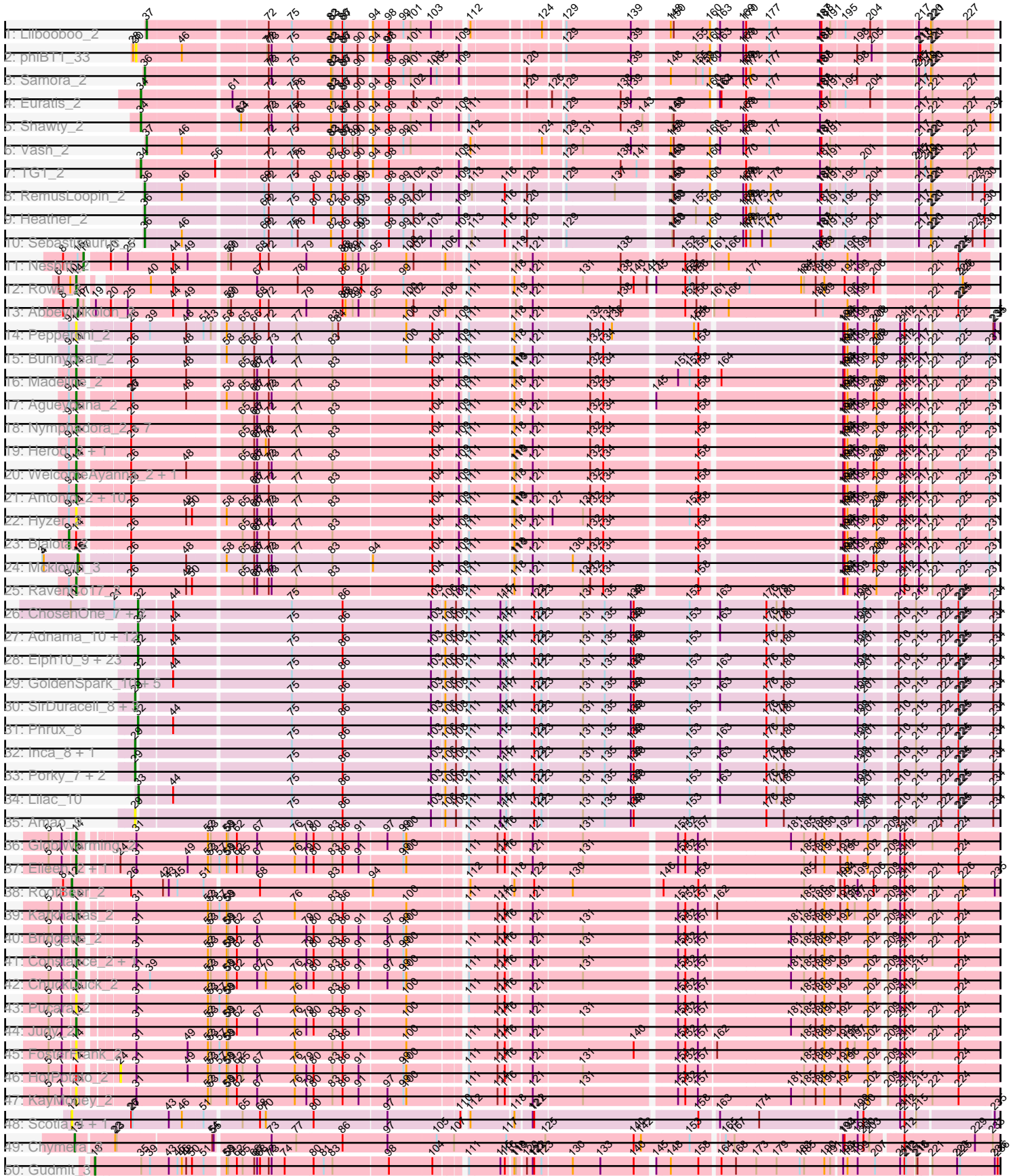
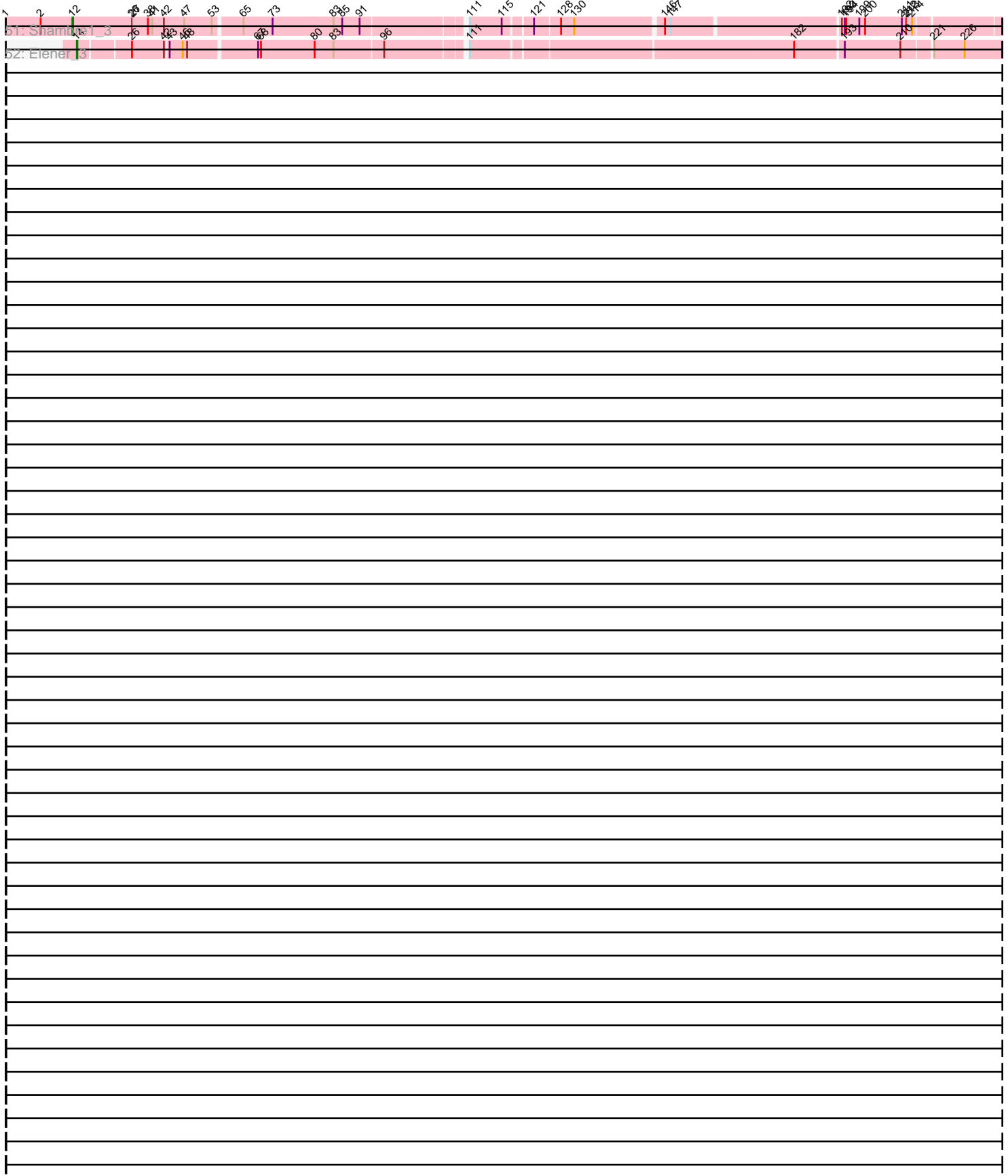


