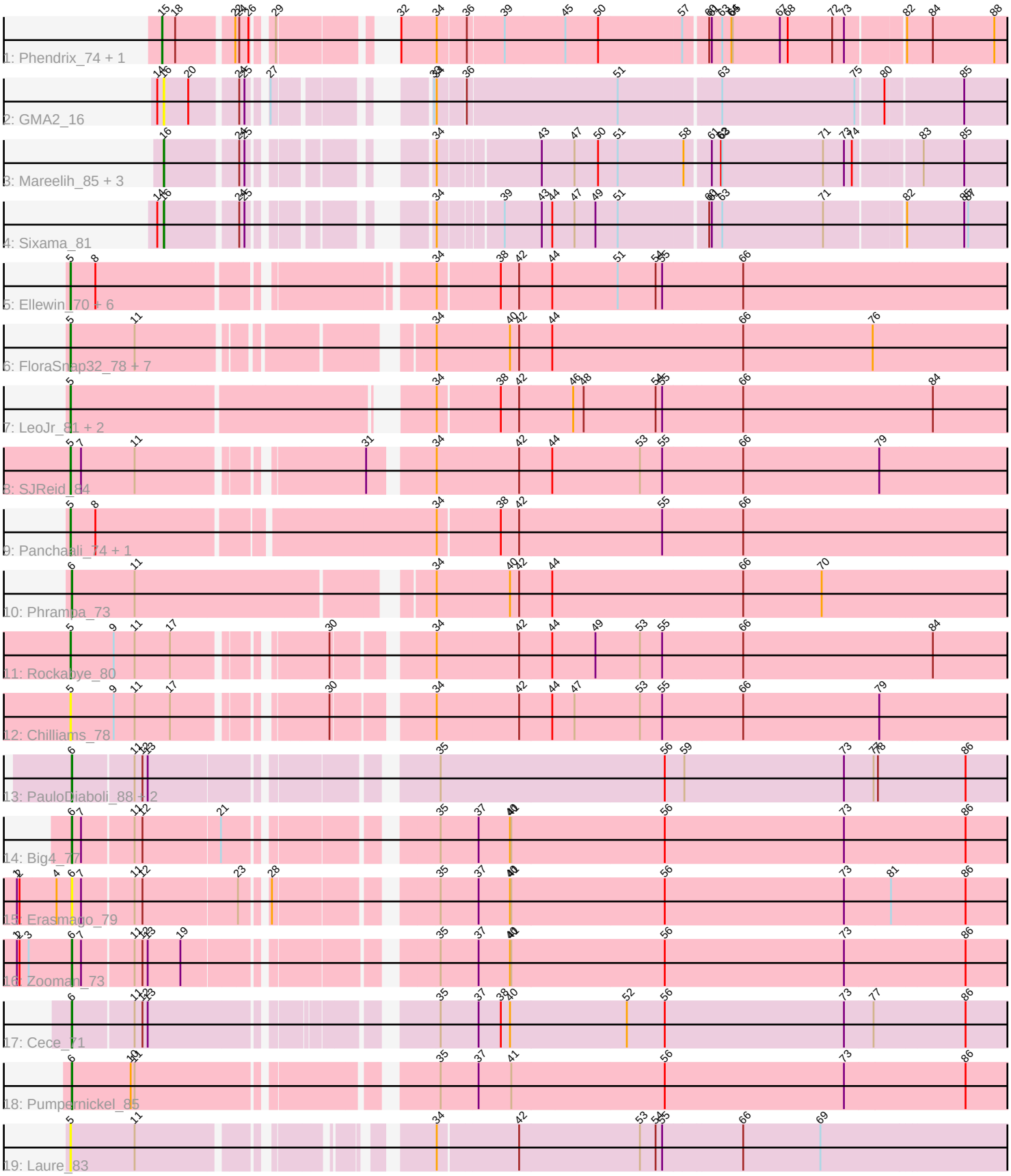
# Pham 345901


1: Phendrix_74 + 1
2: GMA2_16
3: Mareelih_85 + 3
4: Sixama_81
5: Ellewin_70 + 6
6: FloraSnap32_78 + 7
7: LeoJr_81 + 2
8: SJReid_84
9: Panchaali_74 + 1
10: Phramba_73
11: Rockabye_80
12: Chilliams_78
13: PauloDiaboli_88 + 2
14: Big4_77
15: Erasmago_79
16: Zooman_73
17: Cece_71
18: Pumpernickel_85
19: Laure_83

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 345901 Report

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

Pham number 345901 has 41 members, 10 are drafts.

