

Pham 202860

1: Ranunculus_10	20	33	39	44	57	83	96	101	116	135	156	179	189	196	208	222	233	236	260	268	271				
2: Wvide_17	33	39	44	52	57	84	96	104	116	133	146	169	179	188	199	219	222	233	236	260	271				
3: Rizwana_14	39	44	57	63	68			104	116	123	133	164	179	188	193			233	236	244	271				
4: Olypop_19	39	44	57	63	68			104	116	135	169	179	188	193	194			233	236	260	271				
5: NyleyClerk_19	39	44	57	63	68			104	116	135	169	179	188	193	194			233	236	260	271				
6: Forrestell_19	39	44	57	63	68			104	116	135	169	179	188	193	194			233	236	260	271				
7: Beagle_23	39	44	57	63	68			104	116	135	169	179	188	193	194			233	236	260	271				
8: Pointis_23	39	44	57	63	68			104	116	135	169	179	188	193	194			233	236	260	271				
9: Odyssey_35	39	44	57	63	68	79	88		116	133	146	169	179	188	193	219	222	233	236	260	271				
10: BruhMont_13	39	44	57	63	68			105	116	133	146	169	179	184	189	219	222	233	236	260	271				
11: AWGoat_17	39	44	57	63	68			105	116	133	146	169	179	184	189	219	222	233	236	260	271				
12: SilentRX_13	39	44	57	63	68	73	81		113	134	144	161	188	198	210	228	236	246	268	271	281				
13: BayC_10	39	44	57	63	68	73	81		113	134	144	161	188	198	210	228	236	246	268	271	281				
14: TP1604_10	39	44	57	63	68	73	81	89	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
15: YDNI2_11	39	44	57	63	68	73	81	87	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
16: Xkcd426_11	39	44	57	63	68	73	81	89	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
17: RainyPoik_10	39	44	57	63	68	73	81	89	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
18: AbtZgraduate_10	39	44	57	63	68	73	81	89	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
19: BabyGotBac_10	39	44	57	63	68	73	81	89	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
20: Asis_10	39	44	57	63	68	73	81	89	103	113	117	134	142	147	159	179	188	198	210	228	236	246	268	271	281
21: Mischief_11	39	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281					
22: Sillyadpops_22 + 17	56	61	72	77	89	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281					
23: Fizzies_24	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
24: Gazebo_31 + 1	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
25: Statier_24 + 2	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
26: MorillMayer_21	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
27: Grassboy_23 + 3	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
28: Zhaia_23 + 1	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
29: Tempo_21 + 4	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
30: BirdinFrench_21 + 1	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
31: OneinaGivan_21 + 1	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
32: Pepe25_10	56	61	72	77	89	101	112	113	133	140	160	178	188	192	208	221	233	236	268	271					
33: RubyRaid_24 + 1	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
34: Nike_22	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
35: Marcie_24	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
36: AluminumJesus_20	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
37: Altheas_26	56	61	72	77	89	91	101	112	113	133	140	160	178	188	192	211	233	236	268	271					
38: Phinky_34	56	61	72	77	89	91	101	112	113	133	140	160	178	188	192	211	233	236	268	271					
39: SadLad_15	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
40: EverythingBagel_22	56	61	72	77	105	114	124	136	150	160	178	188	191	228	236	246	268	271	281						
41: SailyK_18	56	61	72	77	89	94	104	116	130	140	156	167	184	194	209	223	233	241	268	271					
42: PhiAsp_10	56	61	72	77	89	94	104	116	130	140	156	167	184	194	209	223	233	241	268	271					
43: RomasRevenant_19	56	61	72	77	89	94	104	116	130	140	156	167	184	194	209	223	233	241	268	271					
44: Kithara_26	56	61	72	77	89	94	104	116	130	140	156	167	184	194	209	223	233	241	268	271					
45: TurkishDelight_11	56	61	72	77	89	94	104	116	130	140	156	167	184	194	209	223	233	241	268	271					
46: Sunfish_26	56	61	72	77	89	94	104	116	130	140	156	167	184	194	209	223	233	241	268	271					

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 202860 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202860 has 86 members, 23 are drafts.

Phages represented in each track:

- Track 1 : Ranunculus_17
- Track 2 : Wilde_17, Tank_17
- Track 3 : Rizwana_16
- Track 4 : Ollypop_18
- Track 5 : NyleyClemson_19
- Track 6 : Forrestell_19, RazzB_18
- Track 7 : Beagle_23
- Track 8 : Pointis_22, MellowYellow_19, DogYard_21, Kubulix_22
- Track 9 : Odyssey395_24, Pureglobe5_24
- Track 10 : BruhMoment_18
- Track 11 : AWGoat_17
- Track 12 : SilentRX_18
- Track 13 : BayC_10, Salete_10, Maih_10
- Track 14 : TP1604_10
- Track 15 : YDN12_11
- Track 16 : Xkcd426_11
- Track 17 : RainyPolka_10
- Track 18 : Abt2graduatex2_10
- Track 19 : BabyGotBac_10
- Track 20 : Asis_10
- Track 21 : Mischief19_11
- Track 22 : Sillytadpoles_22, Phabia_22, Quammi_20, Zagie_22, Llemily_22, StrawberryJamm_24, Casend_23, Wheelie_21, Jehoshaphat_24, Teehee_23, DonaldDuck_22, Tissue_22, Viceroy_21, Judebell_24, FrankDeliGuy_20, Rudy_20, Lonelysoil_21, Wayne3_23
- Track 23 : Fizzles_22
- Track 24 : Gazebo_21, Blab_20
- Track 25 : Statler_24, BabyDotz_21, Rowlf_18
- Track 26 : MorillMayhem_21
- Track 27 : Grassboy_23, Mashley_20, Hyperion_21, Kyva_24
- Track 28 : Zhafia_25, Namago_22
- Track 29 : Tempo_21, Kelcole_20, RobinRose_23, Romm_23, Fregley_22
- Track 30 : BirdInFrench_21, Wilca_21
- Track 31 : OneinaGillian_21, CandC_20
- Track 32 : Pepe25_20
- Track 33 : RubyRalph_24, Fransoyer_24
- Track 34 : Nike_22, Squash_24

- Track 35 : Marcie_26
- Track 36 : AluminumJesus_20
- Track 37 : Altheas_24
- Track 38 : Phinky_28
- Track 39 : SadLad_25
- Track 40 : EverythinBagel_22
- Track 41 : SallyK_23
- Track 42 : phiAsp2_4
- Track 43 : RomansRevenge_13
- Track 44 : Kithara_22
- Track 45 : TurkishDelight_11
- Track 46 : Sunfish_26

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

The start number called the most often in the published annotations is 12, it was called in 37 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Altheas_24, AluminumJesus_20, BabyDotz_21, BirdInFrench_21, Blab_20, CandC_20, Casend_23, DonaldDuck_22, EverythinBagel_22, Fizzles_22, FrankDeliGuy_20, Fransoyer_24, Fregley_22, Gazebo_21, Grassboy_23, Hyperion_21, Jehoshaphat_24, Judebell_24, Kelcole_20, Kyva_24, Llemily_22, Lonelysoil_21, Marcie_26, Mashley_20, MorillMayhem_21, Namago_22, Nike_22, OneinaGillian_21, Pepe25_20, Phabia_22, Phinky_28, Quammi_20, RobinRose_23, Romm_23, Rowlf_18, RubyRalph_24, Rudy_20, SallyK_23, Sillytadpoles_22, Squash_24, Statler_24, StrawberryJamm_24, Teehee_23, Tempo_21, Tissue_22, Viceroy_21, Wayne3_23, Wheelie_21, Wilca_21, Zagie_22, Zhafia_25,

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

- Kithara_22, SadLad_25,

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

- AWGoat_17, Abt2graduatex2_10, Asis_10, BabyGotBac_10, BayC_10, Beagle_23, BruhMoment_18, DogYard_21, Forrestell_19, Kubulix_22, Maih_10, MellowYellow_19, Mischief19_11, NyleyClemson_19, Odyssey395_24, Ollypop_18, Pointis_22, Pureglobe5_24, RainyPolka_10, Ranunculus_17, RazzB_18, Rizwana_16, RomansRevenge_13, Salete_10, SilentRX_18, Sunfish_26, TP1604_10, Tank_17, TurkishDelight_11, Wilde_17, Xkcd426_11, YDN12_11, phiAsp2_4,

Summary by start number:

Start 5:

- Found in 1 of 86 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kithara_22 (singleton),

Start 6:

- Found in 1 of 86 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sunfish_26 (singleton),