Pham 215969



Pham 215969



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 215969 Report

This analysis was run 02/22/25 on database version 588.

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 215969 has 122 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Lilbooboo_2
- Track 2 : phiBT1_33
- Track 3 : Samora_2
- Track 4 : Euratis_2
- Track 5 : Shawty_2
- Track 6 : Vash_2
- Track 7 : TG1_2
- Track 8 : RemusLoopin_2
- Track 9 : Heather_2
- Track 10 : Sebastisaurus_2
- Track 11 : Nesbitt_2
- Track 12 : Rowa_2
- Track 13 : AbbeyMikolon_2
- Track 14 : Pepperoni_2
- Track 15 : Bunnybear_2
- Track 16 : Madeline_2
- Track 17 : Agueybana_2
- Track 18 : Nymphadora_2, AlumE_2, Eviarto_2, BatStarr_2, BoyNamedSue_2, TimTam_2, Zirinka_2, Bosnia_2
- Track 19 : Herod_2, Hugley_2
- Track 20 : WelcomeAyanna_2, ThankyouJordi_2
- Track 21 : Antonio_2, Suscepit_2, Polly_2, Trumpet_2, Manasvini_2, Maridalia_2, Kita_2, Zameen_2, Eudoria_2, Tayonia_2, Neobush_2
- Track 22 : Hyzer_2
- Track 23 : Bialota_2
- Track 24 : Mcklovin_3
- Track 25 : RavenCo17_2
- Track 26 : ChosenOne_7, Elite2014_7, Lilpickle_7
- Track 27 : Adnama_10, AmericanBeauty_10, Hoonter_10, TBrady12_10, Highbury_9, Saints25_9, Stank_10, Argent26_10, Xandras_10, Wiggin_10, Goldilocks_10, Gemini_10, Kimchi_10
- Track 28 : Elph10_9, Thimble_9, Moldemort_9, Lilizi_10, Barbarian_8, MadamMonkfish_8, Bench_10, NoSleep_9, Murphy_8, Hopey_9, DoctorDiddles_9,

- Czyszczone1_9, Simpliphy_9, RiverMonster_8, Maxxinista_9, HanKaySha_9, 244_9, Dumbo_8, Asriel_8, Holt_10, Filch_9, Stark_9, Ukulele_8, Pumpkin_9
- Track 29 : GoldenSpark_10, Cactus_10, GooberAzure_10, StolenFromERC_10, OrionPax_9, Gage_10
 - Track 30 : SirDuracell_8, BigBubba_8, Bask21_8, ChotaBhai_8
 - Track 31 : Phrux_8
 - Track 32 : Inca_8, Pat3_8
 - Track 33 : Porky_7, Teaspoon_8, Emmina_8
 - Track 34 : Lilac_10
 - Track 35 : Amao_9
 - Track 36 : GlobiWarming_2
 - Track 37 : Eileen_2, Peas_2
 - Track 38 : RootBeer_2
 - Track 39 : Karkharias_2
 - Track 40 : Bridgette_2
 - Track 41 : Constance_2, PeggyLeg03_2
 - Track 42 : ChuckDuck_2
 - Track 43 : Pucara_2
 - Track 44 : Judy_2
 - Track 45 : FosterFrank_2
 - Track 46 : HotPotato_2
 - Track 47 : KayMoney_2
 - Track 48 : Scotia_4, NoSwimming_4
 - Track 49 : Chymera_2
 - Track 50 : Gudmit_3
 - Track 51 : Shambre1_3
 - Track 52 : Elener_3