Phages represented in each track:
• Track 1 : Phendrix_74, GodonK_76
• Track 2 : GMA2_16
• Track 3 : Mareelih_85, Boopy_87, BlueNGold_86, Forza_87
• Track 4 : Sixama_81
• Track 5 : Ellewin_70, KSunshine22_76, Emmetator_74, WaddleDee_69, BooTeria_72, Artu_72, DunneganBoMo_71
• Track 6 : FloraSnap32_78, Bloom_85, FrostedClock_80, Patbob_80, GoldenEssence_67, Racecar_82, Talia1610_81, Mimi_81
• Track 7 : LeoJr_81, Atuin_76, ReginaGlobina_81
• Track 8 : SJReid_84
• Track 9 : Panchaali_74, Stewart25555_72
• Track 10 : Phrampa_73
• Track 11 : Rockabye_80
• Track 12 : Chilliams_78
• Track 13 : PauloDiaboli_88, A3Wally_88, Dodo_90
• Track 14 : Big4_77
• Track 15 : Erasmago_79
• Track 16 : Zooman_73
• Track 17 : Cece_71
• Track 18 : Pumpernickel_85
• Track 19 : Laure_83

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

The start number called the most often in the published annotations is 5, it was called in 16 of the 31 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Artu_72, Atuin_76, Bloom_85, BooTeria_72, Chilliams_78, DunneganBoMo_71, Ellewin_70, Emmetator_74, FloraSnap32_78, FrostedClock_80, GoldenEssence_67, KSunshine22_76, Laure_83, LeoJr_81, Mimi_81, Panchaali_74, Patbob_80, Racecar_82, ReginaGlobina_81, Rockabye_80, SJReid_84, Stewart25555_72, Talia1610_81, WaddleDee_69,

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

Genes that do not have the "Most Annotated" start:
• A3Wally_88, Big4_77, BlueNGold_86, Boopy_87, Cece_71, Dodo_90, Erasmago_79, Forza_87, GMA2_16, GodonK_76, Mareelih_85, PauloDiaboli_88, Phendrix_74, Phrampa_73, Pumpernickel_85, Sixama_81, Zooman_73,

**Summary by start number:**

Start 5:
• Found in 24 of 41 ( 58.5% ) of genes in pham
• Manual Annotations of this start: 16 of 31
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Artu_72 (FC), Atuin_76 (FC), Bloom_85 (FC), BooTeria_72 (FC), Chilliams_78 (FC), DunneganBoMo_71 (FC), Ellewin_70 (FC), Emmetator_74 (FC), FloraSnap32_78 (FC), FrostedClock_80 (FC), GoldenEssence_67 (FC), KSunshine22_76 (FC), Laure_83 (UNK), LeoJr_81 (FC), Mimi_81 (FC), Panchaali_74 (FC), Patbob_80 (FC), Racecar_82 (FC), ReginaGlobina_81 (FC), Rockabye_80 (FC), SJReid_84 (FC), Stewart25555_72 (FC), Talia1610_81 (FC), WaddleDee_69 (FC),

Start 6:
• Found in 9 of 41 ( 22.0% ) of genes in pham
• Manual Annotations of this start: 8 of 31
• Called 100.0% of time when present
• Phage (with cluster) where this start called: A3Wally_88 (GD1), Big4_77 (GD2), Cece_71 (GD3), Dodo_90 (GD1), Erasmago_79 (GD2), PauloDiaboli_88 (GD1), Phrampa_73 (FC), Pumpernickel_85 (GD4), Zooman_73 (GD2),

Start 15:
• Found in 2 of 41 ( 4.9% ) of genes in pham
• Manual Annotations of this start: 2 of 31
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GodonK_76 (DK), Phendrix_74 (DK),

