

Pham 305059

1: Rubberso_16 +	135	21	36	42	58	68	75	80	87	93	98	106	115	125	144	156	159	188	218	231	239	250	261	265	273	283	291	297									
2: Solo_16		21	36	42	51	58	71	76	88	93	97	106	116	128	135	165	172	181	188	213	226	235	241	251	271	288	298										
3: SV_16 +		21	34	41	53	63	70	78	88	93	97	106	117	123	133	168	175	181	188	213	231	250	258	261	273	288	291										
4: Rajah_16		21	34	46	51	60	71	76	88	93	98	106	116	128	135	155	159	164	171	181	198	202	214	224	230	238	246	269	275	284	288	300					
5: PapayaSalad_16		21	36	42	51	58	71	76	88	93	97	106	116	128	135	165	172	181	188	213	226	235	241	251	271	288	298										
6: Lishka_16 + 1		21	36	42	51	58	71	76	88	93	97	106	116	128	135	165	172	181	188	213	226	235	241	251	271	288	298										
7: Ididsumtinwong_16 +			36	42	58	68	75	80	87	93	98	106	112	128	149	164	171	181	191	202	214	224	230	238	246	269	275	284	288	300							
8: Typher_21 + 2	31		36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	191	202	214	224	230	238	246	269	275	284	288	300						
9: Johann_20 + 1			36	42	58	68	75	80	87	93	98	104	106	112	128	149	164	171	181	191	202	214	224	230	238	246	269	275	284	288	300						
10: PermaG_20			36	42	58	68	75	80	87	93	98	105	112	128	149	164	171	181	191	202	214	224	230	238	246	269	275	284	288	300							
11: TurboVicky_19			36	42	58	68	75	80	87	93	98	105	112	128	149	164	171	181	191	202	214	224	230	238	246	269	275	284	288	300							
12: Rootkit7_19 + 2			36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	191	202	214	224	230	238	246	269	275	284	288	300						
13: Cicada_21			36	42	58	68	71	76	88	93	98	101	106	112	128	149	164	171	181	185	203	214	224	231	238	246	269	275	284	288	300						
14: Rasovi_19 + 1			36	42	58	68	75	80	87	93	98	105	112	128	149	164	171	181	185	202	214	224	231	238	246	269	275	284	288	300							
15: Jera_20			36	42	58	68	75	80	87	93	98	105	112	128	149	164	171	181	185	202	214	224	231	238	246	269	275	284	288	300							
16: Zanela_19	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	230	238	246	269	275	284	288	300						
17: Antura_22	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	230	240	249	253	258	261	264	270	278	281	284	288	291	292
18: Dropshot_16 + 1	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	217	221	240	249	253	258	261	264	270	278	281	284	288	291	292
19: NCRodrigu_16	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	217	221	240	249	253	258	261	264	270	278	281	284	288	291	292
20: Phing_24	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	217	221	240	249	253	258	261	264	270	278	281	284	288	291	292
21: Winchester_16	16	21	36	42	58	68	75	80	87	93	97	104	106	112	128	149	164	171	181	185	201	211	219	227	246	259	272	278	281	284	288	291	292				
22: Marie_25	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	278	281	284	288	291	292	
23: Blett_22	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	278	281	284	288	291	292	
24: Carrilo_23	16	21	36	40	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	217	227	240	249	253	258	261	264	270	278	281	284	288	291	292
25: Phongging_21	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	201	206	219	235	246	249	253	258	261	264	270	272	278	281	284	288	
26: ScoobySnak_16	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	217	227	240	249	253	258	261	264	270	278	281	284	288	291	292
27: JakeLine_21	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	278	281	284	288	291	292	
28: PhillyJawn_16	16	21	36	42	58	68	75	80	87	93	98	104	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	278	281	284	288	291	292	
29: Bush_22	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	271	278	281	284	288	291	292
30: Warren_22	16	21	36	42	58	68	75	80	87	93	98	104	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	271	278	281	284	288	291	292
31: CookieDog_22	16	21	36	42	58	68	75	80	87	93	98	101	106	112	128	149	164	171	181	185	202	212	221	240	249	253	258	261	264	270	272	278	281	284	288	291	292
32: Guzman_21	16	21	36	42	58	68	75	80	87	93	97	104	106	112	128	149	164	171	181	185	201	211	219	229	234	246	259	272	278	281	284	288	291	296	300		
33: Pickles_13	16	21	36	42	58	68	75	80	87	93	97	101	106	112	126	139	147	157	161	178	188	208	214	231	241	246	258	272	278	281	284	288	291	292			
34: Teng_22	16	21	36	42	58	68	75	80	87	93	97	101	106	112	126	139	147	157	161	178	188	208	214	231	241	246	258	272	278	281	284	288	291	292			
35: SweetSims_16	16	21	36	42	58	68	75	80	87	93	97	101	106	112	126	139	147	157	161	178	188	208	214	231	241	246	258	272	278	281	284	288	291	292			
36: DelaSerza_16	16	21	36	42	58	68	75	80	87	93	97	101	106	112	126	139	147	157	161	178	188	208	214	231	241	246	258	272	278	281	284	288	291	292			
37: Lesiram_21	16	33	39	42	58	68	75	80	87	93	96	102	107	113	126	139	147	157	161	178	188	208	214	231	241	246	258	270	272	284	288	291	296				
38: GingerJug_16	16	33	39	42	58	68	75	80	87	93	97	102	107	113	126	139	147	157	161	178	188	208	214	231	241	246	258	270	272	284	288	291	296				
39: Wrackline_26	21	27	33	42	51	65	72	76	80	83	92	102	109	116	121	133	144	154	161	171	181	194	206	210	216	228	244	259	269	270	272	284	288	291	296		
40: Parvapariceps_16	16	33	39	42	51	65	72	76	80	83	92	102	109	116	121	133	144	154	161	171	181	194	206	210	216	228	244	259	269	270	272	284	288	291			

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 305059 Report

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

Pham number 305059 has 54 members, 16 are drafts.

Phages represented in each track:

- Track 1 : Tubberson_16, DaRealMyers_16
- Track 2 : SoJo_16
- Track 3 : SV1_16
- Track 4 : Raleigh_16
- Track 5 : PapayaSalad_16
- Track 6 : Lishka_16, Austintatious_16
- Track 7 : Ididsumtinwong_16, Bioscum_16
- Track 8 : Typher_21, AyoTeo_21, Labella_21
- Track 9 : Johann_20, Goodman_20
- Track 10 : PermaG_20
- Track 11 : TurboVicky_19
- Track 12 : Rootkit7_19, SBlackberry_19, Alove_19
- Track 13 : Cicada_21
- Track 14 : Rasovi_19, Htur_19
- Track 15 : Jera_20
- Track 16 : Zanella_19
- Track 17 : Antuna_22, Losacky_23, Violeta_23, MenE_22
- Track 18 : Dropshot_21, Appa_21
- Track 19 : NCRodriguez_23
- Track 20 : Phingu_24
- Track 21 : Winchester007_37
- Track 22 : Mariel_25
- Track 23 : Blett_22
- Track 24 : Carrillo_23
- Track 25 : Phonegingi_21
- Track 26 : ScoobySnack_20
- Track 27 : Jakelyne_24
- Track 28 : PhillyJawn_22
- Track 29 : Bush_22
- Track 30 : Warren_22
- Track 31 : CookieDog_22
- Track 32 : Guzman_23
- Track 33 : Pickles13_21
- Track 34 : Teng_22
- Track 35 : Sweetums_22
- Track 36 : DelaGarza_20
- Track 37 : Lesiram_21