Start 7:

- Found in 2 of 86 (2.3%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: phiAsp2_4 (singleton),

Start 8:

- Found in 3 of 86 (3.5%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 33.3% of time when present
- Phage (with cluster) where this start called: SadLad_25 (EG),

Start 9:

- Found in 1 of 86 (1.2%) of genes in pham
- Manual Annotations of this start: 1 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BruhMoment_18 (AP3),

Start 10:

- Found in 18 of 86 (20.9%) of genes in pham
- Manual Annotations of this start: 11 of 63
- Called 88.9% of time when present
- Phage (with cluster) where this start called: AWGoat_17 (AP4), Beagle_23 (AP2), DogYard_21 (AP2), Kubulix_22 (AP2), MellowYellow_19 (AP2), NyleyClemson_19 (AP2), Odyssey395_24 (AP2), Ollypop_18 (AP2), Pointis_22 (AP2), Pureglobe5_24 (AP2), Ranunculus_17 (AP), Rizwana_16 (AP1), RomansRevenge_13 (singleton), SilentRX_18 (AP4), Tank_17 (AP1), Wilde_17 (AP1),

Start 12:

- Found in 53 of 86 (61.6%) of genes in pham
- Manual Annotations of this start: 37 of 63
- Called 96.2% of time when present
- Phage (with cluster) where this start called: Altheas_24 (EG), AluminumJesus_20 (EG), BabyDotz_21 (EG), BirdInFrench_21 (EG), Blab_20 (EG), CandC_20 (EG), Casend_23 (EG), DonaldDuck_22 (EG), EverythinBagel_22 (EG), Fizzles_22 (EG), FrankDeliGuy_20 (EG), Fransoyer_24 (EG), Fregley_22 (EG), Gazebo_21 (EG), Grassboy_23 (EG), Hyperion_21 (EG), Jehoshaphat_24 (EG), Judebell_24 (EG), Kelcole_20 (EG), Kyva_24 (EG), Llemily_22 (EG), Lonelysoil_21 (EG), Marcie_26 (EG), Mashley_20 (EG), MorillMayhem_21 (EG), Namago_22 (EG), Nike_22 (EG), OneinaGillian_21 (EG), Pepe25_20 (EG), Phabia_22 (EG), Phinky_28 (EG), Quammi_20 (EG), RobinRose_23 (EG), Romm_23 (EG), Rowlf_18 (EG), RubyRalph_24 (EG), Rudy_20 (EG), SallyK_23 (EG), Sillytadpoles_22 (EG), Squash_24 (EG), Statler_24 (EG), StrawberryJamm_24 (EG), Teehee_23 (EG), Tempo_21 (EG), Tissue_22 (EG), Viceroy_21 (EG), Wayne3_23 (EG), Wheelie_21 (EG), Wilca_21 (EG), Zagie_22 (EG), Zhafia_25 (EG),

Start 15:

- Found in 1 of 86 (1.2%) of genes in pham

- Manual Annotations of this start: 1 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TurkishDelight_11 (singleton),

Start 17:

- Found in 11 of 86 (12.8%) of genes in pham
- Manual Annotations of this start: 10 of 63
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abt2graduatex2_10 (BG), Asis_10 (BG), BabyGotBac_10 (BG), BayC_10 (BG), Maih_10 (BG), Mischief19_11 (BG), RainyPolka_10 (BG), Salete_10 (BG), TP1604_10 (BG), Xkcd426_11 (BG), YDN12_11 (BG),

Start 35:

- Found in 12 of 86 (14.0%) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Forrestell_19 (AP2), RazzB_18 (AP2),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, BG, AP2, AP3, EG, AP1, AP4, AP,

Info for manual annotations of cluster AP:

- Start number 10 was manually annotated 1 time for cluster AP.

Info for manual annotations of cluster AP1:

- Start number 10 was manually annotated 3 times for cluster AP1.

Info for manual annotations of cluster AP2:

- Start number 10 was manually annotated 5 times for cluster AP2.

Info for manual annotations of cluster AP3:

- Start number 9 was manually annotated 1 time for cluster AP3.

Info for manual annotations of cluster AP4:

- Start number 10 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster BG:

- Start number 17 was manually annotated 10 times for cluster BG.

Info for manual annotations of cluster EG:

- Start number 8 was manually annotated 1 time for cluster EG.
- Start number 12 was manually annotated 37 times for cluster EG.

Gene Information:

Gene: AWGoat_17 Start: 8723, Stop: 10624, Start Num: 10

Candidate Starts for AWGoat_17:

(Start: 10 @8723 has 11 MA's), (23, 8810), (25, 8819), (29, 8852), (44, 8948), (54, 8993), (61, 9041), (65, 9065), (95, 9236), (96, 9239), (105, 9308), (114, 9386), (117, 9395), (118, 9407), (130, 9479), (133, 9491), (135, 9500), (140, 9542), (148, 9593), (151, 9626), (154, 9668), (155, 9674), (156, 9686), (179, 9908), (184, 9974), (189, 10016), (222, 10277), (231, 10328), (233, 10334), (273, 10595),

Gene: Abt2graduatex2_10 Start: 8030, Stop: 9832, Start Num: 17

Candidate Starts for Abt2graduatex2_10:

(Start: 17 @8030 has 10 MA's), (34, 8156), (39, 8189), (48, 8237), (56, 8276), (66, 8345), (73, 8414), (76, 8435), (98, 8543), (99, 8549), (113, 8645), (134, 8771), (140, 8816), (142, 8825), (147, 8858), (148, 8867), (149, 8894), (161, 9026), (198, 9320), (211, 9359), (214, 9383), (218, 9431), (224, 9479), (226, 9491), (235, 9542), (248, 9611), (261, 9701), (277, 9803), (280, 9821),

Gene: Altheas_24 Start: 9157, Stop: 10980, Start Num: 12

Candidate Starts for Altheas_24:

(Start: 12 @9157 has 37 MA's), (46, 9388), (51, 9409), (54, 9433), (56, 9442), (61, 9481), (72, 9559), (77, 9577), (114, 9799), (124, 9868), (130, 9916), (150, 10060), (154, 10105), (155, 10111), (156, 10123), (160, 10183), (179, 10312), (180, 10318), (192, 10444), (197, 10489), (217, 10594), (232, 10684), (236, 10720), (239, 10738), (249, 10783), (274, 10957),

Gene: AluminumJesus_20 Start: 8498, Stop: 10324, Start Num: 12

Candidate Starts for AluminumJesus_20:

(Start: 12 @8498 has 37 MA's), (56, 8783), (61, 8822), (63, 8834), (72, 8900), (77, 8918), (107, 9068), (109, 9083), (114, 9140), (130, 9257), (132, 9266), (150, 9401), (154, 9446), (155, 9452), (156, 9464), (160, 9524), (179, 9653), (180, 9659), (181, 9686), (192, 9785), (197, 9830), (232, 10025), (236, 10061), (239, 10079), (249, 10124),

Gene: Asis_10 Start: 8087, Stop: 9889, Start Num: 17

Candidate Starts for Asis_10:

(Start: 17 @8087 has 10 MA's), (34, 8213), (37, 8234), (39, 8246), (48, 8294), (56, 8333), (62, 8375), (66, 8402), (73, 8471), (76, 8492), (81, 8513), (96, 8591), (98, 8597), (99, 8603), (113, 8699), (117, 8747), (134, 8825), (140, 8870), (142, 8879), (147, 8912), (149, 8948), (161, 9080), (198, 9377), (210, 9413), (216, 9458), (219, 9503), (224, 9536), (226, 9548), (235, 9599), (242, 9650), (248, 9668), (253, 9716), (255, 9722), (268, 9803), (271, 9833), (277, 9860), (280, 9878),

Gene: BabyDotz_21 Start: 8763, Stop: 10589, Start Num: 12

Candidate Starts for BabyDotz_21:

(Start: 12 @8763 has 37 MA's), (56, 9048), (61, 9087), (72, 9165), (77, 9183), (107, 9333), (109, 9348), (114, 9405), (124, 9474), (130, 9522), (132, 9531), (150, 9666), (154, 9711), (155, 9717), (156, 9729), (160, 9789), (179, 9918), (180, 9924), (181, 9951), (192, 10050), (197, 10095), (232, 10290), (236, 10326), (239, 10344), (249, 10389),

Gene: BabyGotBac_10 Start: 8087, Stop: 9889, Start Num: 17

Candidate Starts for BabyGotBac_10:

(Start: 17 @8087 has 10 MA's), (34, 8213), (37, 8234), (39, 8246), (48, 8294), (56, 8333), (62, 8375), (66, 8402), (73, 8471), (76, 8492), (81, 8513), (96, 8591), (98, 8597), (99, 8603), (113, 8699), (117, 8747), (134, 8825), (140, 8870), (142, 8879), (147, 8912), (149, 8948), (161, 9080), (198, 9377), (210, 9413), (216, 9458), (219, 9503), (226, 9548), (235, 9599), (242, 9650), (248, 9668), (253, 9716), (268, 9803), (271, 9833), (277, 9860), (280, 9878),

Gene: BayC_10 Start: 8087, Stop: 9889, Start Num: 17

Candidate Starts for BayC_10:

(Start: 17 @8087 has 10 MA's), (34, 8213), (37, 8234), (39, 8246), (48, 8294), (56, 8333), (62, 8375), (66, 8402), (73, 8471), (76, 8492), (81, 8513), (96, 8591), (98, 8597), (99, 8603), (113, 8699), (117,

8747), (134, 8825), (140, 8870), (142, 8879), (147, 8912), (149, 8948), (161, 9080), (198, 9377), (210, 9413), (219, 9503), (224, 9536), (226, 9548), (235, 9599), (242, 9650), (248, 9668), (253, 9716), (255, 9722), (268, 9803), (271, 9833), (277, 9860), (280, 9878),

Gene: Beagle_23 Start: 9245, Stop: 11137, Start Num: 10

Candidate Starts for Beagle_23:

(Start: 10 @9245 has 11 MA's), (13, 9254), (20, 9293), (35, 9416), (38, 9434), (53, 9509), (65, 9584), (104, 9827), (135, 10019), (155, 10193), (156, 10205), (168, 10355), (179, 10406), (181, 10439), (182, 10445), (185, 10478), (189, 10514), (193, 10541), (196, 10580), (200, 10601), (204, 10613), (206, 10619), (238, 10883), (260, 11000), (273, 11096),

Gene: BirdInFrench_21 Start: 7665, Stop: 9464, Start Num: 12

Candidate Starts for BirdInFrench_21:

(Start: 12 @7665 has 37 MA's), (61, 7980), (66, 8010), (77, 8076), (121, 8343), (128, 8388), (139, 8475), (147, 8520), (149, 8556), (154, 8604), (155, 8610), (156, 8622), (159, 8658), (160, 8682), (179, 8817), (189, 8925), (191, 8946), (205, 9027), (232, 9165), (236, 9201), (250, 9267), (259, 9336), (265, 9369), (274, 9438),

Gene: Blab_20 Start: 8374, Stop: 10200, Start Num: 12

Candidate Starts for Blab_20:

(Start: 12 @8374 has 37 MA's), (56, 8659), (61, 8698), (72, 8776), (77, 8794), (107, 8944), (109, 8959), (114, 9016), (130, 9133), (132, 9142), (150, 9277), (154, 9322), (155, 9328), (156, 9340), (160, 9400), (179, 9529), (180, 9535), (181, 9562), (192, 9661), (197, 9706), (232, 9901), (236, 9937), (239, 9955), (249, 10000),

Gene: BruhMoment_18 Start: 8617, Stop: 10521, Start Num: 9

Candidate Starts for BruhMoment_18:

(Start: 9 @8617 has 1 MA's), (11, 8626), (38, 8815), (54, 8890), (61, 8938), (65, 8962), (79, 9040), (88, 9103), (114, 9283), (117, 9292), (118, 9304), (130, 9379), (133, 9391), (135, 9400), (139, 9439), (148, 9493), (154, 9568), (156, 9586), (179, 9787), (189, 9895), (202, 9991), (225, 10177), (233, 10219), (237, 10264), (262, 10402), (273, 10483),

Gene: CandC_20 Start: 7351, Stop: 9150, Start Num: 12

Candidate Starts for CandC_20:

(Start: 12 @7351 has 37 MA's), (26, 7450), (53, 7615), (61, 7666), (66, 7696), (77, 7762), (121, 8029), (128, 8074), (139, 8161), (141, 8170), (147, 8206), (149, 8242), (154, 8290), (155, 8296), (156, 8308), (159, 8344), (160, 8368), (179, 8503), (189, 8611), (191, 8632), (205, 8713), (209, 8722), (229, 8833), (232, 8851), (236, 8887), (250, 8953), (259, 9022), (265, 9055), (276, 9130),

Gene: Casend_23 Start: 9100, Stop: 10926, Start Num: 12

Candidate Starts for Casend_23:

(Start: 12 @9100 has 37 MA's), (33, 9250), (56, 9385), (61, 9424), (72, 9502), (77, 9520), (107, 9670), (109, 9685), (114, 9742), (124, 9811), (130, 9859), (132, 9868), (150, 10003), (154, 10048), (155, 10054), (156, 10066), (160, 10126), (179, 10255), (180, 10261), (181, 10288), (192, 10387), (197, 10432), (232, 10627), (236, 10663), (239, 10681), (249, 10726),

Gene: DogYard_21 Start: 9315, Stop: 11207, Start Num: 10

Candidate Starts for DogYard_21:

(Start: 10 @9315 has 11 MA's), (13, 9324), (20, 9363), (35, 9486), (38, 9504), (49, 9555), (53, 9579), (65, 9654), (104, 9897), (135, 10089), (155, 10263), (156, 10275), (168, 10425), (179, 10476), (181, 10509), (182, 10515), (185, 10548), (189, 10584), (193, 10611), (196, 10650), (200, 10671), (204, 10683), (238, 10953), (260, 11070), (273, 11166),

Gene: DonaldDuck_22 Start: 8446, Stop: 10272, Start Num: 12

Candidate Starts for DonaldDuck_22:

(Start: 12 @8446 has 37 MA's), (33, 8596), (56, 8731), (61, 8770), (72, 8848), (77, 8866), (107, 9016), (109, 9031), (114, 9088), (124, 9157), (130, 9205), (132, 9214), (150, 9349), (154, 9394), (155, 9400), (156, 9412), (160, 9472), (179, 9601), (180, 9607), (181, 9634), (192, 9733), (197, 9778), (232, 9973), (236, 10009), (239, 10027), (249, 10072),

Gene: EverythinBagel_22 Start: 8840, Stop: 10666, Start Num: 12

Candidate Starts for EverythinBagel_22:

(Start: 12 @8840 has 37 MA's), (26, 8939), (33, 8990), (56, 9125), (61, 9164), (72, 9242), (77, 9260), (107, 9410), (109, 9425), (114, 9482), (124, 9551), (130, 9599), (132, 9608), (150, 9743), (154, 9788), (155, 9794), (156, 9806), (160, 9866), (179, 9995), (180, 10001), (181, 10028), (192, 10127), (197, 10172), (232, 10367), (236, 10403), (239, 10421), (249, 10466),

Gene: Fizzles_22 Start: 8440, Stop: 10269, Start Num: 12

Candidate Starts for Fizzles_22:

(Start: 12 @8440 has 37 MA's), (47, 8683), (48, 8689), (61, 8767), (72, 8845), (77, 8863), (93, 8935), (107, 9013), (109, 9028), (114, 9085), (126, 9157), (129, 9181), (130, 9193), (132, 9202), (150, 9337), (153, 9358), (154, 9382), (155, 9388), (156, 9400), (160, 9460), (165, 9520), (179, 9589), (180, 9595), (185, 9661), (192, 9721), (201, 9787), (207, 9805), (217, 9871), (232, 9970), (236, 10006), (246, 10060), (268, 10195),

Gene: Forrestell_19 Start: 8130, Stop: 9848, Start Num: 35

Candidate Starts for Forrestell_19:

(Start: 10 @7959 has 11 MA's), (13, 7968), (20, 8007), (35, 8130), (38, 8148), (49, 8199), (53, 8223), (65, 8298), (104, 8541), (135, 8733), (155, 8907), (156, 8919), (168, 9069), (179, 9120), (181, 9153), (182, 9159), (185, 9192), (189, 9228), (193, 9255), (196, 9294), (204, 9327), (238, 9594), (260, 9711), (273, 9807),

Gene: FrankDeliGuy_20 Start: 8306, Stop: 10132, Start Num: 12

Candidate Starts for FrankDeliGuy_20:

(Start: 12 @8306 has 37 MA's), (33, 8456), (56, 8591), (61, 8630), (72, 8708), (77, 8726), (107, 8876), (109, 8891), (114, 8948), (124, 9017), (130, 9065), (132, 9074), (150, 9209), (154, 9254), (155, 9260), (156, 9272), (160, 9332), (179, 9461), (180, 9467), (181, 9494), (192, 9593), (197, 9638), (232, 9833), (236, 9869), (239, 9887), (249, 9932),