Start 16:
• Found in 6 of 41 ( 14.6% ) of genes in pham
• Manual Annotations of this start: 5 of 31
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlueNGold_86 (DS), Boopy_87 (DS), Forza_87 (DS), GMA2_16 (DS), Mareelih_85 (DS), Sixama_81 (DS),

**Summary by clusters:**

There are 8 clusters represented in this pham: GD1, GD2, GD3, GD4, DK, FC, UNK, DS,

Info for manual annotations of cluster DK:
•Start number 15 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster DS:
•Start number 16 was manually annotated 5 times for cluster DS.

Info for manual annotations of cluster FC:
•Start number 5 was manually annotated 16 times for cluster FC.
•Start number 6 was manually annotated 1 time for cluster FC.

Info for manual annotations of cluster GD1:
•Start number 6 was manually annotated 3 times for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 6 was manually annotated 2 times for cluster GD2.

Info for manual annotations of cluster GD3:
•Start number 6 was manually annotated 1 time for cluster GD3.

Info for manual annotations of cluster GD4:
•Start number 6 was manually annotated 1 time for cluster GD4.

### *Gene Information:*

Gene: A3Wally_88 Start: 44936, Stop: 46945, Start Num: 6
Candidate Starts for A3Wally_88:
(Start: 6 @44936 has 8 MA's), (11, 45071), (12, 45089), (13, 45101), (35, 45644), (56, 46154), (59, 46199), (73, 46565), (77, 46631), (78, 46640), (86, 46835),

Gene: Artu_72 Start: 44186, Stop: 46189, Start Num: 5
Candidate Starts for Artu_72:
(Start: 5 @44186 has 16 MA's), (8, 44240), (34, 44894), (38, 45029), (42, 45071), (44, 45146), (51, 45293), (54, 45380), (55, 45395), (66, 45575),

Gene: Atuin_76 Start: 46811, Stop: 48820, Start Num: 5
Candidate Starts for Atuin_76:
(Start: 5 @46811 has 16 MA's), (34, 47525), (38, 47660), (42, 47702), (46, 47825), (48, 47846), (54, 48011), (55, 48026), (66, 48206), (84, 48632),

Gene: Big4_77 Start: 43780, Stop: 45789, Start Num: 6
Candidate Starts for Big4_77:
(Start: 6 @43780 has 8 MA's), (7, 43801), (11, 43915), (12, 43933), (21, 44107), (35, 44488), (37, 44572), (40, 44644), (41, 44647), (56, 44995), (73, 45406), (86, 45676),

Gene: Bloom_85 Start: 48235, Stop: 50229, Start Num: 5
Candidate Starts for Bloom_85:
(Start: 5 @48235 has 16 MA's), (11, 48379), (34, 48925), (40, 49090), (42, 49111), (44, 49186), (66, 49615), (76, 49912),

Gene: BlueNGold_86 Start: 42025, Stop: 43677, Start Num: 16
Candidate Starts for BlueNGold_86:
(Start: 16 @42025 has 5 MA's), (24, 42172), (25, 42184), (34, 42451), (43, 42664), (47, 42739), (50, 42790), (51, 42832), (58, 42979), (61, 43030), (62, 43051), (63, 43054), (71, 43285), (73, 43333), (74, 43348), (83, 43486), (85, 43579),

Gene: BooTeria_72 Start: 44254, Stop: 46257, Start Num: 5
Candidate Starts for BooTeria_72:
(Start: 5 @44254 has 16 MA's), (8, 44308), (34, 44962), (38, 45097), (42, 45139), (44, 45214), (51, 45361), (54, 45448), (55, 45463), (66, 45643),

Gene: Boopy_87 Start: 42037, Stop: 43689, Start Num: 16
Candidate Starts for Boopy_87:
(Start: 16 @42037 has 5 MA's), (24, 42184), (25, 42196), (34, 42463), (43, 42676), (47, 42751), (50, 42802), (51, 42844), (58, 42991), (61, 43042), (62, 43063), (63, 43066), (71, 43297), (73, 43345), (74, 43360), (83, 43498), (85, 43591),