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

The start number called the most often in the published annotations is 32, it was called in 46 of the 110 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 244_9, Adnama_10, AmericanBeauty_10, Argent26_10, Asriel_8, Barbarian_8, Bench_10, Cactus_10, ChosenOne_7, Czyszczone1_9, DoctorDiddles_9, Dumbo_8, Elite2014_7, Elph10_9, Filch_9, Gage_10, Gemini_10, GoldenSpark_10, Goldilocks_10, GooberAzure_10, HanKaySha_9, Highbury_9, Holt_10, Hoonter_10, Hopey_9, Kimchi_10, Lilizi_10, Lilpickle_7, MadamMonkfish_8, Maxxinista_9, Moldemort_9, Murphy_8, NoSleep_9, OrionPax_9, Phrux_8, Pumpkin_9, RiverMonster_8, Saints25_9, Simpliphy_9, Stank_10, Stark_9, StolenFromERC_10, TBrady12_10, Thimble_9, Ukulele_8, Wiggin_10, Xandras_10,

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

-

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

- AbbeyMikolon_2, Agueybana_2, AlumE_2, Amao_9, Antonio_2, Bask21_8, BatStarr_2, Bialota_2, BigBubba_8, Bosnia_2, BoyNamedSue_2, Bridgette_2, Bunnybear_2, ChotaBhai_8, ChuckDuck_2, Chymera_2, Constance_2, Eileen_2,

Elener_3, Emmina_8, Eudoria_2, Euratis_2, Eviarto_2, FosterFrank_2, GlobiWarming_2, Gudmit_3, Heather_2, Herod_2, HotPotato_2, Hugley_2, Hyzer_2, Inca_8, Judy_2, Karkharias_2, KayMoney_2, Kita_2, Lilac_10, Lilbooboo_2, Madeline_2, Manasvini_2, Maridalia_2, Mcklovin_3, Neobush_2, Nesbitt_2, NoSwimming_4, Nymphadora_2, Pat3_8, Peas_2, PeggyLeg03_2, Pepperoni_2, Polly_2, Porky_7, Pucara_2, RavenCo17_2, RemusLoopin_2, RootBeer_2, Rowa_2, Samora_2, Scotia_4, Sebastisaurus_2, Shambre1_3, Shawty_2, SirDuracell_8, Suscepit_2, TG1_2, Tayonia_2, Teaspoon_8, ThankyouJordi_2, TimTam_2, Trumpet_2, Vash_2, WelcomeAyanna_2, Zameen_2, Zirinka_2, phiBT1_33,

Summary by start number:

Start 9:

- Found in 30 of 122 (24.6%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 3.3% of time when present
- Phage (with cluster) where this start called: Bialota_2 (CZ1),

Start 12:

- Found in 4 of 122 (3.3%) of genes in pham
- Manual Annotations of this start: 2 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NoSwimming_4 (FO), RootBeer_2 (FA), Scotia_4 (FO), Shambre1_3 (singleton),

Start 13:

- Found in 1 of 122 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Chymera_2 (singleton),

Start 14:

- Found in 45 of 122 (36.9%) of genes in pham
- Manual Annotations of this start: 37 of 110
- Called 95.6% of time when present
- Phage (with cluster) where this start called: Agueybana_2 (CZ1), AlumE_2 (CZ1), Antonio_2 (CZ1), BatStarr_2 (CZ1), Bosnia_2 (CZ1), BoyNamedSue_2 (CZ1), Bridgette_2 (FA), Bunnybear_2 (CZ), ChuckDuck_2 (FA), Constance_2 (FA), Eileen_2 (FA), Elener_3 (singleton), Eudoria_2 (CZ1), Eviarto_2 (CZ1), FosterFrank_2 (FA), GlobiWarming_2 (FA), Herod_2 (CZ1), Hugley_2 (CZ1), Hyzer_2 (CZ1), Judy_2 (FA), Karkharias_2 (FA), KayMoney_2 (FA), Kita_2 (CZ1), Madeline_2 (CZ1), Manasvini_2 (CZ1), Maridalia_2 (CZ1), Neobush_2 (CZ1), Nymphadora_2 (CZ1), Peas_2 (FA), PeggyLeg03_2 (FA), Pepperoni_2 (CZ), Polly_2 (CZ1), Pucara_2 (FA), RavenCo17_2 (CZ8), Rowa_2 (BL), Suscepit_2 (CZ1), Tayonia_2 (CZ1), ThankyouJordi_2 (CZ1), TimTam_2 (CZ1), Trumpet_2 (CZ1), WelcomeAyanna_2 (CZ1), Zameen_2 (CZ1), Zirinka_2 (CZ1),

Start 15:

- Found in 3 of 122 (2.5%) of genes in pham
- Manual Annotations of this start: 2 of 110
- Called 66.7% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon_2 (BL), Mcklovin_3 (CZ4),

Start 17:

- Found in 2 of 122 (1.6%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Nesbitt_2 (BL),

Start 18:

- Found in 1 of 122 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gudmit_3 (singleton),

Start 24:

- Found in 3 of 122 (2.5%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: HotPotato_2 (FA),

Start 29:

- Found in 10 of 122 (8.2%) of genes in pham
- Manual Annotations of this start: 9 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amao_9 (E), Bask21_8 (E), BigBubba_8 (E), ChotaBhai_8 (E), Emmina_8 (E), Inca_8 (E), Pat3_8 (E), Porky_7 (E), SirDuracell_8 (E), Teaspoon_8 (E),

Start 30:

- Found in 1 of 122 (0.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: phiBT1_33 (BB1),

Start 32:

- Found in 47 of 122 (38.5%) of genes in pham
- Manual Annotations of this start: 46 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 244_9 (E), Adnama_10 (E), AmericanBeauty_10 (E), Argent26_10 (E), Asriel_8 (E), Barbarian_8 (E), Bench_10 (E), Cactus_10 (E), ChosenOne_7 (E), Czyszczonek_1_9 (E), DoctorDiddles_9 (E), Dumbo_8 (E), Elite2014_7 (E), Elph10_9 (E), Filch_9 (E), Gage_10 (E), Gemini_10 (E), GoldenSpark_10 (E), Goldilocks_10 (E), GooberAzure_10 (E), HanKaySha_9 (E), Highbury_9 (E), Holt_10 (E), Hoonter_10 (E), Hopey_9 (E), Kimchi_10 (E), Lilizi_10 (E), Lilpickle_7 (E), MadamMonkfish_8 (E), Maxxinista_9 (E), Moldemort_9 (E), Murphy_8 (E), NoSleep_9 (E), OrionPax_9 (E), Phrux_8 (E), Pumpkin_9 (E), RiverMonster_8 (E), Saints25_9 (E), Simpliphy_9 (E), Stank_10 (E), Stark_9 (E), StolenFromERC_10 (E), TBrady12_10 (E), Thimble_9 (E), Ukulele_8 (E), Wiggin_10 (E), Xandras_10 (E),

Start 33:

- Found in 1 of 122 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 110
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Lilac_10 (E),

Start 34:

- Found in 3 of 122 (2.5%) of genes in pham
- Manual Annotations of this start: 3 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Euratis_2 (BB1), Shawty_2 (BB1), TG1_2 (BB1),

Start 36:

- Found in 4 of 122 (3.3%) of genes in pham
- Manual Annotations of this start: 4 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Heather_2 (BB2), RemusLoopin_2 (BB2), Samora_2 (BB1), Sebastisaurus_2 (BB2),

Start 37:

- Found in 2 of 122 (1.6%) of genes in pham
- Manual Annotations of this start: 2 of 110
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Lilbooboo_2 (BB1), Vash_2 (BB1),

Summary by clusters:

There are 11 clusters represented in this pham: CZ8, E, CZ, BL, CZ1, singleton, CZ4, FA, BB2, BB1, FO,

Info for manual annotations of cluster BB1:

- Start number 34 was manually annotated 3 times for cluster BB1.
- Start number 36 was manually annotated 1 time for cluster BB1.
- Start number 37 was manually annotated 2 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 36 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster BL:

- Start number 14 was manually annotated 1 time for cluster BL.
- Start number 15 was manually annotated 1 time for cluster BL.
- Start number 17 was manually annotated 1 time for cluster BL.

Info for manual annotations of cluster CZ:

- Start number 14 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 9 was manually annotated 1 time for cluster CZ1.
- Start number 14 was manually annotated 24 times for cluster CZ1.

Info for manual annotations of cluster CZ4:

- Start number 15 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ8:

- Start number 14 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster E:

- Start number 29 was manually annotated 9 times for cluster E.
- Start number 32 was manually annotated 46 times for cluster E.
- Start number 33 was manually annotated 1 time for cluster E.

Info for manual annotations of cluster FA:

- Start number 12 was manually annotated 1 time for cluster FA.
- Start number 14 was manually annotated 9 times for cluster FA.

Gene Information:

Gene: 244_9 Start: 2277, Stop: 3947, Start Num: 32

Candidate Starts for 244_9:

(Start: 32 @2277 has 46 MA's), (44, 2340), (75, 2574), (86, 2676), (103, 2856), (106, 2880), (108, 2898), (111, 2910), (115, 2973), (117, 2985), (122, 3030), (123, 3045), (131, 3123), (135, 3168), (139, 3222), (140, 3228), (153, 3342), (176, 3486), (180, 3522), (199, 3675), (201, 3687), (210, 3744), (215, 3780), (222, 3831), (224, 3867), (225, 3870), (234, 3936),

Gene: AbbeyMikolon_2 Start: 631, Stop: 2349, Start Num: 15

Candidate Starts for AbbeyMikolon_2:

(8, 601), (Start: 15 @631 has 2 MA's), (Start: 17 @643 has 1 MA's), (19, 655), (20, 682), (25, 712), (44, 802), (49, 832), (59, 901), (60, 907), (68, 967), (72, 985), (79, 1063), (86, 1135), (88, 1141), (89, 1156), (91, 1168), (95, 1195), (100, 1261), (102, 1276), (106, 1333), (111, 1360), (119, 1447), (121, 1471), (138, 1645), (152, 1759), (156, 1780), (161, 1810), (166, 1840), (186, 2017), (189, 2032), (196, 2080), (199, 2101), (221, 2233), (224, 2287), (225, 2290),

Gene: Adnama_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Adnama_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Agueybana_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Agueybana_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (27, 591), (48, 702), (58, 771), (65, 804), (66, 828), (67, 834), (72, 858), (73, 864), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (145, 1575), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (206, 1995), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: AlumE_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for AlumE_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Amao_9 Start: 2303, Stop: 3973, Start Num: 29

Candidate Starts for Amao_9:

(Start: 29 @2303 has 9 MA's), (75, 2600), (86, 2702), (103, 2882), (106, 2906), (108, 2924), (111, 2936), (115, 2999), (117, 3011), (122, 3056), (123, 3071), (131, 3149), (135, 3194), (139, 3248), (140, 3254), (153, 3368), (176, 3512), (180, 3548), (199, 3701), (201, 3713), (210, 3770), (215, 3806), (222, 3857), (224, 3893), (225, 3896), (234, 3962),

Gene: AmericanBeauty_10 Start: 2506, Stop: 4176, Start Num: 32

Candidate Starts for AmericanBeauty_10:

(Start: 32 @2506 has 46 MA's), (44, 2569), (75, 2803), (86, 2905), (103, 3085), (106, 3109), (108, 3127), (111, 3139), (115, 3202), (117, 3214), (122, 3259), (123, 3274), (131, 3352), (135, 3397), (139, 3451), (140, 3457), (153, 3571), (163, 3619), (176, 3715), (179, 3736), (180, 3751), (199, 3904), (201, 3916), (210, 3973), (215, 4009), (222, 4060), (224, 4096), (225, 4099), (234, 4165),