- Track 38 : Gingerbug_18
- Track 39 : Wrackline_26
- Track 40 : Parvarticeps_35
- Track 41 : Chymera_17

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

The start number called the most often in the published annotations is 8, it was called in 16 of the 38 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Antuna_22, Appa_21, Blett_22, Bush_22, Carrillo_23, CookieDog_22, DelaGarza_20, Dropshot_21, Gingerbug_18, Guzman_23, Jakelyne_24, Lesiram_21, Losacky_23, Mariel_25, MenE_22, NCRodriguez_23, Parvarticeps_35, PhillyJawn_22, Phingu_24, Phonegingi_21, Pickles13_21, ScoobySnack_20, Sweetums_22, Teng_22, Violeta_23, Warren_22, Winchester007_37, Wrackline_26,

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

-

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

- Alove_19, Austintatious_16, AyoTeo_21, Bioscum_16, Chymera_17, Cicada_21, DaRealMyers_16, Goodman_20, Htur_19, Ididsumtinwong_16, Jera_20, Johann_20, Labella_21, Lishka_16, PapayaSalad_16, PermaG_20, Raleigh_16, Rasovi_19, Rootkit7_19, SBlackberry_19, SV1_16, SoJo_16, Tubberson_16, TurboVicky_19, Typher_21, Zanella_19,

Summary by start number:

Start 1:

- Found in 10 of 54 (18.5%) of genes in pham
- Manual Annotations of this start: 9 of 38
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Austintatious_16 (BC3), Bioscum_16 (BC3), DaRealMyers_16 (BC1), Ididsumtinwong_16 (BC3), Lishka_16 (BC3), PapayaSalad_16 (BC3), Raleigh_16 (BC2), SV1_16 (BC1), SoJo_16 (BC1), Tubberson_16 (BC1),

Start 8:

- Found in 28 of 54 (51.9%) of genes in pham
- Manual Annotations of this start: 16 of 38
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Antuna_22 (GA), Appa_21 (GA), Blett_22 (GA), Bush_22 (GA), Carrillo_23 (GA), CookieDog_22 (GA), DelaGarza_20 (GF), Dropshot_21 (GA), Gingerbug_18 (GF), Guzman_23 (GA), Jakelyne_24 (GA), Lesiram_21 (GF), Losacky_23 (GA), Mariel_25 (GA), MenE_22 (GA), NCRodriguez_23 (GA), Parvarticeps_35 (UNK), PhillyJawn_22 (GA), Phingu_24 (GA), Phonegingi_21 (GA), Pickles13_21 (GA), ScoobySnack_20 (GA), Sweetums_22 (GF), Teng_22 (GF), Violeta_23 (GA), Warren_22 (GA), Winchester007_37 (GA), Wrackline_26 (GF),

Start 9:

- Found in 1 of 54 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 38
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chymera_17 (singleton),

Start 38:

- Found in 15 of 54 (27.8%) of genes in pham
- Manual Annotations of this start: 12 of 38
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alove_19 (EJ), AyoTeo_21 (EJ), Cicada_21 (EJ), Goodman_20 (EJ), Htur_19 (EJ), Jera_20 (EJ), Johann_20 (EJ), Labella_21 (EJ), PermaG_20 (EJ), Rasovi_19 (EJ), Rootkit7_19 (EJ), SBlackberry_19 (EJ), TurboVicky_19 (EJ), Typher_21 (EJ), Zanella_19 (EJ),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, EJ, GF, GA, UNK, BC1, BC2, BC3,

Info for manual annotations of cluster BC1:

- Start number 1 was manually annotated 3 times for cluster BC1.

Info for manual annotations of cluster BC2:

- Start number 1 was manually annotated 1 time for cluster BC2.

Info for manual annotations of cluster BC3:

- Start number 1 was manually annotated 5 times for cluster BC3.

Info for manual annotations of cluster EJ:

- Start number 38 was manually annotated 12 times for cluster EJ.

Info for manual annotations of cluster GA:

- Start number 8 was manually annotated 11 times for cluster GA.

Info for manual annotations of cluster GF:

- Start number 8 was manually annotated 5 times for cluster GF.

Gene Information:

Gene: Alove_19 Start: 13340, Stop: 15328, Start Num: 38

Candidate Starts for Alove_19:

(Start: 38 @13340 has 12 MA's), (43, 13379), (58, 13490), (61, 13505), (62, 13517), (85, 13709), (88, 13733), (105, 13916), (112, 13982), (128, 14078), (133, 14102), (149, 14189), (161, 14291), (164, 14315), (175, 14384), (181, 14417), (202, 14582), (214, 14615), (221, 14642), (224, 14660), (236, 14762), (237, 14774), (238, 14780), (249, 14861), (269, 15035), (275, 15101), (284, 15161), (285, 15170), (300, 15302),

Gene: Antuna_22 Start: 11505, Stop: 13703, Start Num: 8

Candidate Starts for Antuna_22:

(Start: 8 @11505 has 16 MA's), (16, 11580), (22, 11631), (26, 11658), (35, 11751), (39, 11808), (44, 11850), (47, 11883), (49, 11895), (55, 11946), (56, 11949), (58, 11958), (59, 11961), (63, 11997), (64, 12003), (65, 12006), (66, 12018), (67, 12027), (70, 12051), (83, 12150), (89, 12210), (91, 12249), (93, 12264), (97, 12321), (113, 12459), (117, 12489), (119, 12501), (123, 12525), (124, 12534), (129, 12555), (130, 12558), (132, 12570), (136, 12588), (141, 12630), (148, 12660), (166, 12801), (175, 12858), (185, 12924), (199, 12984), (200, 12993), (212, 13056), (227, 13122), (278, 13473), (283, 13497), (287, 13536), (292, 13557),

Gene: Appa_21 Start: 11367, Stop: 13565, Start Num: 8

Candidate Starts for Appa_21:

(Start: 8 @11367 has 16 MA's), (16, 11442), (22, 11493), (26, 11520), (35, 11613), (39, 11670), (44, 11712), (47, 11745), (49, 11757), (55, 11808), (56, 11811), (58, 11820), (59, 11823), (63, 11859), (64, 11865), (65, 11868), (66, 11880), (67, 11889), (70, 11913), (83, 12012), (89, 12072), (91, 12111), (93, 12126), (97, 12183), (113, 12321), (117, 12351), (119, 12363), (123, 12387), (124, 12396), (129, 12417), (130, 12420), (132, 12432), (136, 12450), (141, 12492), (148, 12522), (166, 12663), (175, 12720), (185, 12786), (199, 12846), (200, 12855), (212, 12918), (227, 12984), (240, 13017), (278, 13335), (283, 13359), (287, 13398), (292, 13419),

Gene: Austintatious_16 Start: 9780, Stop: 12197, Start Num: 1

Candidate Starts for Austintatious_16:

(Start: 1 @9780 has 9 MA's), (3, 9792), (5, 9846), (6, 9867), (27, 10041), (29, 10062), (34, 10119), (36, 10152), (46, 10254), (51, 10296), (58, 10338), (59, 10341), (60, 10353), (71, 10431), (78, 10494), (84, 10557), (86, 10575), (89, 10587), (93, 10641), (94, 10650), (96, 10695), (97, 10698), (106, 10779), (116, 10866), (117, 10869), (125, 10917), (128, 10935), (132, 10953), (135, 10965), (155, 11076), (159, 11133), (162, 11169), (165, 11190), (171, 11223), (172, 11229), (177, 11262), (181, 11283), (185, 11316), (190, 11340), (226, 11538), (260, 11796), (261, 11817), (265, 11841), (267, 11862), (273, 11916), (280, 11982), (283, 11994), (288, 12039),