Gene: Cece_71 Start: 39862, Stop: 41862, Start Num: 6
Candidate Starts for Cece_71:
(Start: 6 @39862 has 8 MA's), (11, 39997), (12, 40015), (13, 40027), (35, 40564), (37, 40648), (38, 40699), (40, 40720), (52, 40984), (56, 41071), (73, 41482), (77, 41548), (86, 41752),

Gene: Chilliams_78 Start: 50058, Stop: 52049, Start Num: 5
Candidate Starts for Chilliams_78:
(Start: 5 @50058 has 16 MA's), (9, 50154), (11, 50202), (17, 50283), (30, 50559), (34, 50745), (42, 50931), (44, 51006), (47, 51057), (53, 51204), (55, 51255), (66, 51435), (79, 51747),

Gene: Dodo_90 Start: 45258, Stop: 47267, Start Num: 6
Candidate Starts for Dodo_90:
(Start: 6 @45258 has 8 MA's), (11, 45393), (12, 45411), (13, 45423), (35, 45966), (56, 46476), (59, 46521), (73, 46887), (77, 46953), (78, 46962), (86, 47157),

Gene: DunneganBoMo_71 Start: 43679, Stop: 45682, Start Num: 5
Candidate Starts for DunneganBoMo_71:
(Start: 5 @43679 has 16 MA's), (8, 43733), (34, 44387), (38, 44522), (42, 44564), (44, 44639), (51, 44786), (54, 44873), (55, 44888), (66, 45068),

Gene: Ellewin_70 Start: 43274, Stop: 45277, Start Num: 5
Candidate Starts for Ellewin_70:
(Start: 5 @43274 has 16 MA's), (8, 43328), (34, 43982), (38, 44117), (42, 44159), (44, 44234), (51, 44381), (54, 44468), (55, 44483), (66, 44663),

Gene: Emmetator_74 Start: 44426, Stop: 46429, Start Num: 5
Candidate Starts for Emmetator_74:
(Start: 5 @44426 has 16 MA's), (8, 44480), (34, 45134), (38, 45269), (42, 45311), (44, 45386), (51, 45533), (54, 45620), (55, 45635), (66, 45815),

Gene: Erasmago_79 Start: 41432, Stop: 43444, Start Num: 6
Candidate Starts for Erasmago_79:
(1, 41312), (2, 41318), (4, 41399), (Start: 6 @41432 has 8 MA's), (7, 41453), (11, 41567), (12, 41585), (23, 41795), (28, 41837), (35, 42146), (37, 42230), (40, 42302), (41, 42305), (56, 42653), (73, 43064), (81, 43169), (86, 43334),

Gene: FloraSnap32_78 Start: 47272, Stop: 49266, Start Num: 5
Candidate Starts for FloraSnap32_78:
(Start: 5 @47272 has 16 MA's), (11, 47416), (34, 47962), (40, 48127), (42, 48148), (44, 48223), (66, 48652), (76, 48949),

Gene: Forza_87 Start: 41953, Stop: 43605, Start Num: 16

Candidate Starts for Forza_87:
(Start: 16 @41953 has 5 MA's), (24, 42100), (25, 42112), (34, 42379), (43, 42592), (47, 42667), (50, 42718), (51, 42760), (58, 42907), (61, 42958), (62, 42979), (63, 42982), (71, 43213), (73, 43261), (74, 43276), (83, 43414), (85, 43507),

Gene: FrostedClock_80 Start: 47723, Stop: 49717, Start Num: 5
Candidate Starts for FrostedClock_80:
(Start: 5 @47723 has 16 MA's), (11, 47867), (34, 48413), (40, 48578), (42, 48599), (44, 48674), (66, 49103), (76, 49400),

Gene: GMA2_16 Start: 15295, Stop: 16959, Start Num: 16
Candidate Starts for GMA2_16:
(14, 15280), (Start: 16 @15295 has 5 MA's), (20, 15349), (24, 15442), (25, 15454), (27, 15481), (33, 15718), (34, 15724), (36, 15781), (51, 16114), (63, 16336), (75, 16636), (80, 16696), (85, 16861),