Gene: Antonio_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Antonio_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Argent26_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Argent26_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Asriel_8 Start: 2168, Stop: 3838, Start Num: 32

Candidate Starts for Asriel_8:

(Start: 32 @2168 has 46 MA's), (44, 2231), (75, 2465), (86, 2567), (103, 2747), (106, 2771), (108, 2789), (111, 2801), (115, 2864), (117, 2876), (122, 2921), (123, 2936), (131, 3014), (135, 3059), (139, 3113), (140, 3119), (153, 3233), (176, 3377), (180, 3413), (199, 3566), (201, 3578), (210, 3635), (215, 3671), (222, 3722), (224, 3758), (225, 3761), (234, 3827),

Gene: Barbarian_8 Start: 2168, Stop: 3838, Start Num: 32

Candidate Starts for Barbarian_8:

(Start: 32 @2168 has 46 MA's), (44, 2231), (75, 2465), (86, 2567), (103, 2747), (106, 2771), (108, 2789), (111, 2801), (115, 2864), (117, 2876), (122, 2921), (123, 2936), (131, 3014), (135, 3059), (139, 3113), (140, 3119), (153, 3233), (176, 3377), (180, 3413), (199, 3566), (201, 3578), (210, 3635), (215, 3671), (222, 3722), (224, 3758), (225, 3761), (234, 3827),

Gene: Bask21_8 Start: 1963, Stop: 3633, Start Num: 29

Candidate Starts for Bask21_8:

(Start: 29 @1963 has 9 MA's), (75, 2260), (86, 2362), (103, 2542), (106, 2566), (108, 2584), (111, 2596), (115, 2659), (117, 2671), (122, 2716), (123, 2731), (131, 2809), (135, 2854), (139, 2908), (140, 2914), (153, 3028), (163, 3076), (176, 3172), (180, 3208), (199, 3361), (201, 3373), (210, 3430), (215, 3466), (222, 3517), (224, 3553), (225, 3556), (234, 3622),

Gene: BatStarr_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for BatStarr_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Bench_10 Start: 2583, Stop: 4253, Start Num: 32

Candidate Starts for Bench_10:

(Start: 32 @2583 has 46 MA's), (44, 2646), (75, 2880), (86, 2982), (103, 3162), (106, 3186), (108, 3204), (111, 3216), (115, 3279), (117, 3291), (122, 3336), (123, 3351), (131, 3429), (135, 3474), (139, 3528), (140, 3534), (153, 3648), (176, 3792), (180, 3828), (199, 3981), (201, 3993), (210, 4050), (215, 4086), (222, 4137), (224, 4173), (225, 4176), (234, 4242),

Gene: Bialota_2 Start: 483, Stop: 2222, Start Num: 9

Candidate Starts for Bialota_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: BigBubba_8 Start: 1963, Stop: 3633, Start Num: 29

Candidate Starts for BigBubba_8:

(Start: 29 @1963 has 9 MA's), (75, 2260), (86, 2362), (103, 2542), (106, 2566), (108, 2584), (111, 2596), (115, 2659), (117, 2671), (122, 2716), (123, 2731), (131, 2809), (135, 2854), (139, 2908), (140, 2914), (153, 3028), (163, 3076), (176, 3172), (180, 3208), (199, 3361), (201, 3373), (210, 3430), (215, 3466), (222, 3517), (224, 3553), (225, 3556), (234, 3622),

Gene: Bosnia_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Bosnia_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: BoyNamedSue_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for BoyNamedSue_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Bridgette_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for Bridgette_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (52, 859), (53, 865), (58, 898), (59, 901), (62, 919), (67, 961), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (97, 1222), (99, 1255), (100, 1261), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (181, 1969), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (221, 2236), (224, 2290),

Gene: Bunnybear_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Bunnybear_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (48, 702), (58, 771), (65, 804), (66, 828), (73, 864), (77, 915), (83, 987), (100, 1134), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (206, 1995), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Cactus_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Cactus_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: ChosenOne_7 Start: 1729, Stop: 3399, Start Num: 32

Candidate Starts for ChosenOne_7:

(11, 1603), (21, 1681), (Start: 32 @1729 has 46 MA's), (44, 1792), (75, 2026), (86, 2128), (103, 2308), (106, 2332), (108, 2350), (111, 2362), (115, 2425), (117, 2437), (122, 2482), (123, 2497), (131, 2575), (135, 2620), (139, 2674), (140, 2680), (153, 2794), (163, 2842), (176, 2938), (179, 2959), (180, 2974), (199, 3127), (201, 3139), (210, 3196), (215, 3232), (222, 3283), (224, 3319), (225, 3322), (234, 3388),

Gene: ChotaBhai_8 Start: 1963, Stop: 3633, Start Num: 29

Candidate Starts for ChotaBhai_8:

(Start: 29 @1963 has 9 MA's), (75, 2260), (86, 2362), (103, 2542), (106, 2566), (108, 2584), (111, 2596), (115, 2659), (117, 2671), (122, 2716), (123, 2731), (131, 2809), (135, 2854), (139, 2908), (140, 2914), (153, 3028), (163, 3076), (176, 3172), (180, 3208), (199, 3361), (201, 3373), (210, 3430), (215, 3466), (222, 3517), (224, 3553), (225, 3556), (234, 3622),

Gene: ChuckDuck_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for ChuckDuck_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (39, 742), (52, 859), (53, 865), (58, 898), (59, 901), (62, 919), (67, 961), (70, 979), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (97, 1222), (99, 1255), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (181, 1969), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (215, 2203), (224, 2290),

Gene: Chymera_2 Start: 579, Stop: 2390, Start Num: 13

Candidate Starts for Chymera_2:

(Start: 13 @579 has 1 MA's), (22, 651), (23, 654), (54, 843), (55, 846), (73, 954), (77, 1005), (86, 1098), (97, 1191), (105, 1290), (107, 1326), (117, 1434), (125, 1515), (140, 1698), (142, 1713), (153, 1812), (165, 1860), (167, 1878), (193, 2094), (194, 2097), (199, 2124), (200, 2136), (203, 2148), (212, 2205), (229, 2346), (233, 2379),

Gene: Constance_2 Start: 626, Stop: 2374, Start Num: 14

Candidate Starts for Constance_2:

(5, 575), (7, 602), (Start: 14 @626 has 37 MA's), (31, 719), (52, 860), (53, 866), (58, 899), (59, 902), (62, 920), (67, 962), (79, 1064), (80, 1076), (83, 1115), (86, 1136), (91, 1169), (97, 1223), (99, 1256), (100, 1262), (111, 1364), (114, 1421), (116, 1436), (121, 1475), (131, 1571), (151, 1748), (152, 1763), (157, 1787), (181, 1970), (185, 1997), (186, 2021), (190, 2039), (192, 2069), (202, 2126), (209, 2153), (211, 2177), (212, 2186), (221, 2237), (224, 2291),

Gene: Czyszczone1_9 Start: 2465, Stop: 4135, Start Num: 32

Candidate Starts for Czyszczone1_9:

(Start: 32 @2465 has 46 MA's), (44, 2528), (75, 2762), (86, 2864), (103, 3044), (106, 3068), (108, 3086), (111, 3098), (115, 3161), (117, 3173), (122, 3218), (123, 3233), (131, 3311), (135, 3356), (139, 3410), (140, 3416), (153, 3530), (176, 3674), (180, 3710), (199, 3863), (201, 3875), (210, 3932), (215, 3968), (222, 4019), (224, 4055), (225, 4058), (234, 4124),

Gene: DoctorDiddles_9 Start: 2462, Stop: 4132, Start Num: 32

Candidate Starts for DoctorDiddles_9:

(Start: 32 @2462 has 46 MA's), (44, 2525), (75, 2759), (86, 2861), (103, 3041), (106, 3065), (108, 3083), (111, 3095), (115, 3158), (117, 3170), (122, 3215), (123, 3230), (131, 3308), (135, 3353), (139, 3407), (140, 3413), (153, 3527), (176, 3671), (180, 3707), (199, 3860), (201, 3872), (210, 3929), (215, 3965), (222, 4016), (224, 4052), (225, 4055), (234, 4121),

Gene: Dumbo_8 Start: 2277, Stop: 3947, Start Num: 32

Candidate Starts for Dumbo_8:

(Start: 32 @2277 has 46 MA's), (44, 2340), (75, 2574), (86, 2676), (103, 2856), (106, 2880), (108, 2898), (111, 2910), (115, 2973), (117, 2985), (122, 3030), (123, 3045), (131, 3123), (135, 3168), (139, 3222), (140, 3228), (153, 3342), (176, 3486), (180, 3522), (199, 3675), (201, 3687), (210, 3744), (215, 3780), (222, 3831), (224, 3867), (225, 3870), (234, 3936),

Gene: Eileen_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for Eileen_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (24, 685), (31, 718), (49, 820), (52, 859), (53, 865), (57, 883), (58, 898), (59, 901), (62, 919), (65, 931), (67, 961), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (99, 1255), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (196, 2083), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (224, 2290),

Gene: Elener_3 Start: 1848, Stop: 3611, Start Num: 14

Candidate Starts for Elener_3:

(Start: 14 @1848 has 37 MA's), (26, 1944), (42, 2010), (43, 2016), (46, 2043), (48, 2052), (67, 2181), (68, 2187), (80, 2295), (83, 2334), (96, 2433), (111, 2580), (182, 3207), (193, 3303), (210, 3417), (221, 3471), (226, 3534),

Gene: Elite2014_7 Start: 1729, Stop: 3399, Start Num: 32

Candidate Starts for Elite2014_7:

(11, 1603), (21, 1681), (Start: 32 @1729 has 46 MA's), (44, 1792), (75, 2026), (86, 2128), (103, 2308), (106, 2332), (108, 2350), (111, 2362), (115, 2425), (117, 2437), (122, 2482), (123, 2497), (131, 2575), (135, 2620), (139, 2674), (140, 2680), (153, 2794), (163, 2842), (176, 2938), (179, 2959), (180, 2974), (199, 3127), (201, 3139), (210, 3196), (215, 3232), (222, 3283), (224, 3319), (225, 3322), (234, 3388),

Gene: Elph10_9 Start: 2280, Stop: 3950, Start Num: 32

Candidate Starts for Elph10_9:

(Start: 32 @2280 has 46 MA's), (44, 2343), (75, 2577), (86, 2679), (103, 2859), (106, 2883), (108, 2901), (111, 2913), (115, 2976), (117, 2988), (122, 3033), (123, 3048), (131, 3126), (135, 3171), (139, 3225), (140, 3231), (153, 3345), (176, 3489), (180, 3525), (199, 3678), (201, 3690), (210, 3747), (215, 3783), (222, 3834), (224, 3870), (225, 3873), (234, 3939),

Gene: Emmina_8 Start: 1834, Stop: 3504, Start Num: 29

Candidate Starts for Emmina_8:

(Start: 29 @1834 has 9 MA's), (75, 2131), (86, 2233), (103, 2413), (106, 2437), (108, 2455), (111, 2467), (115, 2530), (117, 2542), (122, 2587), (123, 2602), (131, 2680), (135, 2725), (139, 2779), (140, 2785), (153, 2899), (163, 2947), (176, 3043), (179, 3064), (180, 3079), (199, 3232), (201, 3244), (210, 3301), (215, 3337), (222, 3388), (224, 3424), (225, 3427), (234, 3493),