Gene: Fransoyer_24 Start: 9057, Stop: 10871, Start Num: 12

Candidate Starts for Fransoyer_24:

(Start: 8 @9036 has 1 MA's), (Start: 12 @9057 has 37 MA's), (61, 9384), (64, 9402), (66, 9414), (97, 9558), (107, 9630), (112, 9654), (115, 9705), (131, 9819), (138, 9846), (140, 9876), (150, 9957), (154, 10002), (155, 10008), (156, 10020), (160, 10080), (168, 10164), (179, 10209), (180, 10215), (185, 10281), (192, 10341), (209, 10431), (217, 10491), (232, 10572), (268, 10797),

Gene: Fregley_22 Start: 7891, Stop: 9690, Start Num: 12

Candidate Starts for Fregley_22:

(Start: 12 @7891 has 37 MA's), (26, 7990), (53, 8155), (61, 8206), (66, 8236), (77, 8302), (121, 8569), (128, 8614), (139, 8701), (147, 8746), (149, 8782), (154, 8830), (155, 8836), (156, 8848), (159, 8884), (160, 8908), (179, 9043), (189, 9151), (191, 9172), (205, 9253), (209, 9262), (229, 9373), (232, 9391), (236, 9427), (250, 9493), (259, 9562), (265, 9595), (276, 9670),

Gene: Gazebo_21 Start: 8940, Stop: 10766, Start Num: 12

Candidate Starts for Gazebo_21:

(Start: 12 @8940 has 37 MA's), (56, 9225), (61, 9264), (72, 9342), (77, 9360), (107, 9510), (109, 9525), (114, 9582), (130, 9699), (132, 9708), (150, 9843), (154, 9888), (155, 9894), (156, 9906), (160, 9966), (179, 10095), (180, 10101), (181, 10128), (192, 10227), (197, 10272), (232, 10467), (236, 10503), (239, 10521), (249, 10566),

Gene: Grassboy_23 Start: 9122, Stop: 10948, Start Num: 12

Candidate Starts for Grassboy_23:

(Start: 12 @9122 has 37 MA's), (33, 9272), (56, 9407), (61, 9446), (72, 9524), (77, 9542), (107, 9692), (109, 9707), (114, 9764), (130, 9881), (132, 9890), (150, 10025), (154, 10070), (155, 10076), (156, 10088), (160, 10148), (179, 10277), (180, 10283), (181, 10310), (192, 10409), (197, 10454), (232, 10649), (236, 10685), (239, 10703), (249, 10748),

Gene: Hyperion_21 Start: 8813, Stop: 10639, Start Num: 12

Candidate Starts for Hyperion_21:

(Start: 12 @8813 has 37 MA's), (33, 8963), (56, 9098), (61, 9137), (72, 9215), (77, 9233), (107, 9383), (109, 9398), (114, 9455), (130, 9572), (132, 9581), (150, 9716), (154, 9761), (155, 9767), (156, 9779), (160, 9839), (179, 9968), (180, 9974), (181, 10001), (192, 10100), (197, 10145), (232, 10340), (236, 10376), (239, 10394), (249, 10439),

Gene: Jehoshaphat_24 Start: 9365, Stop: 11191, Start Num: 12

Candidate Starts for Jehoshaphat_24:

(Start: 12 @9365 has 37 MA's), (33, 9515), (56, 9650), (61, 9689), (72, 9767), (77, 9785), (107, 9935), (109, 9950), (114, 10007), (124, 10076), (130, 10124), (132, 10133), (150, 10268), (154, 10313), (155, 10319), (156, 10331), (160, 10391), (179, 10520), (180, 10526), (181, 10553), (192, 10652), (197, 10697), (232, 10892), (236, 10928), (239, 10946), (249, 10991),

Gene: Judebell_24 Start: 8906, Stop: 10732, Start Num: 12

Candidate Starts for Judebell_24:

(Start: 12 @8906 has 37 MA's), (33, 9056), (56, 9191), (61, 9230), (72, 9308), (77, 9326), (107, 9476), (109, 9491), (114, 9548), (124, 9617), (130, 9665), (132, 9674), (150, 9809), (154, 9854), (155, 9860), (156, 9872), (160, 9932), (179, 10061), (180, 10067), (181, 10094), (192, 10193), (197, 10238), (232, 10433), (236, 10469), (239, 10487), (249, 10532),

Gene: Kelcole_20 Start: 7743, Stop: 9542, Start Num: 12

Candidate Starts for Kelcole_20:

(Start: 12 @7743 has 37 MA's), (26, 7842), (53, 8007), (61, 8058), (66, 8088), (77, 8154), (121, 8421), (128, 8466), (139, 8553), (147, 8598), (149, 8634), (154, 8682), (155, 8688), (156, 8700), (159, 8736), (160, 8760), (179, 8895), (189, 9003), (191, 9024), (205, 9105), (209, 9114), (229, 9225), (232, 9243), (236, 9279), (250, 9345), (259, 9414), (265, 9447), (276, 9522),

Gene: Kithara_22 Start: 9733, Stop: 11709, Start Num: 5

Candidate Starts for Kithara_22:

(Start: 5 @9733 has 1 MA's), (Start: 12 @9775 has 37 MA's), (24, 9859), (27, 9877), (32, 9922), (36, 9949), (58, 10093), (59, 10108), (64, 10135), (69, 10177), (70, 10195), (75, 10231), (99, 10366), (115, 10504), (118, 10522), (119, 10540), (120, 10543), (130, 10606), (133, 10618), (138, 10639), (141, 10675), (143, 10681), (144, 10687), (154, 10795), (155, 10801), (178, 11002), (189, 11125), (190, 11143), (215, 11281), (224, 11359), (236, 11437), (245, 11485), (250, 11503), (254, 11548), (267, 11638), (273, 11683),

Gene: Kubulix_22 Start: 9444, Stop: 11330, Start Num: 10

Candidate Starts for Kubulix_22:

(Start: 10 @9444 has 11 MA's), (13, 9453), (20, 9492), (35, 9615), (38, 9633), (49, 9684), (53, 9708), (65, 9783), (104, 10026), (135, 10218), (155, 10392), (156, 10404), (168, 10554), (179, 10605), (181,

10638), (182, 10644), (185, 10677), (189, 10713), (193, 10740), (196, 10779), (200, 10800), (204, 10812), (238, 11076), (260, 11193), (273, 11289),

Gene: Kyva_24 Start: 9157, Stop: 10983, Start Num: 12

Candidate Starts for Kyva_24:

(Start: 12 @9157 has 37 MA's), (33, 9307), (56, 9442), (61, 9481), (72, 9559), (77, 9577), (107, 9727), (109, 9742), (114, 9799), (130, 9916), (132, 9925), (150, 10060), (154, 10105), (155, 10111), (156, 10123), (160, 10183), (179, 10312), (180, 10318), (181, 10345), (192, 10444), (197, 10489), (232, 10684), (236, 10720), (239, 10738), (249, 10783),

Gene: Llemily_22 Start: 8141, Stop: 9967, Start Num: 12

Candidate Starts for Llemily_22:

(Start: 12 @8141 has 37 MA's), (33, 8291), (56, 8426), (61, 8465), (72, 8543), (77, 8561), (107, 8711), (109, 8726), (114, 8783), (124, 8852), (130, 8900), (132, 8909), (150, 9044), (154, 9089), (155, 9095), (156, 9107), (160, 9167), (179, 9296), (180, 9302), (181, 9329), (192, 9428), (197, 9473), (232, 9668), (236, 9704), (239, 9722), (249, 9767),

Gene: Lonelysoil_21 Start: 8386, Stop: 10212, Start Num: 12

Candidate Starts for Lonelysoil_21:

(Start: 12 @8386 has 37 MA's), (33, 8536), (56, 8671), (61, 8710), (72, 8788), (77, 8806), (107, 8956), (109, 8971), (114, 9028), (124, 9097), (130, 9145), (132, 9154), (150, 9289), (154, 9334), (155, 9340), (156, 9352), (160, 9412), (179, 9541), (180, 9547), (181, 9574), (192, 9673), (197, 9718), (232, 9913), (236, 9949), (239, 9967), (249, 10012),

Gene: Maih_10 Start: 8086, Stop: 9888, Start Num: 17

Candidate Starts for Maih_10:

(Start: 17 @8086 has 10 MA's), (34, 8212), (37, 8233), (39, 8245), (48, 8293), (56, 8332), (62, 8374), (66, 8401), (73, 8470), (76, 8491), (81, 8512), (96, 8590), (98, 8596), (99, 8602), (113, 8698), (117, 8746), (134, 8824), (140, 8869), (142, 8878), (147, 8911), (149, 8947), (161, 9079), (198, 9376), (210, 9412), (219, 9502), (224, 9535), (226, 9547), (235, 9598), (242, 9649), (248, 9667), (253, 9715), (255, 9721), (268, 9802), (271, 9832), (277, 9859), (280, 9877),

Gene: Marcie_26 Start: 8457, Stop: 10256, Start Num: 12

Candidate Starts for Marcie_26:

(Start: 12 @8457 has 37 MA's), (42, 8670), (61, 8772), (66, 8802), (77, 8868), (121, 9135), (122, 9150), (127, 9168), (128, 9180), (139, 9267), (141, 9276), (147, 9312), (149, 9348), (154, 9396), (155, 9402), (156, 9414), (159, 9450), (160, 9474), (179, 9609), (189, 9717), (205, 9819), (209, 9828), (221, 9927), (229, 9939), (232, 9957), (236, 9993), (250, 10059), (259, 10128), (265, 10161), (274, 10230), (276, 10236),

Gene: Mashley_20 Start: 8624, Stop: 10450, Start Num: 12

Candidate Starts for Mashley_20:

(Start: 12 @8624 has 37 MA's), (33, 8774), (56, 8909), (61, 8948), (72, 9026), (77, 9044), (107, 9194), (109, 9209), (114, 9266), (130, 9383), (132, 9392), (150, 9527), (154, 9572), (155, 9578), (156, 9590), (160, 9650), (179, 9779), (180, 9785), (181, 9812), (192, 9911), (197, 9956), (232, 10151), (236, 10187), (239, 10205), (249, 10250),

Gene: MellowYellow_19 Start: 7989, Stop: 9875, Start Num: 10

Candidate Starts for MellowYellow_19:

(Start: 10 @7989 has 11 MA's), (13, 7998), (20, 8037), (35, 8160), (38, 8178), (49, 8229), (53, 8253), (65, 8328), (104, 8571), (135, 8763), (155, 8937), (156, 8949), (168, 9099), (179, 9150), (181, 9183), (182, 9189), (185, 9222), (189, 9258), (193, 9285), (196, 9324), (200, 9345), (204, 9357), (238, 9621), (260, 9738), (273, 9834),

Gene: Mischief19_11 Start: 9640, Stop: 11433, Start Num: 17

Candidate Starts for Mischief19_11:

(Start: 17 @9640 has 10 MA's), (28, 9733), (37, 9796), (39, 9808), (41, 9823), (56, 9895), (60, 9931), (74, 10036), (78, 10060), (98, 10159), (103, 10210), (110, 10246), (117, 10309), (138, 10402), (140, 10432), (142, 10441), (145, 10462), (155, 10564), (156, 10576), (176, 10747), (198, 10948), (226, 11107), (235, 11158), (242, 11209), (244, 11218), (255, 11284), (271, 11395), (275, 11416),

Gene: MorillMayhem_21 Start: 8632, Stop: 10458, Start Num: 12

Candidate Starts for MorillMayhem_21:

(Start: 12 @8632 has 37 MA's), (56, 8917), (61, 8956), (63, 8968), (72, 9034), (77, 9052), (107, 9202), (109, 9217), (114, 9274), (124, 9343), (130, 9391), (132, 9400), (150, 9535), (154, 9580), (155, 9586), (156, 9598), (160, 9658), (179, 9787), (180, 9793), (181, 9820), (192, 9919), (197, 9964), (232, 10159), (236, 10195), (239, 10213), (249, 10258),

Gene: Namago_22 Start: 8194, Stop: 10020, Start Num: 12

Candidate Starts for Namago_22:

(Start: 12 @8194 has 37 MA's), (56, 8479), (61, 8518), (72, 8596), (77, 8614), (109, 8779), (114, 8836), (130, 8953), (132, 8962), (150, 9097), (154, 9142), (155, 9148), (156, 9160), (160, 9220), (179, 9349), (180, 9355), (181, 9382), (192, 9481), (197, 9526), (232, 9721), (236, 9757), (239, 9775), (249, 9820),

Gene: Nike_22 Start: 9101, Stop: 10927, Start Num: 12

Candidate Starts for Nike_22:

(Start: 12 @9101 has 37 MA's), (56, 9386), (61, 9425), (72, 9503), (77, 9521), (107, 9671), (109, 9686), (114, 9743), (124, 9812), (130, 9860), (132, 9869), (150, 10004), (154, 10049), (155, 10055), (156, 10067), (160, 10127), (179, 10256), (180, 10262), (181, 10289), (192, 10388), (197, 10433), (232, 10628), (236, 10664), (239, 10682), (249, 10727), (271, 10883),

Gene: NyleyClemson_19 Start: 7931, Stop: 9820, Start Num: 10

Candidate Starts for NyleyClemson_19:

(Start: 10 @7931 has 11 MA's), (13, 7940), (20, 7979), (35, 8102), (38, 8120), (53, 8195), (65, 8270), (104, 8513), (135, 8705), (155, 8879), (156, 8891), (168, 9041), (179, 9092), (181, 9125), (182, 9131), (185, 9164), (189, 9200), (193, 9227), (196, 9266), (204, 9299), (238, 9566), (260, 9683), (273, 9779),

Gene: Odyssey395_24 Start: 9446, Stop: 11332, Start Num: 10

Candidate Starts for Odyssey395_24:

(Start: 10 @9446 has 11 MA's), (13, 9455), (20, 9494), (35, 9617), (38, 9635), (49, 9686), (53, 9710), (65, 9785), (135, 10220), (155, 10394), (156, 10406), (168, 10556), (179, 10607), (181, 10640), (182, 10646), (185, 10679), (189, 10715), (193, 10742), (196, 10781), (200, 10802), (204, 10814), (238, 11078), (260, 11195), (273, 11291),

Gene: Ollypop_18 Start: 8427, Stop: 10322, Start Num: 10

Candidate Starts for Ollypop_18:

(Start: 10 @8427 has 11 MA's), (13, 8436), (19, 8472), (20, 8475), (35, 8598), (38, 8616), (44, 8646), (49, 8667), (53, 8691), (56, 8703), (61, 8742), (64, 8760), (65, 8766), (95, 8940), (104, 9009), (123, 9150), (135, 9201), (155, 9375), (156, 9387), (168, 9537), (179, 9588), (181, 9621), (182, 9627), (185, 9660), (189, 9696), (196, 9762), (204, 9795), (238, 10071), (243, 10092), (248, 10110), (273, 10284),

Gene: OneinaGillian_21 Start: 7426, Stop: 9225, Start Num: 12

Candidate Starts for OneinaGillian_21:

(Start: 12 @7426 has 37 MA's), (26, 7525), (53, 7690), (61, 7741), (66, 7771), (77, 7837), (121, 8104), (128, 8149), (139, 8236), (141, 8245), (147, 8281), (149, 8317), (154, 8365), (155, 8371), (156, 8383), (159, 8419), (160, 8443), (179, 8578), (189, 8686), (191, 8707), (205, 8788), (209, 8797), (229, 8908),

(232, 8926), (236, 8962), (250, 9028), (259, 9097), (265, 9130), (276, 9205),

Gene: Pepe25_20 Start: 7682, Stop: 9481, Start Num: 12

Candidate Starts for Pepe25_20:

(Start: 12 @7682 has 37 MA's), (61, 7997), (66, 8027), (77, 8093), (121, 8360), (139, 8492), (147, 8537), (149, 8573), (154, 8621), (155, 8627), (156, 8639), (159, 8675), (160, 8699), (179, 8834), (189, 8942), (191, 8963), (196, 9008), (205, 9044), (232, 9182), (236, 9218), (250, 9284), (259, 9353), (265, 9386), (274, 9455),

Gene: Phabia_22 Start: 8559, Stop: 10385, Start Num: 12

Candidate Starts for Phabia_22:

(Start: 12 @8559 has 37 MA's), (33, 8709), (56, 8844), (61, 8883), (72, 8961), (77, 8979), (107, 9129), (109, 9144), (114, 9201), (124, 9270), (130, 9318), (132, 9327), (150, 9462), (154, 9507), (155, 9513), (156, 9525), (160, 9585), (179, 9714), (180, 9720), (181, 9747), (192, 9846), (197, 9891), (232, 10086), (236, 10122), (239, 10140), (249, 10185),

Gene: Phinky_28 Start: 9498, Stop: 11324, Start Num: 12

Candidate Starts for Phinky_28:

(Start: 12 @9498 has 37 MA's), (16, 9519), (33, 9648), (61, 9825), (70, 9897), (71, 9906), (72, 9909), (91, 9993), (116, 10158), (125, 10224), (150, 10401), (154, 10446), (155, 10452), (156, 10464), (160, 10524), (179, 10653), (180, 10659), (185, 10725), (192, 10785), (232, 11025), (250, 11127), (274, 11298), (279, 11316),

Gene: Pointis_22 Start: 9444, Stop: 11336, Start Num: 10

Candidate Starts for Pointis_22:

(Start: 10 @9444 has 11 MA's), (13, 9453), (20, 9492), (35, 9615), (38, 9633), (49, 9684), (53, 9708), (65, 9783), (104, 10026), (135, 10218), (155, 10392), (156, 10404), (168, 10554), (179, 10605), (181, 10638), (182, 10644), (185, 10677), (189, 10713), (193, 10740), (196, 10779), (200, 10800), (204, 10812), (238, 11082), (260, 11199), (273, 11295),

Gene: Pureglobe5_24 Start: 9460, Stop: 11346, Start Num: 10

Candidate Starts for Pureglobe5_24:

(Start: 10 @9460 has 11 MA's), (13, 9469), (20, 9508), (35, 9631), (38, 9649), (49, 9700), (53, 9724), (65, 9799), (135, 10234), (155, 10408), (156, 10420), (168, 10570), (179, 10621), (181, 10654), (182, 10660), (185, 10693), (189, 10729), (193, 10756), (196, 10795), (200, 10816), (204, 10828), (238, 11092), (260, 11209), (273, 11305),

Gene: Quammi_20 Start: 8130, Stop: 9956, Start Num: 12

Candidate Starts for Quammi_20:

(Start: 12 @8130 has 37 MA's), (33, 8280), (56, 8415), (61, 8454), (72, 8532), (77, 8550), (107, 8700), (109, 8715), (114, 8772), (124, 8841), (130, 8889), (132, 8898), (150, 9033), (154, 9078), (155, 9084), (156, 9096), (160, 9156), (179, 9285), (180, 9291), (181, 9318), (192, 9417), (197, 9462), (232, 9657), (236, 9693), (239, 9711), (249, 9756),

Gene: RainyPolka_10 Start: 8039, Stop: 9838, Start Num: 17

Candidate Starts for RainyPolka_10:

(Start: 17 @8039 has 10 MA's), (33, 8156), (34, 8165), (39, 8198), (48, 8246), (56, 8285), (66, 8354), (73, 8423), (74, 8426), (76, 8444), (81, 8465), (85, 8492), (96, 8546), (98, 8552), (99, 8558), (103, 8603), (113, 8654), (117, 8702), (134, 8780), (137, 8789), (142, 8834), (147, 8867), (148, 8876), (149, 8903), (161, 9035), (198, 9326), (210, 9362), (214, 9389), (218, 9437), (224, 9485), (226, 9497), (233, 9530), (235, 9548), (248, 9617), (277, 9809), (280, 9827),

Gene: Ranunculus_17 Start: 8385, Stop: 10292, Start Num: 10

Candidate Starts for Ranunculus_17:

(Start: 10 @8385 has 11 MA's), (20, 8433), (35, 8556), (38, 8574), (49, 8625), (53, 8649), (56, 8661), (64, 8718), (65, 8724), (135, 9159), (154, 9327), (155, 9333), (156, 9345), (179, 9546), (181, 9579), (182, 9585), (185, 9618), (189, 9654), (196, 9720), (204, 9753), (208, 9765), (222, 9921), (229, 9957), (233, 9978), (236, 10011), (260, 10155), (268, 10209), (271, 10239),

Gene: RazzB_18 Start: 7930, Stop: 9648, Start Num: 35

Candidate Starts for RazzB_18:

(Start: 10 @7759 has 11 MA's), (13, 7768), (20, 7807), (35, 7930), (38, 7948), (49, 7999), (53, 8023), (65, 8098), (104, 8341), (135, 8533), (155, 8707), (156, 8719), (168, 8869), (179, 8920), (181, 8953), (182, 8959), (185, 8992), (189, 9028), (193, 9055), (196, 9094), (204, 9127), (238, 9394), (260, 9511), (273, 9607),

Gene: Rizwana_16 Start: 8365, Stop: 10227, Start Num: 10

Candidate Starts for Rizwana_16:

(Start: 10 @8365 has 11 MA's), (13, 8374), (23, 8449), (30, 8497), (38, 8557), (44, 8587), (52, 8614), (61, 8680), (84, 8812), (95, 8872), (96, 8875), (117, 9031), (118, 9043), (130, 9118), (133, 9130), (135, 9139), (139, 9178), (148, 9232), (154, 9307), (166, 9454), (169, 9478), (172, 9484), (177, 9508), (179, 9526), (185, 9598), (189, 9634), (194, 9664), (197, 9703), (199, 9715), (208, 9745), (219, 9841), (222, 9880), (234, 9949), (237, 9982), (271, 10186), (272, 10189), (273, 10198),

Gene: RobinRose_23 Start: 7894, Stop: 9693, Start Num: 12

Candidate Starts for RobinRose_23:

(Start: 12 @7894 has 37 MA's), (26, 7993), (53, 8158), (61, 8209), (66, 8239), (77, 8305), (121, 8572), (128, 8617), (139, 8704), (147, 8749), (149, 8785), (154, 8833), (155, 8839), (156, 8851), (159, 8887), (160, 8911), (179, 9046), (189, 9154), (191, 9175), (205, 9256), (209, 9265), (229, 9376), (232, 9394), (236, 9430), (250, 9496), (259, 9565), (265, 9598), (276, 9673),

Gene: RomansRevenge_13 Start: 6378, Stop: 8228, Start Num: 10

Candidate Starts for RomansRevenge_13:

(7, 6363), (Start: 10 @6378 has 11 MA's), (21, 6444), (23, 6462), (37, 6561), (38, 6570), (39, 6573), (40, 6585), (41, 6588), (50, 6621), (55, 6648), (61, 6693), (80, 6795), (85, 6822), (86, 6837), (95, 6876), (100, 6909), (102, 6927), (104, 6945), (117, 7035), (118, 7047), (130, 7131), (135, 7152), (140, 7194), (148, 7245), (154, 7320), (155, 7326), (156, 7338), (163, 7419), (164, 7449), (170, 7485), (179, 7530), (189, 7638), (220, 7845), (228, 7881), (237, 7950), (247, 7998), (252, 8037), (260, 8082), (273, 8178),

Gene: Romm_23 Start: 7894, Stop: 9693, Start Num: 12

Candidate Starts for Romm_23:

(Start: 12 @7894 has 37 MA's), (26, 7993), (53, 8158), (61, 8209), (66, 8239), (77, 8305), (121, 8572), (128, 8617), (139, 8704), (147, 8749), (149, 8785), (154, 8833), (155, 8839), (156, 8851), (159, 8887), (160, 8911), (179, 9046), (189, 9154), (191, 9175), (205, 9256), (209, 9265), (229, 9376), (232, 9394), (236, 9430), (250, 9496), (259, 9565), (265, 9598), (276, 9673),

Gene: Rowlf_18 Start: 7897, Stop: 9723, Start Num: 12

Candidate Starts for Rowlf_18:

(Start: 12 @7897 has 37 MA's), (56, 8182), (61, 8221), (72, 8299), (77, 8317), (107, 8467), (109, 8482), (114, 8539), (124, 8608), (130, 8656), (132, 8665), (150, 8800), (154, 8845), (155, 8851), (156, 8863), (160, 8923), (179, 9052), (180, 9058), (181, 9085), (192, 9184), (197, 9229), (232, 9424), (236, 9460), (239, 9478), (249, 9523),

Gene: RubyRalph_24 Start: 8991, Stop: 10805, Start Num: 12

Candidate Starts for RubyRalph_24:

(Start: 8 @8970 has 1 MA's), (Start: 12 @8991 has 37 MA's), (61, 9318), (64, 9336), (66, 9348), (97, 9492), (107, 9564), (112, 9588), (115, 9639), (131, 9753), (138, 9780), (140, 9810), (150, 9891), (154, 9936), (155, 9942), (156, 9954), (160, 10014), (168, 10098), (179, 10143), (180, 10149), (185, 10215), (192, 10275), (209, 10365), (217, 10425), (232, 10506), (268, 10731),

Gene: Rudy_20 Start: 8130, Stop: 9956, Start Num: 12

Candidate Starts for Rudy_20:

(Start: 12 @8130 has 37 MA's), (33, 8280), (56, 8415), (61, 8454), (72, 8532), (77, 8550), (107, 8700), (109, 8715), (114, 8772), (124, 8841), (130, 8889), (132, 8898), (150, 9033), (154, 9078), (155, 9084), (156, 9096), (160, 9156), (179, 9285), (180, 9291), (181, 9318), (192, 9417), (197, 9462), (232, 9657), (236, 9693), (239, 9711), (249, 9756),

Gene: SadLad_25 Start: 9427, Stop: 11262, Start Num: 8

Candidate Starts for SadLad_25:

(Start: 8 @9427 has 1 MA's), (Start: 12 @9448 has 37 MA's), (61, 9775), (64, 9793), (66, 9805), (97, 9949), (107, 10021), (112, 10045), (115, 10096), (131, 10210), (138, 10237), (140, 10267), (150, 10348), (154, 10393), (155, 10399), (156, 10411), (160, 10471), (168, 10555), (179, 10600), (180, 10606), (185, 10672), (192, 10732), (209, 10822), (217, 10882), (232, 10963), (268, 11188),

Gene: Salete_10 Start: 8087, Stop: 9889, Start Num: 17

Candidate Starts for Salete_10:

(Start: 17 @8087 has 10 MA's), (34, 8213), (37, 8234), (39, 8246), (48, 8294), (56, 8333), (62, 8375), (66, 8402), (73, 8471), (76, 8492), (81, 8513), (96, 8591), (98, 8597), (99, 8603), (113, 8699), (117, 8747), (134, 8825), (140, 8870), (142, 8879), (147, 8912), (149, 8948), (161, 9080), (198, 9377), (210, 9413), (219, 9503), (224, 9536), (226, 9548), (235, 9599), (242, 9650), (248, 9668), (253, 9716), (255, 9722), (268, 9803), (271, 9833), (277, 9860), (280, 9878),

Gene: SallyK_23 Start: 9291, Stop: 11117, Start Num: 12

Candidate Starts for SallyK_23:

(Start: 12 @9291 has 37 MA's), (33, 9441), (56, 9576), (61, 9615), (72, 9693), (77, 9711), (107, 9861), (109, 9876), (114, 9933), (124, 10002), (130, 10050), (132, 10059), (150, 10194), (154, 10239), (155, 10245), (160, 10317), (179, 10446), (180, 10452), (181, 10479), (192, 10578), (197, 10623), (232, 10818), (236, 10854), (239, 10872), (249, 10917),

Gene: SilentRX_18 Start: 8516, Stop: 10414, Start Num: 10

Candidate Starts for SilentRX_18:

(Start: 10 @8516 has 11 MA's), (23, 8603), (25, 8612), (29, 8645), (44, 8741), (54, 8786), (61, 8834), (65, 8858), (95, 9029), (96, 9032), (105, 9101), (114, 9179), (117, 9188), (118, 9200), (130, 9272), (133, 9284), (135, 9293), (140, 9335), (148, 9386), (151, 9419), (154, 9461), (155, 9467), (156, 9479), (179, 9701), (184, 9767), (189, 9809), (222, 10058), (233, 10115), (239, 10166), (263, 10301), (273, 10376), (276, 10388),

Gene: Sillytadpoles_22 Start: 8128, Stop: 9954, Start Num: 12

Candidate Starts for Sillytadpoles_22:

(Start: 12 @8128 has 37 MA's), (33, 8278), (56, 8413), (61, 8452), (72, 8530), (77, 8548), (107, 8698), (109, 8713), (114, 8770), (124, 8839), (130, 8887), (132, 8896), (150, 9031), (154, 9076), (155, 9082), (156, 9094), (160, 9154), (179, 9283), (180, 9289), (181, 9316), (192, 9415), (197, 9460), (232, 9655), (236, 9691), (239, 9709), (249, 9754),

Gene: Squash_24 Start: 9156, Stop: 10982, Start Num: 12

Candidate Starts for Squash_24:

(Start: 12 @9156 has 37 MA's), (56, 9441), (61, 9480), (72, 9558), (77, 9576), (107, 9726), (109, 9741), (114, 9798), (124, 9867), (130, 9915), (132, 9924), (150, 10059), (154, 10104), (155, 10110), (156,

10122), (160, 10182), (179, 10311), (180, 10317), (181, 10344), (192, 10443), (197, 10488), (232, 10683), (236, 10719), (239, 10737), (249, 10782), (271, 10938),

Gene: Statler_24 Start: 9110, Stop: 10936, Start Num: 12

Candidate Starts for Statler_24:

(Start: 12 @9110 has 37 MA's), (56, 9395), (61, 9434), (72, 9512), (77, 9530), (107, 9680), (109, 9695), (114, 9752), (124, 9821), (130, 9869), (132, 9878), (150, 10013), (154, 10058), (155, 10064), (156, 10076), (160, 10136), (179, 10265), (180, 10271), (181, 10298), (192, 10397), (197, 10442), (232, 10637), (236, 10673), (239, 10691), (249, 10736),

Gene: StrawberryJamm_24 Start: 8430, Stop: 10256, Start Num: 12

Candidate Starts for StrawberryJamm_24:

(Start: 12 @8430 has 37 MA's), (33, 8580), (56, 8715), (61, 8754), (72, 8832), (77, 8850), (107, 9000), (109, 9015), (114, 9072), (124, 9141), (130, 9189), (132, 9198), (150, 9333), (154, 9378), (155, 9384), (156, 9396), (160, 9456), (179, 9585), (180, 9591), (181, 9618), (192, 9717), (197, 9762), (232, 9957), (236, 9993), (239, 10011), (249, 10056),

Gene: Sunfish_26 Start: 9771, Stop: 11576, Start Num: 6

Candidate Starts for Sunfish_26:

(Start: 6 @9771 has 1 MA's), (14, 9810), (33, 9951), (38, 9990), (43, 10017), (56, 10065), (67, 10149), (99, 10290), (105, 10347), (121, 10467), (130, 10518), (140, 10581), (142, 10590), (144, 10599), (154, 10707), (155, 10713), (158, 10746), (174, 10887), (185, 10986), (188, 11022), (189, 11025), (217, 11199), (240, 11334), (250, 11379), (256, 11433), (260, 11457),

Gene: TP1604_10 Start: 8087, Stop: 9889, Start Num: 17

Candidate Starts for TP1604_10:

(Start: 17 @8087 has 10 MA's), (34, 8213), (37, 8234), (39, 8246), (48, 8294), (56, 8333), (62, 8375), (66, 8402), (73, 8471), (76, 8492), (81, 8513), (96, 8591), (98, 8597), (99, 8603), (113, 8699), (117, 8747), (134, 8825), (140, 8870), (142, 8879), (147, 8912), (148, 8921), (149, 8948), (161, 9080), (198, 9377), (210, 9413), (216, 9458), (219, 9503), (226, 9548), (235, 9599), (242, 9650), (248, 9668), (253, 9716), (268, 9803), (271, 9833), (277, 9860), (280, 9878),

Gene: Tank_17 Start: 8380, Stop: 10260, Start Num: 10

Candidate Starts for Tank_17:

(Start: 10 @8380 has 11 MA's), (13, 8389), (23, 8464), (30, 8512), (38, 8572), (44, 8602), (61, 8695), (83, 8815), (92, 8872), (95, 8887), (101, 8932), (117, 9046), (118, 9058), (130, 9133), (133, 9145), (135, 9154), (136, 9157), (139, 9193), (148, 9247), (154, 9322), (156, 9340), (169, 9493), (172, 9499), (173, 9505), (176, 9520), (179, 9541), (189, 9649), (195, 9688), (197, 9718), (222, 9895), (237, 9997), (257, 10096), (263, 10138), (273, 10213), (276, 10225),

Gene: Teehee_23 Start: 9365, Stop: 11191, Start Num: 12

Candidate Starts for Teehee_23:

(Start: 12 @9365 has 37 MA's), (33, 9515), (56, 9650), (61, 9689), (72, 9767), (77, 9785), (107, 9935), (109, 9950), (114, 10007), (124, 10076), (130, 10124), (132, 10133), (150, 10268), (154, 10313), (155, 10319), (156, 10331), (160, 10391), (179, 10520), (180, 10526), (181, 10553), (192, 10652), (197, 10697), (232, 10892), (236, 10928), (239, 10946), (249, 10991),

Gene: Tempo_21 Start: 7770, Stop: 9569, Start Num: 12

Candidate Starts for Tempo_21:

(Start: 12 @7770 has 37 MA's), (26, 7869), (53, 8034), (61, 8085), (66, 8115), (77, 8181), (121, 8448), (128, 8493), (139, 8580), (147, 8625), (149, 8661), (154, 8709), (155, 8715), (156, 8727), (159, 8763), (160, 8787), (179, 8922), (189, 9030), (191, 9051), (205, 9132), (209, 9141), (229, 9252), (232, 9270), (236, 9306), (250, 9372), (259, 9441), (265, 9474), (276, 9549),

Gene: Tissue_22 Start: 8939, Stop: 10765, Start Num: 12

Candidate Starts for Tissue_22:

(Start: 12 @8939 has 37 MA's), (33, 9089), (56, 9224), (61, 9263), (72, 9341), (77, 9359), (107, 9509), (109, 9524), (114, 9581), (124, 9650), (130, 9698), (132, 9707), (150, 9842), (154, 9887), (155, 9893), (156, 9905), (160, 9965), (179, 10094), (180, 10100), (181, 10127), (192, 10226), (197, 10271), (232, 10466), (236, 10502), (239, 10520), (249, 10565),

Gene: TurkishDelight_11 Start: 6388, Stop: 8154, Start Num: 15

Candidate Starts for TurkishDelight_11:

(Start: 15 @6388 has 1 MA's), (39, 6565), (68, 6745), (69, 6748), (82, 6826), (85, 6850), (90, 6886), (99, 6916), (113, 7012), (117, 7060), (131, 7126), (133, 7132), (140, 7183), (149, 7261), (151, 7267), (157, 7339), (160, 7387), (162, 7399), (171, 7474), (175, 7495), (213, 7738), (244, 7936), (248, 7945), (278, 8143),

Gene: Viceroy_21 Start: 8130, Stop: 9956, Start Num: 12

Candidate Starts for Viceroy_21:

(Start: 12 @8130 has 37 MA's), (33, 8280), (56, 8415), (61, 8454), (72, 8532), (77, 8550), (107, 8700), (109, 8715), (114, 8772), (124, 8841), (130, 8889), (132, 8898), (150, 9033), (154, 9078), (155, 9084), (156, 9096), (160, 9156), (179, 9285), (180, 9291), (181, 9318), (192, 9417), (197, 9462), (232, 9657), (236, 9693), (239, 9711), (249, 9756),

Gene: Wayne3_23 Start: 9095, Stop: 10921, Start Num: 12

Candidate Starts for Wayne3_23:

(Start: 12 @9095 has 37 MA's), (33, 9245), (56, 9380), (61, 9419), (72, 9497), (77, 9515), (107, 9665), (109, 9680), (114, 9737), (124, 9806), (130, 9854), (132, 9863), (150, 9998), (154, 10043), (155, 10049), (156, 10061), (160, 10121), (179, 10250), (180, 10256), (181, 10283), (192, 10382), (197, 10427), (232, 10622), (236, 10658), (239, 10676), (249, 10721),

Gene: Wheelie_21 Start: 8446, Stop: 10272, Start Num: 12

Candidate Starts for Wheelie_21:

(Start: 12 @8446 has 37 MA's), (33, 8596), (56, 8731), (61, 8770), (72, 8848), (77, 8866), (107, 9016), (109, 9031), (114, 9088), (124, 9157), (130, 9205), (132, 9214), (150, 9349), (154, 9394), (155, 9400), (156, 9412), (160, 9472), (179, 9601), (180, 9607), (181, 9634), (192, 9733), (197, 9778), (232, 9973), (236, 10009), (239, 10027), (249, 10072),

Gene: Wilca_21 Start: 7665, Stop: 9464, Start Num: 12

Candidate Starts for Wilca_21:

(Start: 12 @7665 has 37 MA's), (61, 7980), (66, 8010), (77, 8076), (121, 8343), (128, 8388), (139, 8475), (147, 8520), (149, 8556), (154, 8604), (155, 8610), (156, 8622), (159, 8658), (160, 8682), (179, 8817), (189, 8925), (191, 8946), (205, 9027), (232, 9165), (236, 9201), (250, 9267), (259, 9336), (265, 9369), (274, 9438),

Gene: Wilde_17 Start: 8308, Stop: 10188, Start Num: 10

Candidate Starts for Wilde_17:

(Start: 10 @8308 has 11 MA's), (13, 8317), (23, 8392), (30, 8440), (38, 8500), (44, 8530), (61, 8623), (83, 8743), (92, 8800), (95, 8815), (101, 8860), (117, 8974), (118, 8986), (130, 9061), (133, 9073), (135, 9082), (136, 9085), (139, 9121), (148, 9175), (154, 9250), (156, 9268), (169, 9421), (172, 9427), (173, 9433), (176, 9448), (179, 9469), (189, 9577), (195, 9616), (197, 9646), (222, 9823), (237, 9925), (257, 10024), (263, 10066), (273, 10141), (276, 10153),

Gene: Xkcd426_11 Start: 9122, Stop: 10924, Start Num: 17

Candidate Starts for Xkcd426_11:

(Start: 17 @9122 has 10 MA's), (20, 9143), (22, 9164), (31, 9227), (39, 9281), (56, 9368), (66, 9437), (73, 9506), (81, 9548), (87, 9593), (96, 9626), (98, 9632), (111, 9722), (113, 9734), (117, 9782), (134, 9860), (142, 9914), (147, 9947), (149, 9983), (156, 10049), (161, 10115), (183, 10295), (198, 10415), (203, 10433), (213, 10469), (224, 10571), (226, 10583), (251, 10718), (258, 10766), (268, 10838), (269, 10847), (271, 10868), (277, 10895), (280, 10913),

Gene: YDN12_11 Start: 8033, Stop: 9832, Start Num: 17

Candidate Starts for YDN12_11:

(Start: 17 @8033 has 10 MA's), (34, 8159), (37, 8180), (39, 8192), (48, 8240), (56, 8279), (62, 8321), (66, 8348), (73, 8417), (76, 8438), (81, 8459), (89, 8513), (96, 8537), (98, 8543), (99, 8549), (103, 8594), (113, 8645), (117, 8693), (140, 8816), (142, 8825), (147, 8858), (149, 8894), (151, 8900), (161, 9026), (175, 9128), (198, 9323), (210, 9359), (212, 9368), (219, 9449), (224, 9482), (226, 9494), (230, 9512), (235, 9545), (248, 9614), (253, 9662), (255, 9668), (268, 9749), (271, 9779), (277, 9806), (280, 9821),

Gene: Zagie_22 Start: 8634, Stop: 10460, Start Num: 12

Candidate Starts for Zagie_22:

(Start: 12 @8634 has 37 MA's), (33, 8784), (56, 8919), (61, 8958), (72, 9036), (77, 9054), (107, 9204), (109, 9219), (114, 9276), (124, 9345), (130, 9393), (132, 9402), (150, 9537), (154, 9582), (155, 9588), (156, 9600), (160, 9660), (179, 9789), (180, 9795), (181, 9822), (192, 9921), (197, 9966), (232, 10161), (236, 10197), (239, 10215), (249, 10260),

Gene: Zhafia_25 Start: 8864, Stop: 10690, Start Num: 12

Candidate Starts for Zhafia_25:

(Start: 12 @8864 has 37 MA's), (56, 9149), (61, 9188), (72, 9266), (77, 9284), (109, 9449), (114, 9506), (130, 9623), (132, 9632), (150, 9767), (154, 9812), (155, 9818), (156, 9830), (160, 9890), (179, 10019), (180, 10025), (181, 10052), (192, 10151), (197, 10196), (232, 10391), (236, 10427), (239, 10445), (249, 10490),

Gene: phiAsp2_4 Start: 1019, Stop: 2959, Start Num: 7

Candidate Starts for phiAsp2_4:

(1, 869), (2, 875), (3, 878), (4, 890), (7, 1019), (18, 1070), (39, 1238), (42, 1259), (45, 1268), (57, 1331), (66, 1394), (68, 1415), (77, 1466), (79, 1469), (94, 1553), (106, 1640), (108, 1646), (111, 1664), (115, 1718), (118, 1736), (130, 1784), (138, 1817), (139, 1844), (140, 1847), (142, 1856), (145, 1877), (146, 1880), (152, 1946), (156, 2000), (167, 2138), (185, 2261), (186, 2264), (187, 2285), (188, 2294), (209, 2411), (223, 2576), (227, 2603), (232, 2627), (241, 2702), (255, 2786), (257, 2792), (260, 2813), (264, 2837), (266, 2852), (270, 2894), (274, 2915), (281, 2945),