Gene: GodonK_76 Start: 36704, Stop: 38413, Start Num: 15
Candidate Starts for GodonK_76:
(Start: 15 @36704 has 2 MA's), (18, 36731), (22, 36851), (24, 36860), (26, 36881), (29, 36911), (32, 37100), (34, 37178), (36, 37241), (39, 37319), (45, 37454), (50, 37526), (57, 37712), (60, 37760), (61, 37766), (63, 37790), (64, 37811), (65, 37814), (67, 37922), (68, 37940), (72, 38042), (73, 38069), (82, 38189), (84, 38243), (88, 38384),

Gene: GoldenEssence_67 Start: 42028, Stop: 44022, Start Num: 5
Candidate Starts for GoldenEssence_67:
(Start: 5 @42028 has 16 MA's), (11, 42172), (34, 42718), (40, 42883), (42, 42904), (44, 42979), (66, 43408), (76, 43705),

Gene: KSunshine22_76 Start: 44913, Stop: 46916, Start Num: 5
Candidate Starts for KSunshine22_76:
(Start: 5 @44913 has 16 MA's), (8, 44967), (34, 45621), (38, 45756), (42, 45798), (44, 45873), (51, 46020), (54, 46107), (55, 46122), (66, 46302),

Gene: Laure_83 Start: 47867, Stop: 49807, Start Num: 5
Candidate Starts for Laure_83:
(Start: 5 @47867 has 16 MA's), (11, 48011), (34, 48521), (42, 48695), (53, 48968), (54, 49004), (55, 49019), (66, 49199), (69, 49376),

Gene: LeoJr_81 Start: 46939, Stop: 48948, Start Num: 5
Candidate Starts for LeoJr_81:
(Start: 5 @46939 has 16 MA's), (34, 47653), (38, 47788), (42, 47830), (46, 47953), (48, 47974), (54, 48139), (55, 48154), (66, 48334), (84, 48760),

Gene: Mareelih_85 Start: 41455, Stop: 43107, Start Num: 16
Candidate Starts for Mareelih_85:
(Start: 16 @41455 has 5 MA's), (24, 41602), (25, 41614), (34, 41881), (43, 42094), (47, 42169), (50, 42220), (51, 42262), (58, 42409), (61, 42460), (62, 42481), (63, 42484), (71, 42715), (73, 42763), (74, 42778), (83, 42916), (85, 43009),

Gene: Mimi_81 Start: 47582, Stop: 49576, Start Num: 5
Candidate Starts for Mimi_81:
(Start: 5 @47582 has 16 MA's), (11, 47726), (34, 48272), (40, 48437), (42, 48458), (44, 48533), (66, 48962), (76, 49259),

Gene: Panchaali_74 Start: 44604, Stop: 46667, Start Num: 5
Candidate Starts for Panchaali_74:
(Start: 5 @44604 has 16 MA's), (8, 44658), (34, 45372), (38, 45507), (42, 45549), (55, 45873), (66, 46053),

Gene: Patbob_80 Start: 48454, Stop: 50448, Start Num: 5
Candidate Starts for Patbob_80:
(Start: 5 @48454 has 16 MA's), (11, 48598), (34, 49144), (40, 49309), (42, 49330), (44, 49405), (66, 49834), (76, 50131),

Gene: PauloDiaboli_88 Start: 44293, Stop: 46302, Start Num: 6
Candidate Starts for PauloDiaboli_88:
(Start: 6 @44293 has 8 MA's), (11, 44428), (12, 44446), (13, 44458), (35, 45001), (56, 45511), (59, 45556), (73, 45922), (77, 45988), (78, 45997), (86, 46192),

Gene: Phendrix_74 Start: 36572, Stop: 38281, Start Num: 15
Candidate Starts for Phendrix_74:
(Start: 15 @36572 has 2 MA's), (18, 36599), (22, 36719), (24, 36728), (26, 36749), (29, 36779), (32, 36968), (34, 37046), (36, 37109), (39, 37187), (45, 37322), (50, 37394), (57, 37580), (60, 37628), (61, 37634), (63, 37658), (64, 37679), (65, 37682), (67, 37790), (68, 37808), (72, 37910), (73, 37937), (82, 38057), (84, 38111), (88, 38252),