Gene: AyoTeo_21 Start: 13467, Stop: 15455, Start Num: 38

Candidate Starts for AyoTeo_21:

(Start: 38 @13467 has 12 MA's), (43, 13506), (58, 13617), (61, 13632), (62, 13644), (85, 13836), (88, 13860), (92, 13902), (105, 14043), (112, 14109), (128, 14205), (149, 14316), (161, 14418), (164, 14442), (175, 14511), (181, 14544), (202, 14709), (214, 14742), (220, 14757), (221, 14769), (224, 14787), (237, 14901), (238, 14907), (269, 15162), (275, 15228), (284, 15288), (300, 15429),

Gene: Bioscum_16 Start: 9816, Stop: 12233, Start Num: 1

Candidate Starts for Bioscum_16:

(Start: 1 @9816 has 9 MA's), (3, 9828), (5, 9882), (6, 9903), (27, 10077), (29, 10098), (34, 10155), (36, 10188), (46, 10290), (51, 10332), (58, 10374), (59, 10377), (60, 10389), (71, 10467), (78, 10530), (84, 10593), (86, 10611), (89, 10623), (93, 10677), (94, 10686), (96, 10731), (97, 10734), (106, 10815), (116, 10902), (117, 10905), (125, 10953), (128, 10971), (132, 10989), (135, 11001), (155, 11112), (159, 11169), (162, 11205), (165, 11226), (171, 11259), (172, 11265), (181, 11319), (185, 11352), (190, 11376), (226, 11574), (260, 11832), (261, 11853), (265, 11877), (267, 11898), (273, 11952), (280, 12018), (283, 12030), (288, 12075),

Gene: Blett_22 Start: 11520, Stop: 13718, Start Num: 8

Candidate Starts for Blett_22:

(Start: 8 @11520 has 16 MA's), (16, 11595), (22, 11646), (26, 11673), (35, 11766), (39, 11823), (44, 11865), (47, 11898), (49, 11910), (55, 11961), (56, 11964), (58, 11973), (59, 11976), (63, 12012), (64, 12018), (65, 12021), (66, 12033), (67, 12042), (70, 12066), (83, 12165), (89, 12225), (91, 12264), (93, 12279), (97, 12336), (113, 12474), (117, 12504), (119, 12516), (123, 12540), (124, 12549), (129, 12570), (130, 12573), (132, 12585), (136, 12603), (141, 12645), (148, 12675), (164, 12804), (175,

12873), (185, 12939), (199, 12999), (200, 13008), (212, 13071), (227, 13137), (240, 13170), (278, 13488), (283, 13512), (287, 13551), (292, 13572),

Gene: Bush_22 Start: 11501, Stop: 13699, Start Num: 8

Candidate Starts for Bush_22:

(Start: 8 @11501 has 16 MA's), (16, 11576), (22, 11627), (26, 11654), (35, 11747), (39, 11804), (44, 11846), (47, 11879), (49, 11891), (55, 11942), (56, 11945), (58, 11954), (59, 11957), (63, 11993), (64, 11999), (65, 12002), (66, 12014), (67, 12023), (70, 12047), (83, 12146), (89, 12206), (91, 12245), (93, 12260), (106, 12398), (107, 12404), (113, 12455), (117, 12485), (119, 12497), (123, 12521), (124, 12530), (129, 12551), (130, 12554), (132, 12566), (136, 12584), (141, 12626), (148, 12656), (166, 12797), (175, 12854), (185, 12920), (199, 12980), (200, 12989), (212, 13052), (227, 13118), (240, 13151), (278, 13469), (283, 13493), (287, 13532), (292, 13553),

Gene: Carrillo_23 Start: 11474, Stop: 13672, Start Num: 8

Candidate Starts for Carrillo_23:

(Start: 8 @11474 has 16 MA's), (16, 11549), (22, 11600), (26, 11627), (35, 11720), (39, 11777), (44, 11819), (47, 11852), (49, 11864), (55, 11915), (56, 11918), (58, 11927), (59, 11930), (63, 11966), (64, 11972), (65, 11975), (66, 11987), (67, 11996), (70, 12020), (83, 12119), (89, 12179), (91, 12218), (93, 12233), (97, 12290), (113, 12428), (117, 12458), (119, 12470), (123, 12494), (124, 12503), (129, 12524), (130, 12527), (132, 12539), (136, 12557), (141, 12599), (148, 12629), (166, 12770), (175, 12827), (185, 12893), (199, 12953), (200, 12962), (212, 13025), (227, 13091), (249, 13172), (278, 13442), (283, 13466), (287, 13505), (292, 13526),

Gene: Chymera_17 Start: 10951, Stop: 12987, Start Num: 9

Candidate Starts for Chymera_17:

(4, 10852), (Start: 9 @10951 has 1 MA's), (14, 10987), (25, 11086), (28, 11095), (29, 11113), (36, 11203), (42, 11260), (43, 11272), (46, 11305), (47, 11314), (51, 11347), (69, 11470), (70, 11482), (72, 11491), (73, 11494), (79, 11554), (80, 11557), (82, 11569), (93, 11695), (103, 11803), (104, 11821), (108, 11854), (111, 11887), (118, 11929), (122, 11953), (125, 11965), (127, 11980), (137, 12019), (152, 12061), (153, 12064), (182, 12103), (184, 12124), (186, 12136), (187, 12139), (195, 12208), (243, 12475), (257, 12574), (267, 12661), (270, 12691), (276, 12763), (289, 12841), (293, 12883), (294, 12886),

Gene: Cicada_21 Start: 13577, Stop: 15565, Start Num: 38

Candidate Starts for Cicada_21:

(Start: 38 @13577 has 12 MA's), (43, 13616), (58, 13727), (61, 13742), (62, 13754), (85, 13946), (88, 13970), (92, 14012), (101, 14102), (105, 14153), (112, 14219), (125, 14300), (128, 14315), (133, 14339), (143, 14402), (149, 14426), (161, 14528), (164, 14552), (175, 14621), (181, 14654), (214, 14852), (221, 14879), (224, 14897), (230, 14951), (236, 14999), (237, 15011), (238, 15017), (247, 15083), (248, 15095), (269, 15272), (272, 15308), (275, 15338), (284, 15398), (300, 15539),

Gene: CookieDog_22 Start: 11501, Stop: 13699, Start Num: 8

Candidate Starts for CookieDog_22:

(Start: 8 @11501 has 16 MA's), (16, 11576), (22, 11627), (26, 11654), (35, 11747), (44, 11846), (47, 11879), (49, 11891), (55, 11942), (56, 11945), (58, 11954), (59, 11957), (63, 11993), (64, 11999), (65, 12002), (66, 12014), (67, 12023), (70, 12047), (83, 12146), (89, 12206), (91, 12245), (93, 12260), (106, 12398), (107, 12404), (113, 12455), (117, 12485), (119, 12497), (123, 12521), (124, 12530), (129, 12551), (130, 12554), (132, 12566), (136, 12584), (141, 12626), (148, 12656), (166, 12797), (175, 12854), (185, 12920), (199, 12980), (200, 12989), (212, 13052), (227, 13118), (249, 13199), (278, 13469), (283, 13493), (287, 13532), (292, 13553),

Gene: DaRealMyers_16 Start: 10050, Stop: 12278, Start Num: 1

Candidate Starts for DaRealMyers_16:

(Start: 1 @10050 has 9 MA's), (2, 10056), (3, 10062), (13, 10239), (15, 10260), (27, 10377), (36, 10488), (42, 10548), (58, 10674), (68, 10743), (75, 10806), (80, 10839), (87, 10914), (93, 10977), (98, 11043), (106, 11115), (115, 11193), (125, 11253), (144, 11319), (156, 11373), (159, 11382), (185, 11427), (189, 11445), (190, 11451), (218, 11586), (231, 11685), (239, 11742), (248, 11808), (250, 11820), (261, 11928), (265, 11952), (273, 12027), (283, 12108), (291, 12159), (297, 12189),

Gene: DelaGarza_20 Start: 12031, Stop: 14265, Start Num: 8

Candidate Starts for DelaGarza_20:

(Start: 8 @12031 has 16 MA's), (10, 12037), (17, 12118), (18, 12130), (20, 12148), (23, 12157), (29, 12199), (30, 12205), (44, 12367), (45, 12382), (48, 12403), (49, 12412), (58, 12475), (69, 12556), (70, 12568), (76, 12616), (78, 12634), (83, 12667), (89, 12727), (93, 12781), (97, 12838), (113, 12976), (117, 13006), (119, 13018), (126, 13063), (139, 13132), (147, 13171), (151, 13195), (157, 13216), (161, 13282), (176, 13372), (179, 13381), (180, 13384), (188, 13435), (221, 13579), (232, 13675), (237, 13711), (241, 13732), (247, 13783), (249, 13798), (268, 13963), (269, 13972), (272, 14008), (278, 14065), (282, 14083), (284, 14098), (285, 14107),

Gene: Dropshot_21 Start: 11367, Stop: 13565, Start Num: 8

Candidate Starts for Dropshot_21:

(Start: 8 @11367 has 16 MA's), (16, 11442), (22, 11493), (26, 11520), (35, 11613), (39, 11670), (44, 11712), (47, 11745), (49, 11757), (55, 11808), (56, 11811), (58, 11820), (59, 11823), (63, 11859), (64, 11865), (65, 11868), (66, 11880), (67, 11889), (70, 11913), (83, 12012), (89, 12072), (91, 12111), (93, 12126), (97, 12183), (113, 12321), (117, 12351), (119, 12363), (123, 12387), (124, 12396), (129, 12417), (130, 12420), (132, 12432), (136, 12450), (141, 12492), (148, 12522), (166, 12663), (175, 12720), (185, 12786), (199, 12846), (200, 12855), (212, 12918), (227, 12984), (240, 13017), (278, 13335), (283, 13359), (287, 13398), (292, 13419),

Gene: Gingerbug_18 Start: 11192, Stop: 13474, Start Num: 8

Candidate Starts for Gingerbug_18:

(Start: 8 @11192 has 16 MA's), (17, 11273), (18, 11285), (33, 11393), (37, 11471), (39, 11480), (41, 11501), (44, 11522), (45, 11537), (48, 11558), (58, 11630), (60, 11645), (69, 11711), (71, 11726), (73, 11735), (76, 11771), (78, 11789), (83, 11822), (89, 11882), (93, 11936), (96, 11990), (102, 12023), (107, 12080), (114, 12140), (117, 12161), (119, 12173), (120, 12185), (128, 12224), (130, 12230), (134, 12251), (136, 12260), (141, 12302), (144, 12314), (148, 12332), (160, 12428), (162, 12449), (166, 12473), (167, 12476), (170, 12497), (176, 12533), (185, 12596), (190, 12620), (208, 12752), (214, 12761), (232, 12884), (237, 12920), (245, 12983), (252, 13034), (254, 13046), (258, 13091), (270, 13190), (272, 13217), (284, 13307), (295, 13376),

Gene: Goodman_20 Start: 13490, Stop: 15478, Start Num: 38

Candidate Starts for Goodman_20:

(31, 13391), (Start: 38 @13490 has 12 MA's), (58, 13640), (61, 13655), (62, 13667), (85, 13859), (88, 13883), (92, 13925), (101, 14015), (105, 14066), (112, 14132), (125, 14213), (128, 14228), (133, 14252), (149, 14339), (161, 14441), (164, 14465), (175, 14534), (181, 14567), (214, 14765), (221, 14792), (224, 14810), (230, 14864), (236, 14912), (237, 14924), (238, 14930), (247, 14996), (248, 15008), (249, 15011), (269, 15185), (272, 15221), (275, 15251), (284, 15311), (300, 15452),

Gene: Guzman_23 Start: 11782, Stop: 13980, Start Num: 8

Candidate Starts for Guzman_23:

(Start: 8 @11782 has 16 MA's), (16, 11857), (22, 11908), (26, 11935), (35, 12028), (39, 12085), (44, 12127), (47, 12160), (49, 12172), (55, 12223), (56, 12226), (58, 12235), (59, 12238), (63, 12274), (64, 12280), (65, 12283), (66, 12295), (67, 12304), (70, 12328), (83, 12427), (89, 12487), (91, 12526), (93, 12541), (97, 12598), (113, 12736), (117, 12766), (119, 12778), (123, 12802), (124, 12811), (129, 12832), (130, 12835), (132, 12847), (136, 12865), (141, 12907), (148, 12937), (166, 13078), (175, 13135), (185, 13201), (199, 13261), (200, 13270), (212, 13333), (227, 13399), (249, 13480), (272,

13693), (278, 13750), (283, 13774), (287, 13813), (292, 13834),

Gene: Htur_19 Start: 13514, Stop: 15508, Start Num: 38

Candidate Starts for Htur_19:

(Start: 38 @13514 has 12 MA's), (43, 13553), (58, 13664), (61, 13679), (62, 13691), (77, 13805), (85, 13883), (88, 13907), (101, 14039), (105, 14090), (112, 14156), (128, 14252), (149, 14363), (164, 14489), (173, 14549), (178, 14573), (181, 14591), (185, 14624), (203, 14771), (214, 14789), (223, 14822), (225, 14837), (231, 14903), (252, 15062), (253, 15068), (254, 15074), (261, 15152), (262, 15167), (269, 15209), (275, 15275), (285, 15344), (300, 15482),

Gene: Ididsumtinwong_16 Start: 9816, Stop: 12233, Start Num: 1

Candidate Starts for Ididsumtinwong_16:

(Start: 1 @9816 has 9 MA's), (3, 9828), (5, 9882), (6, 9903), (27, 10077), (29, 10098), (34, 10155), (36, 10188), (46, 10290), (51, 10332), (58, 10374), (59, 10377), (60, 10389), (71, 10467), (78, 10530), (84, 10593), (86, 10611), (89, 10623), (93, 10677), (94, 10686), (96, 10731), (97, 10734), (106, 10815), (116, 10902), (117, 10905), (125, 10953), (128, 10971), (132, 10989), (135, 11001), (155, 11112), (159, 11169), (162, 11205), (165, 11226), (171, 11259), (172, 11265), (181, 11319), (185, 11352), (190, 11376), (226, 11574), (260, 11832), (261, 11853), (265, 11877), (267, 11898), (273, 11952), (280, 12018), (283, 12030), (288, 12075),

Gene: Jakelyne_24 Start: 11520, Stop: 13781, Start Num: 8

Candidate Starts for Jakelyne_24:

(Start: 8 @11520 has 16 MA's), (16, 11595), (22, 11646), (26, 11673), (35, 11766), (39, 11823), (44, 11865), (47, 11898), (49, 11910), (55, 11961), (56, 11964), (58, 11973), (59, 11976), (63, 12012), (64, 12018), (65, 12021), (66, 12033), (67, 12042), (70, 12066), (83, 12165), (89, 12225), (91, 12264), (93, 12279), (97, 12336), (113, 12474), (117, 12504), (119, 12516), (123, 12540), (124, 12549), (129, 12570), (130, 12573), (132, 12585), (136, 12603), (141, 12645), (148, 12675), (164, 12804), (175, 12873), (181, 12906), (185, 12939), (199, 12999), (200, 13008), (206, 13038), (217, 13098), (240, 13170), (249, 13218), (253, 13251), (258, 13302), (261, 13335), (263, 13368), (264, 13371), (270, 13446), (277, 13545), (278, 13551), (283, 13575), (287, 13614), (292, 13635),

Gene: Jera_20 Start: 12587, Stop: 14575, Start Num: 38

Candidate Starts for Jera_20:

(Start: 38 @12587 has 12 MA's), (43, 12626), (58, 12737), (61, 12752), (62, 12764), (85, 12956), (88, 12980), (105, 13163), (112, 13229), (128, 13325), (133, 13349), (149, 13436), (161, 13538), (164, 13562), (175, 13631), (181, 13664), (185, 13697), (202, 13829), (221, 13889), (226, 13940), (236, 14009), (237, 14021), (238, 14027), (269, 14282), (275, 14348), (284, 14408), (300, 14549),

Gene: Johann_20 Start: 13490, Stop: 15478, Start Num: 38

Candidate Starts for Johann_20:

(31, 13391), (Start: 38 @13490 has 12 MA's), (58, 13640), (61, 13655), (62, 13667), (85, 13859), (88, 13883), (92, 13925), (101, 14015), (105, 14066), (112, 14132), (125, 14213), (128, 14228), (133, 14252), (149, 14339), (161, 14441), (164, 14465), (175, 14534), (181, 14567), (214, 14765), (221, 14792), (224, 14810), (230, 14864), (236, 14912), (237, 14924), (238, 14930), (247, 14996), (248, 15008), (249, 15011), (269, 15185), (272, 15221), (275, 15251), (284, 15311), (300, 15452),

Gene: Labella_21 Start: 13470, Stop: 15458, Start Num: 38

Candidate Starts for Labella_21:

(Start: 38 @13470 has 12 MA's), (43, 13509), (58, 13620), (61, 13635), (62, 13647), (85, 13839), (88, 13863), (92, 13905), (105, 14046), (112, 14112), (128, 14208), (149, 14319), (161, 14421), (164, 14445), (175, 14514), (181, 14547), (202, 14712), (214, 14745), (220, 14760), (221, 14772), (224, 14790), (237, 14904), (238, 14910), (269, 15165), (275, 15231), (284, 15291), (300, 15432),

Gene: Lesiram_21 Start: 12001, Stop: 14235, Start Num: 8

Candidate Starts for Lesiram_21:

(Start: 8 @12001 has 16 MA's), (10, 12007), (17, 12088), (18, 12100), (20, 12118), (23, 12127), (29, 12169), (30, 12175), (44, 12337), (45, 12352), (48, 12373), (49, 12382), (58, 12445), (69, 12526), (70, 12538), (76, 12586), (78, 12604), (83, 12637), (89, 12697), (93, 12751), (97, 12808), (113, 12946), (117, 12976), (119, 12988), (126, 13033), (139, 13102), (147, 13141), (151, 13165), (157, 13186), (161, 13252), (176, 13342), (180, 13354), (188, 13405), (192, 13438), (232, 13645), (237, 13681), (241, 13702), (247, 13753), (249, 13768), (268, 13933), (269, 13942), (272, 13978), (278, 14035), (282, 14053), (284, 14068), (285, 14077),

Gene: Lishka_16 Start: 9780, Stop: 12197, Start Num: 1

Candidate Starts for Lishka_16:

(Start: 1 @9780 has 9 MA's), (3, 9792), (5, 9846), (6, 9867), (27, 10041), (29, 10062), (34, 10119), (36, 10152), (46, 10254), (51, 10296), (58, 10338), (59, 10341), (60, 10353), (71, 10431), (78, 10494), (84, 10557), (86, 10575), (89, 10587), (93, 10641), (94, 10650), (96, 10695), (97, 10698), (106, 10779), (116, 10866), (117, 10869), (125, 10917), (128, 10935), (132, 10953), (135, 10965), (155, 11076), (159, 11133), (162, 11169), (165, 11190), (171, 11223), (172, 11229), (177, 11262), (181, 11283), (185, 11316), (190, 11340), (226, 11538), (260, 11796), (261, 11817), (265, 11841), (267, 11862), (273, 11916), (280, 11982), (283, 11994), (288, 12039),

Gene: Losacky_23 Start: 11647, Stop: 13845, Start Num: 8

Candidate Starts for Losacky_23:

(Start: 8 @11647 has 16 MA's), (16, 11722), (22, 11773), (26, 11800), (35, 11893), (39, 11950), (44, 11992), (47, 12025), (49, 12037), (55, 12088), (56, 12091), (58, 12100), (59, 12103), (63, 12139), (64, 12145), (65, 12148), (66, 12160), (67, 12169), (70, 12193), (83, 12292), (89, 12352), (91, 12391), (93, 12406), (97, 12463), (113, 12601), (117, 12631), (119, 12643), (123, 12667), (124, 12676), (129, 12697), (130, 12700), (132, 12712), (136, 12730), (141, 12772), (148, 12802), (166, 12943), (175, 13000), (185, 13066), (199, 13126), (200, 13135), (212, 13198), (227, 13264), (278, 13615), (283, 13639), (287, 13678), (292, 13699),

Gene: Mariel_25 Start: 11675, Stop: 14137, Start Num: 8

Candidate Starts for Mariel_25:

(Start: 8 @11675 has 16 MA's), (16, 11750), (19, 11780), (26, 11828), (33, 11891), (35, 11921), (36, 11942), (44, 12020), (47, 12053), (49, 12065), (55, 12116), (56, 12119), (59, 12131), (63, 12167), (64, 12173), (65, 12176), (66, 12188), (67, 12197), (70, 12221), (81, 12299), (83, 12320), (89, 12380), (91, 12419), (93, 12434), (97, 12491), (100, 12509), (106, 12572), (107, 12578), (113, 12629), (117, 12659), (119, 12671), (123, 12695), (124, 12704), (129, 12725), (130, 12728), (132, 12740), (141, 12800), (150, 12839), (151, 12848), (156, 12866), (162, 12947), (163, 12956), (167, 12974), (196, 13190), (201, 13223), (211, 13298), (219, 13400), (246, 13616), (259, 13724), (272, 13850), (278, 13907), (283, 13931), (287, 13970),

Gene: MenE_22 Start: 11635, Stop: 13833, Start Num: 8

Candidate Starts for MenE_22:

(Start: 8 @11635 has 16 MA's), (16, 11710), (22, 11761), (26, 11788), (35, 11881), (39, 11938), (44, 11980), (47, 12013), (49, 12025), (55, 12076), (56, 12079), (58, 12088), (59, 12091), (63, 12127), (64, 12133), (65, 12136), (66, 12148), (67, 12157), (70, 12181), (83, 12280), (89, 12340), (91, 12379), (93, 12394), (97, 12451), (113, 12589), (117, 12619), (119, 12631), (123, 12655), (124, 12664), (129, 12685), (130, 12688), (132, 12700), (136, 12718), (141, 12760), (148, 12790), (166, 12931), (175, 12988), (185, 13054), (199, 13114), (200, 13123), (212, 13186), (227, 13252), (278, 13603), (283, 13627), (287, 13666), (292, 13687),

Gene: NCRodriguez_23 Start: 11633, Stop: 13894, Start Num: 8

Candidate Starts for NCRodriguez_23:

(Start: 8 @11633 has 16 MA's), (16, 11708), (22, 11759), (26, 11786), (35, 11879), (39, 11936), (44, 11978), (47, 12011), (49, 12023), (55, 12074), (56, 12077), (58, 12086), (59, 12089), (63, 12125), (64, 12131), (65, 12134), (66, 12146), (67, 12155), (70, 12179), (83, 12278), (89, 12338), (91, 12377), (93, 12392), (107, 12536), (113, 12587), (117, 12617), (119, 12629), (123, 12653), (124, 12662), (129, 12683), (130, 12686), (132, 12698), (136, 12716), (141, 12758), (148, 12788), (164, 12917), (175, 12986), (181, 13019), (185, 13052), (199, 13112), (200, 13121), (206, 13151), (217, 13211), (240, 13283), (249, 13331), (253, 13364), (258, 13415), (261, 13448), (263, 13481), (264, 13484), (270, 13559), (277, 13658), (278, 13664), (283, 13688), (287, 13727), (292, 13748),

Gene: PapayaSalad_16 Start: 9786, Stop: 12203, Start Num: 1

Candidate Starts for PapayaSalad_16:

(Start: 1 @9786 has 9 MA's), (3, 9798), (5, 9852), (6, 9873), (27, 10047), (29, 10068), (34, 10125), (46, 10260), (51, 10302), (58, 10344), (59, 10347), (60, 10359), (71, 10437), (78, 10500), (84, 10563), (86, 10581), (89, 10593), (93, 10647), (94, 10656), (96, 10701), (97, 10704), (106, 10785), (116, 10872), (117, 10875), (125, 10923), (128, 10941), (132, 10959), (135, 10971), (155, 11082), (159, 11139), (162, 11175), (165, 11196), (171, 11229), (172, 11235), (177, 11268), (181, 11289), (185, 11322), (190, 11346), (198, 11421), (261, 11823), (265, 11847), (267, 11868), (273, 11922), (279, 11985), (283, 12000), (288, 12045),

Gene: Parvaparticeps_35 Start: 26694, Stop: 24370, Start Num: 8

Candidate Starts for Parvaparticeps_35:

(Start: 8 @26694 has 16 MA's), (21, 26571), (22, 26568), (29, 26517), (32, 26490), (33, 26478), (40, 26379), (41, 26370), (44, 26349), (49, 26304), (58, 26241), (59, 26238), (65, 26193), (73, 26136), (74, 26118), (78, 26082), (84, 26019), (89, 25989), (93, 25935), (121, 25680), (131, 25638), (132, 25629), (142, 25566), (144, 25557), (145, 25551), (146, 25548), (158, 25494), (163, 25401), (170, 25362), (172, 25350), (175, 25329), (184, 25269), (188, 25248), (194, 25185), (197, 25158), (210, 25074), (215, 25020), (228, 24954), (259, 24765), (266, 24702), (268, 24687), (270, 24669), (271, 24666), (272, 24642), (280, 24573), (284, 24552), (294, 24468), (298, 24435), (299, 24402),

Gene: PermaG_20 Start: 13551, Stop: 15539, Start Num: 38

Candidate Starts for PermaG_20:

(Start: 38 @13551 has 12 MA's), (43, 13590), (58, 13701), (61, 13716), (62, 13728), (85, 13920), (88, 13944), (92, 13986), (101, 14076), (102, 14085), (105, 14127), (112, 14193), (125, 14274), (128, 14289), (133, 14313), (145, 14385), (149, 14400), (161, 14502), (164, 14526), (175, 14595), (181, 14628), (191, 14694), (214, 14826), (221, 14853), (230, 14925), (233, 14958), (237, 14985), (238, 14991), (242, 15024), (269, 15246), (272, 15282), (275, 15312), (284, 15372), (300, 15513),

Gene: PhillyJawn_22 Start: 11367, Stop: 13565, Start Num: 8

Candidate Starts for PhillyJawn_22:

(Start: 8 @11367 has 16 MA's), (16, 11442), (22, 11493), (26, 11520), (35, 11613), (39, 11670), (44, 11712), (47, 11745), (49, 11757), (55, 11808), (56, 11811), (58, 11820), (59, 11823), (63, 11859), (64, 11865), (65, 11868), (66, 11880), (67, 11889), (70, 11913), (83, 12012), (89, 12072), (91, 12111), (93, 12126), (97, 12183), (113, 12321), (117, 12351), (119, 12363), (123, 12387), (124, 12396), (129, 12417), (130, 12420), (132, 12432), (136, 12450), (166, 12663), (175, 12720), (185, 12786), (199, 12846), (200, 12855), (212, 12918), (227, 12984), (240, 13017), (278, 13335), (283, 13359), (287, 13398), (292, 13419),

Gene: Phingu_24 Start: 11523, Stop: 13784, Start Num: 8

Candidate Starts for Phingu_24:

(Start: 8 @11523 has 16 MA's), (16, 11598), (22, 11649), (26, 11676), (35, 11769), (39, 11826), (44, 11868), (47, 11901), (49, 11913), (55, 11964), (56, 11967), (58, 11976), (59, 11979), (63, 12015), (64, 12021), (65, 12024), (66, 12036), (67, 12045), (70, 12069), (83, 12168), (89, 12228), (91, 12267), (93, 12282), (97, 12339), (113, 12477), (117, 12507), (119, 12519), (123, 12543), (124, 12552), (129,

12573), (130, 12576), (132, 12588), (136, 12606), (141, 12648), (148, 12678), (167, 12822), (175, 12876), (185, 12942), (199, 13002), (200, 13011), (212, 13074), (217, 13101), (240, 13173), (249, 13221), (253, 13254), (258, 13305), (261, 13338), (263, 13371), (264, 13374), (270, 13449), (277, 13548), (278, 13554), (283, 13578), (287, 13617), (292, 13638),

Gene: Phonegingi_21 Start: 11365, Stop: 13626, Start Num: 8

Candidate Starts for Phonegingi_21:

(Start: 8 @11365 has 16 MA's), (16, 11440), (22, 11491), (26, 11518), (35, 11611), (40, 11680), (44, 11710), (47, 11743), (49, 11755), (55, 11806), (56, 11809), (58, 11818), (59, 11821), (63, 11857), (64, 11863), (65, 11866), (66, 11878), (67, 11887), (83, 12010), (89, 12070), (91, 12109), (93, 12124), (97, 12181), (107, 12268), (113, 12319), (117, 12349), (119, 12361), (123, 12385), (124, 12394), (126, 12406), (129, 12415), (130, 12418), (132, 12430), (140, 12487), (141, 12490), (148, 12520), (164, 12649), (175, 12718), (181, 12751), (185, 12784), (188, 12799), (199, 12844), (200, 12853), (217, 12943), (240, 13015), (249, 13063), (253, 13096), (258, 13147), (261, 13180), (263, 13213), (264, 13216), (270, 13291), (278, 13396), (283, 13420), (287, 13459),

Gene: Pickles13_21 Start: 11528, Stop: 13990, Start Num: 8

Candidate Starts for Pickles13_21:

(Start: 8 @11528 has 16 MA's), (16, 11603), (19, 11633), (24, 11666), (26, 11681), (33, 11744), (35, 11774), (36, 11795), (39, 11831), (44, 11873), (47, 11906), (49, 11918), (55, 11969), (56, 11972), (59, 11984), (63, 12020), (64, 12026), (65, 12029), (66, 12041), (67, 12050), (70, 12074), (81, 12152), (89, 12233), (91, 12272), (93, 12287), (95, 12299), (97, 12344), (100, 12362), (106, 12425), (107, 12431), (113, 12482), (117, 12512), (119, 12524), (123, 12548), (124, 12557), (129, 12578), (130, 12581), (132, 12593), (136, 12611), (137, 12623), (141, 12653), (151, 12701), (156, 12719), (162, 12800), (163, 12809), (167, 12827), (196, 13043), (201, 13076), (211, 13151), (219, 13253), (222, 13271), (226, 13322), (229, 13337), (234, 13385), (246, 13469), (259, 13577), (278, 13760), (283, 13784), (287, 13823), (290, 13838), (296, 13886), (301, 13964),

Gene: Raleigh_16 Start: 10247, Stop: 12655, Start Num: 1

Candidate Starts for Raleigh_16:

(Start: 1 @10247 has 9 MA's), (5, 10313), (6, 10334), (7, 10355), (11, 10412), (27, 10508), (31, 10544), (34, 10586), (47, 10730), (50, 10760), (51, 10763), (53, 10775), (54, 10784), (58, 10805), (63, 10844), (70, 10895), (78, 10961), (80, 10970), (82, 10982), (89, 11054), (93, 11108), (117, 11336), (125, 11384), (129, 11405), (169, 11675), (177, 11729), (178, 11732), (181, 11750), (183, 11765), (185, 11783), (190, 11807), (191, 11816), (193, 11837), (198, 11882), (213, 11933), (231, 12041), (250, 12176), (256, 12230), (258, 12251), (261, 12284), (267, 12329), (273, 12383), (283, 12464), (286, 12491), (291, 12515),

Gene: Rasovi_19 Start: 13514, Stop: 15508, Start Num: 38

Candidate Starts for Rasovi_19:

(Start: 38 @13514 has 12 MA's), (43, 13553), (58, 13664), (61, 13679), (62, 13691), (77, 13805), (85, 13883), (88, 13907), (101, 14039), (105, 14090), (112, 14156), (128, 14252), (149, 14363), (164, 14489), (173, 14549), (178, 14573), (181, 14591), (185, 14624), (203, 14771), (214, 14789), (223, 14822), (225, 14837), (231, 14903), (252, 15062), (253, 15068), (254, 15074), (261, 15152), (262, 15167), (269, 15209), (275, 15275), (285, 15344), (300, 15482),

Gene: Rootkit7_19 Start: 13340, Stop: 15328, Start Num: 38

Candidate Starts for Rootkit7_19:

(Start: 38 @13340 has 12 MA's), (43, 13379), (58, 13490), (61, 13505), (62, 13517), (85, 13709), (88, 13733), (105, 13916), (112, 13982), (128, 14078), (133, 14102), (149, 14189), (161, 14291), (164, 14315), (175, 14384), (181, 14417), (202, 14582), (214, 14615), (221, 14642), (224, 14660), (236, 14762), (237, 14774), (238, 14780), (249, 14861), (269, 15035), (275, 15101), (284, 15161), (285, 15170), (300, 15302),

Gene: SBlackberry_19 Start: 13346, Stop: 15334, Start Num: 38

Candidate Starts for SBlackberry_19:

(Start: 38 @13346 has 12 MA's), (43, 13385), (58, 13496), (61, 13511), (62, 13523), (85, 13715), (88, 13739), (105, 13922), (112, 13988), (128, 14084), (133, 14108), (149, 14195), (161, 14297), (164, 14321), (175, 14390), (181, 14423), (202, 14588), (214, 14621), (221, 14648), (224, 14666), (236, 14768), (237, 14780), (238, 14786), (249, 14867), (269, 15041), (275, 15107), (284, 15167), (285, 15176), (300, 15308),

Gene: SV1_16 Start: 10022, Stop: 12439, Start Num: 1

Candidate Starts for SV1_16:

(Start: 1 @10022 has 9 MA's), (3, 10034), (5, 10088), (6, 10109), (27, 10283), (29, 10304), (33, 10343), (36, 10394), (46, 10496), (51, 10538), (57, 10577), (58, 10580), (59, 10583), (71, 10673), (78, 10736), (84, 10799), (86, 10817), (89, 10829), (93, 10883), (97, 10940), (106, 11021), (116, 11108), (117, 11111), (125, 11159), (128, 11177), (135, 11207), (165, 11432), (172, 11471), (174, 11486), (181, 11525), (185, 11558), (190, 11582), (213, 11708), (226, 11780), (255, 12002), (260, 12038), (261, 12059), (265, 12083), (267, 12104), (271, 12131), (272, 12155), (273, 12158), (279, 12221), (280, 12224), (283, 12236), (288, 12281),

Gene: ScoobySnack_20 Start: 11232, Stop: 13694, Start Num: 8

Candidate Starts for ScoobySnack_20:

(Start: 8 @11232 has 16 MA's), (16, 11307), (22, 11358), (26, 11385), (36, 11499), (44, 11577), (47, 11610), (49, 11622), (55, 11673), (56, 11676), (58, 11685), (59, 11688), (63, 11724), (64, 11730), (65, 11733), (66, 11745), (67, 11754), (70, 11778), (83, 11877), (89, 11937), (91, 11976), (93, 11991), (113, 12186), (117, 12216), (119, 12228), (123, 12252), (124, 12261), (128, 12279), (129, 12282), (130, 12285), (132, 12297), (136, 12315), (137, 12327), (151, 12405), (156, 12423), (163, 12513), (167, 12531), (187, 12663), (196, 12747), (201, 12780), (206, 12828), (219, 12957), (235, 13092), (246, 13173), (253, 13227), (257, 13266), (259, 13281), (272, 13407), (278, 13464), (283, 13488), (285, 13506),

Gene: SoJo_16 Start: 10050, Stop: 12278, Start Num: 1

Candidate Starts for SoJo_16:

(Start: 1 @10050 has 9 MA's), (2, 10056), (3, 10062), (13, 10239), (15, 10260), (27, 10377), (36, 10488), (42, 10548), (58, 10674), (68, 10743), (80, 10839), (87, 10914), (93, 10977), (98, 11043), (106, 11115), (115, 11193), (125, 11253), (144, 11319), (156, 11373), (159, 11382), (185, 11427), (189, 11445), (190, 11451), (218, 11586), (231, 11685), (239, 11742), (248, 11808), (250, 11820), (261, 11928), (265, 11952), (273, 12027), (283, 12108), (291, 12159), (297, 12189),

Gene: Sweetums_22 Start: 12109, Stop: 14346, Start Num: 8

Candidate Starts for Sweetums_22:

(Start: 8 @12109 has 16 MA's), (10, 12115), (11, 12133), (12, 12139), (29, 12280), (30, 12286), (33, 12319), (39, 12406), (44, 12448), (45, 12463), (48, 12484), (49, 12493), (58, 12556), (69, 12637), (70, 12649), (76, 12697), (78, 12715), (83, 12748), (89, 12808), (93, 12862), (97, 12919), (113, 13057), (114, 13066), (117, 13087), (126, 13144), (147, 13252), (151, 13276), (157, 13297), (161, 13363), (176, 13453), (179, 13462), (180, 13465), (188, 13516), (221, 13660), (232, 13756), (237, 13792), (241, 13813), (247, 13864), (249, 13879), (268, 14044), (269, 14053), (272, 14089), (278, 14146), (282, 14164), (284, 14179), (285, 14188),

Gene: Teng_22 Start: 12028, Stop: 14262, Start Num: 8

Candidate Starts for Teng_22:

(Start: 8 @12028 has 16 MA's), (10, 12034), (17, 12115), (18, 12127), (20, 12145), (23, 12154), (29, 12196), (30, 12202), (44, 12364), (45, 12379), (48, 12400), (49, 12409), (58, 12472), (69, 12553), (70, 12565), (76, 12613), (78, 12631), (83, 12664), (89, 12724), (93, 12778), (97, 12835), (113, 12973),

(117, 13003), (119, 13015), (139, 13129), (147, 13168), (151, 13192), (157, 13213), (161, 13279), (176, 13369), (180, 13381), (188, 13432), (237, 13708), (241, 13729), (247, 13780), (249, 13795), (268, 13960), (269, 13969), (272, 14005), (278, 14062), (282, 14080), (284, 14095), (285, 14104),

Gene: Tubberson_16 Start: 10050, Stop: 12278, Start Num: 1

Candidate Starts for Tubberson_16:

(Start: 1 @10050 has 9 MA's), (2, 10056), (3, 10062), (13, 10239), (15, 10260), (27, 10377), (36, 10488), (42, 10548), (58, 10674), (68, 10743), (75, 10806), (80, 10839), (87, 10914), (93, 10977), (98, 11043), (106, 11115), (115, 11193), (125, 11253), (144, 11319), (156, 11373), (159, 11382), (185, 11427), (189, 11445), (190, 11451), (218, 11586), (231, 11685), (239, 11742), (248, 11808), (250, 11820), (261, 11928), (265, 11952), (273, 12027), (283, 12108), (291, 12159), (297, 12189),

Gene: TurboVicky_19 Start: 13340, Stop: 15328, Start Num: 38

Candidate Starts for TurboVicky_19:

(Start: 38 @13340 has 12 MA's), (43, 13379), (58, 13490), (61, 13505), (62, 13517), (85, 13709), (88, 13733), (92, 13775), (105, 13916), (112, 13982), (128, 14078), (149, 14189), (161, 14291), (164, 14315), (175, 14384), (181, 14417), (202, 14582), (220, 14630), (221, 14642), (224, 14660), (236, 14762), (237, 14774), (238, 14780), (269, 15035), (275, 15101), (284, 15161), (300, 15302),

Gene: Typher_21 Start: 13470, Stop: 15458, Start Num: 38

Candidate Starts for Typher_21:

(Start: 38 @13470 has 12 MA's), (43, 13509), (58, 13620), (61, 13635), (62, 13647), (85, 13839), (88, 13863), (92, 13905), (105, 14046), (112, 14112), (128, 14208), (149, 14319), (161, 14421), (164, 14445), (175, 14514), (181, 14547), (202, 14712), (214, 14745), (220, 14760), (221, 14772), (224, 14790), (237, 14904), (238, 14910), (269, 15165), (275, 15231), (284, 15291), (300, 15432),

Gene: Violeta_23 Start: 11465, Stop: 13663, Start Num: 8

Candidate Starts for Violeta_23:

(Start: 8 @11465 has 16 MA's), (16, 11540), (22, 11591), (26, 11618), (35, 11711), (39, 11768), (44, 11810), (47, 11843), (49, 11855), (55, 11906), (56, 11909), (58, 11918), (59, 11921), (63, 11957), (64, 11963), (65, 11966), (66, 11978), (67, 11987), (70, 12011), (83, 12110), (89, 12170), (91, 12209), (93, 12224), (97, 12281), (113, 12419), (117, 12449), (119, 12461), (123, 12485), (124, 12494), (129, 12515), (130, 12518), (132, 12530), (136, 12548), (141, 12590), (148, 12620), (166, 12761), (175, 12818), (185, 12884), (199, 12944), (200, 12953), (212, 13016), (227, 13082), (278, 13433), (283, 13457), (287, 13496), (292, 13517),

Gene: Warren_22 Start: 11565, Stop: 13763, Start Num: 8

Candidate Starts for Warren_22:

(Start: 8 @11565 has 16 MA's), (16, 11640), (22, 11691), (26, 11718), (35, 11811), (44, 11910), (47, 11943), (49, 11955), (55, 12006), (56, 12009), (58, 12018), (59, 12021), (63, 12057), (64, 12063), (65, 12066), (66, 12078), (67, 12087), (70, 12111), (83, 12210), (89, 12270), (91, 12309), (93, 12324), (97, 12381), (113, 12519), (117, 12549), (119, 12561), (123, 12585), (124, 12594), (129, 12615), (130, 12618), (132, 12630), (136, 12648), (141, 12690), (148, 12720), (153, 12744), (164, 12849), (175, 12918), (181, 12951), (185, 12984), (199, 13044), (200, 13053), (212, 13116), (227, 13182), (240, 13215), (271, 13452), (278, 13533), (283, 13557), (287, 13596), (292, 13617),

Gene: Winchester007_37 Start: 17485, Stop: 19683, Start Num: 8

Candidate Starts for Winchester007_37:

(Start: 8 @17485 has 16 MA's), (16, 17560), (22, 17611), (26, 17638), (35, 17731), (44, 17830), (47, 17863), (49, 17875), (55, 17926), (56, 17929), (58, 17938), (59, 17941), (63, 17977), (64, 17983), (65, 17986), (66, 17998), (67, 18007), (70, 18031), (83, 18130), (89, 18190), (91, 18229), (93, 18244), (97, 18301), (113, 18439), (117, 18469), (119, 18481), (123, 18505), (124, 18514), (129, 18535), (130, 18538), (132, 18550), (136, 18568), (148, 18640), (166, 18781), (175, 18838), (185, 18904), (199,

18964), (200, 18973), (212, 19036), (227, 19102), (278, 19453), (283, 19477), (287, 19516), (292, 19537),

Gene: Wrackline_26 Start: 12677, Stop: 15094, Start Num: 8

Candidate Starts for Wrackline_26:

(Start: 8 @12677 has 16 MA's), (11, 12695), (17, 12758), (18, 12770), (30, 12845), (32, 12866), (33, 12878), (37, 12956), (44, 13007), (45, 13022), (48, 13043), (49, 13052), (52, 13079), (55, 13103), (56, 13106), (58, 13115), (67, 13184), (69, 13196), (76, 13256), (78, 13274), (81, 13286), (83, 13307), (84, 13337), (89, 13367), (90, 13382), (93, 13421), (99, 13490), (102, 13508), (109, 13598), (110, 13604), (114, 13625), (117, 13646), (119, 13658), (126, 13703), (128, 13709), (129, 13712), (134, 13736), (136, 13745), (138, 13760), (144, 13799), (148, 13817), (154, 13847), (161, 13922), (162, 13934), (166, 13958), (167, 13961), (168, 13964), (170, 13982), (181, 14048), (191, 14114), (194, 14159), (204, 14237), (205, 14246), (207, 14261), (209, 14279), (216, 14372), (242, 14576), (244, 14588), (251, 14642), (252, 14651), (253, 14657), (258, 14708), (270, 14807), (274, 14852), (278, 14891), (281, 14906), (284, 14924), (285, 14933),

Gene: Zanella_19 Start: 13343, Stop: 15331, Start Num: 38

Candidate Starts for Zanella_19:

(Start: 38 @13343 has 12 MA's), (43, 13382), (58, 13493), (61, 13508), (62, 13520), (85, 13712), (88, 13736), (105, 13919), (112, 13985), (128, 14081), (133, 14105), (149, 14192), (161, 14294), (164, 14318), (175, 14387), (181, 14420), (202, 14585), (220, 14633), (221, 14645), (224, 14663), (236, 14765), (237, 14777), (238, 14783), (269, 15038), (275, 15104), (284, 15164), (300, 15305),