Gene: Phrampa_73 Start: 45102, Stop: 47150, Start Num: 6
Candidate Starts for Phrampa_73:
(Start: 6 @45102 has 8 MA's), (11, 45246), (34, 45846), (40, 46011), (42, 46032), (44, 46107), (66, 46536), (70, 46716),

Gene: Pumpernickel_85 Start: 45481, Stop: 47517, Start Num: 6
Candidate Starts for Pumpernickel_85:
(Start: 6 @45481 has 8 MA's), (10, 45616), (11, 45625), (35, 46213), (37, 46297), (41, 46372), (56, 46717), (73, 47128), (86, 47404),

Gene: Racecar_82 Start: 48235, Stop: 50229, Start Num: 5
Candidate Starts for Racecar_82:
(Start: 5 @48235 has 16 MA's), (11, 48379), (34, 48925), (40, 49090), (42, 49111), (44, 49186), (66, 49615), (76, 49912),

Gene: ReginaGlobina_81 Start: 47691, Stop: 49700, Start Num: 5
Candidate Starts for ReginaGlobina_81:
(Start: 5 @47691 has 16 MA's), (34, 48405), (38, 48540), (42, 48582), (46, 48705), (48, 48726), (54, 48891), (55, 48906), (66, 49086), (84, 49512),

Gene: Rockabye_80 Start: 50410, Stop: 52398, Start Num: 5
Candidate Starts for Rockabye_80:
(Start: 5 @50410 has 16 MA's), (9, 50506), (11, 50554), (17, 50635), (30, 50911), (34, 51094), (42, 51280), (44, 51355), (49, 51451), (53, 51553), (55, 51604), (66, 51784), (84, 52210),

Gene: SJReid_84 Start: 49478, Stop: 51490, Start Num: 5
Candidate Starts for SJReid_84:
(Start: 5 @49478 has 16 MA's), (7, 49499), (11, 49622), (31, 50066), (34, 50186), (42, 50372), (44, 50447), (53, 50645), (55, 50696), (66, 50876), (79, 51188),

Gene: Sixama_81 Start: 41770, Stop: 43428, Start Num: 16

Candidate Starts for Sixama_81:
(14, 41755), (Start: 16 @41770 has 5 MA's), (24, 41917), (25, 41929), (34, 42202), (39, 42331), (43, 42415), (44, 42439), (47, 42490), (49, 42535), (51, 42583), (60, 42775), (61, 42781), (63, 42805), (71, 43036), (82, 43204), (85, 43330), (87, 43339),

Gene: Stewart25555_72 Start: 44035, Stop: 46092, Start Num: 5
Candidate Starts for Stewart25555_72:
(Start: 5 @44035 has 16 MA's), (8, 44089), (34, 44797), (38, 44932), (42, 44974), (55, 45298), (66, 45478),

Gene: Talia1610_81 Start: 47600, Stop: 49594, Start Num: 5
Candidate Starts for Talia1610_81:
(Start: 5 @47600 has 16 MA's), (11, 47744), (34, 48290), (40, 48455), (42, 48476), (44, 48551), (66, 48980), (76, 49277),

Gene: WaddleDee_69 Start: 43531, Stop: 45537, Start Num: 5
Candidate Starts for WaddleDee_69:
(Start: 5 @43531 has 16 MA's), (8, 43585), (34, 44242), (38, 44377), (42, 44419), (44, 44494), (51, 44641), (54, 44728), (55, 44743), (66, 44923),

Gene: Zooman_73 Start: 42476, Stop: 44485, Start Num: 6
Candidate Starts for Zooman_73:
(1, 42350), (2, 42356), (3, 42377), (Start: 6 @42476 has 8 MA's), (7, 42497), (11, 42611), (12, 42629), (13, 42641), (19, 42716), (35, 43187), (37, 43271), (40, 43343), (41, 43346), (56, 43694), (73, 44105), (86, 44375),