Gene: Eudoria_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Eudoria_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Euratis_2 Start: 596, Stop: 2176, Start Num: 34

Candidate Starts for Euratis_2:

(Start: 34 @596 has 3 MA's), (61, 767), (72, 833), (75, 881), (78, 893), (82, 962), (83, 965), (86, 986), (87, 989), (90, 1016), (94, 1037), (98, 1070), (102, 1121), (120, 1304), (126, 1343), (129, 1364), (138, 1475), (139, 1496), (160, 1637), (163, 1643), (164, 1646), (170, 1694), (177, 1742), (187, 1847), (188, 1850), (191, 1868), (195, 1895), (204, 1943), (217, 2024), (221, 2051), (227, 2123),

Gene: Eviarto_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Eviarto_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Filch_9 Start: 2274, Stop: 3944, Start Num: 32

Candidate Starts for Filch_9:

(Start: 32 @2274 has 46 MA's), (44, 2337), (75, 2571), (86, 2673), (103, 2853), (106, 2877), (108, 2895), (111, 2907), (115, 2970), (117, 2982), (122, 3027), (123, 3042), (131, 3120), (135, 3165), (139, 3219), (140, 3225), (153, 3339), (176, 3483), (180, 3519), (199, 3672), (201, 3684), (210, 3741), (215, 3777), (222, 3828), (224, 3864), (225, 3867), (234, 3933),

Gene: FosterFrank_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for FosterFrank_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (49, 820), (52, 859), (53, 865), (57, 883), (58, 898), (59, 901), (76, 1039), (83, 1114), (86, 1135), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (140, 1675), (151, 1747), (152, 1762), (157, 1786), (162, 1819), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (196, 2083), (197, 2098), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (221, 2236), (224, 2290),

Gene: Gage_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Gage_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Gemini_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Gemini_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: GlobiWarming_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for GlobiWarming_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (52, 859), (53, 865), (58, 898), (59, 901), (62, 919), (67, 961), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (97, 1222), (99, 1255), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (181, 1969), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (221, 2236), (224, 2290),

Gene: GoldenSpark_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for GoldenSpark_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Goldilocks_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Goldilocks_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: GooberAzure_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for GooberAzure_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Gudmit_3 Start: 983, Stop: 2704, Start Num: 18

Candidate Starts for Gudmit_3:

(Start: 18 @983 has 1 MA's), (35, 1076), (39, 1094), (43, 1133), (45, 1151), (46, 1160), (48, 1169), (50, 1181), (51, 1202), (58, 1238), (59, 1241), (62, 1259), (65, 1271), (66, 1295), (67, 1301), (68, 1307), (72, 1325), (73, 1331), (74, 1358), (80, 1415), (81, 1436), (83, 1454), (98, 1565), (104, 1652), (111, 1700), (115, 1763), (116, 1772), (118, 1784), (119, 1787), (120, 1802), (121, 1811), (122, 1814), (123, 1829), (130, 1886), (133, 1943), (140, 2012), (145, 2042), (148, 2069), (158, 2126), (164, 2162), (168, 2192), (173, 2231), (179, 2273), (183, 2321), (185, 2330), (190, 2372), (191, 2384), (193, 2402), (196, 2411), (199, 2432), (207, 2468), (211, 2519), (212, 2528), (213, 2531), (215, 2546), (216, 2549), (221, 2570), (223, 2621), (225, 2627), (235, 2693), (236, 2699),

Gene: HanKaySha_9 Start: 2465, Stop: 4135, Start Num: 32

Candidate Starts for HanKaySha_9:

(Start: 32 @2465 has 46 MA's), (44, 2528), (75, 2762), (86, 2864), (103, 3044), (106, 3068), (108, 3086), (111, 3098), (115, 3161), (117, 3173), (122, 3218), (123, 3233), (131, 3311), (135, 3356), (139, 3410), (140, 3416), (153, 3530), (176, 3674), (180, 3710), (199, 3863), (201, 3875), (210, 3932), (215, 3968), (222, 4019), (224, 4055), (225, 4058), (234, 4124),

Gene: Heather_2 Start: 597, Stop: 2144, Start Num: 36

Candidate Starts for Heather_2:

(Start: 36 @597 has 4 MA's), (69, 816), (72, 825), (75, 873), (80, 918), (82, 954), (86, 978), (90, 1008), (93, 1017), (98, 1062), (99, 1092), (102, 1113), (109, 1191), (116, 1266), (120, 1296), (149, 1551), (150, 1554), (155, 1596), (160, 1623), (169, 1674), (170, 1680), (172, 1689), (173, 1701), (178, 1731), (187, 1833), (191, 1854), (195, 1881), (204, 1929), (217, 2010), (220, 2034), (221, 2037), (230, 2133),

Gene: Herod_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Herod_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (70, 852), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Highbury_9 Start: 2474, Stop: 4144, Start Num: 32

Candidate Starts for Highbury_9:

(Start: 32 @2474 has 46 MA's), (44, 2537), (75, 2771), (86, 2873), (103, 3053), (106, 3077), (108, 3095), (111, 3107), (115, 3170), (117, 3182), (122, 3227), (123, 3242), (131, 3320), (135, 3365), (139, 3419), (140, 3425), (153, 3539), (163, 3587), (176, 3683), (179, 3704), (180, 3719), (199, 3872), (201, 3884), (210, 3941), (215, 3977), (222, 4028), (224, 4064), (225, 4067), (234, 4133),

Gene: Holt_10 Start: 2580, Stop: 4250, Start Num: 32

Candidate Starts for Holt_10:

(Start: 32 @2580 has 46 MA's), (44, 2643), (75, 2877), (86, 2979), (103, 3159), (106, 3183), (108, 3201), (111, 3213), (115, 3276), (117, 3288), (122, 3333), (123, 3348), (131, 3426), (135, 3471), (139, 3525), (140, 3531), (153, 3645), (176, 3789), (180, 3825), (199, 3978), (201, 3990), (210, 4047), (215, 4083), (222, 4134), (224, 4170), (225, 4173), (234, 4239),

Gene: Hoonter_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Hoonter_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Hopey_9 Start: 2274, Stop: 3944, Start Num: 32

Candidate Starts for Hopey_9:

(Start: 32 @2274 has 46 MA's), (44, 2337), (75, 2571), (86, 2673), (103, 2853), (106, 2877), (108, 2895), (111, 2907), (115, 2970), (117, 2982), (122, 3027), (123, 3042), (131, 3120), (135, 3165), (139, 3219), (140, 3225), (153, 3339), (176, 3483), (180, 3519), (199, 3672), (201, 3684), (210, 3741), (215, 3777), (222, 3828), (224, 3864), (225, 3867), (234, 3933),

Gene: HotPotato_2 Start: 685, Stop: 2373, Start Num: 24

Candidate Starts for HotPotato_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (24, 685), (31, 718), (49, 820), (52, 859), (53, 865), (57, 883), (58, 898), (59, 901), (62, 919), (65, 931), (67, 961), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (99, 1255), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (196, 2083), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (224, 2290),

Gene: Hugley_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Hugley_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (70, 852), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Hyzer_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Hyzer_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (48, 702), (50, 714), (58, 771), (65, 804), (66, 828), (67, 834), (72, 858), (73, 864), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (119, 1320), (121, 1344), (127, 1377), (131, 1440), (132, 1455), (134, 1482), (153, 1641), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (206, 1995), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Inca_8 Start: 1976, Stop: 3646, Start Num: 29

Candidate Starts for Inca_8:

(Start: 29 @1976 has 9 MA's), (75, 2273), (86, 2375), (103, 2555), (106, 2579), (108, 2597), (111, 2609), (115, 2672), (122, 2729), (123, 2744), (131, 2822), (135, 2867), (139, 2921), (140, 2927), (153, 3041), (163, 3089), (176, 3185), (180, 3221), (199, 3374), (201, 3386), (210, 3443), (215, 3479), (222, 3530), (224, 3566), (225, 3569), (234, 3635),

Gene: Judy_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for Judy_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (52, 859), (53, 865), (58, 898), (59, 901), (62, 919), (67, 961), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (100, 1261), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (181, 1969), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (221, 2236), (224, 2290),

Gene: Karkharias_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for Karkharias_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (52, 859), (53, 865), (57, 883), (58, 898), (59, 901), (76, 1039), (83, 1114), (86, 1135), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (151, 1747), (152, 1762), (157, 1786), (162, 1819), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (196, 2083), (197, 2098), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (221, 2236), (224, 2290),

Gene: KayMoney_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for KayMoney_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (52, 859), (53, 865), (58, 898), (59, 901), (62, 919), (67, 961), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (97, 1222), (99, 1255), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (181, 1969), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (215, 2203), (221, 2236), (224, 2290),

Gene: Kimchi_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Kimchi_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Kita_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Kita_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Lilac_10 Start: 2301, Stop: 3971, Start Num: 33

Candidate Starts for Lilac_10:

(Start: 33 @2301 has 1 MA's), (44, 2364), (75, 2598), (86, 2700), (103, 2880), (106, 2904), (108, 2922), (111, 2934), (115, 2997), (117, 3009), (122, 3054), (123, 3069), (131, 3147), (135, 3192), (139, 3246), (140, 3252), (153, 3366), (163, 3414), (176, 3510), (179, 3531), (180, 3546), (199, 3699), (201, 3711), (210, 3768), (215, 3804), (222, 3855), (224, 3891), (225, 3894), (234, 3960),

Gene: Lilbooboo_2 Start: 588, Stop: 2150, Start Num: 37

Candidate Starts for Lilbooboo_2:

(Start: 37 @588 has 2 MA's), (72, 813), (75, 861), (82, 942), (83, 945), (86, 966), (87, 969), (94, 1017), (98, 1050), (99, 1080), (101, 1095), (103, 1134), (112, 1188), (124, 1311), (129, 1344), (139, 1476), (148, 1539), (150, 1545), (160, 1614), (163, 1620), (169, 1665), (170, 1671), (177, 1719), (187, 1824), (188, 1827), (191, 1845), (195, 1872), (204, 1920), (217, 2001), (220, 2025), (221, 2028), (227, 2100),

Gene: Lilizi_10 Start: 2512, Stop: 4182, Start Num: 32

Candidate Starts for Lilizi_10:

(Start: 32 @2512 has 46 MA's), (44, 2575), (75, 2809), (86, 2911), (103, 3091), (106, 3115), (108, 3133), (111, 3145), (115, 3208), (117, 3220), (122, 3265), (123, 3280), (131, 3358), (135, 3403), (139, 3457), (140, 3463), (153, 3577), (176, 3721), (180, 3757), (199, 3910), (201, 3922), (210, 3979), (215, 4015), (222, 4066), (224, 4102), (225, 4105), (234, 4171),

Gene: Lilpickle_7 Start: 1729, Stop: 3399, Start Num: 32

Candidate Starts for Lilpickle_7:

(11, 1603), (21, 1681), (Start: 32 @1729 has 46 MA's), (44, 1792), (75, 2026), (86, 2128), (103, 2308), (106, 2332), (108, 2350), (111, 2362), (115, 2425), (117, 2437), (122, 2482), (123, 2497), (131, 2575), (135, 2620), (139, 2674), (140, 2680), (153, 2794), (163, 2842), (176, 2938), (179, 2959), (180, 2974), (199, 3127), (201, 3139), (210, 3196), (215, 3232), (222, 3283), (224, 3319), (225, 3322), (234, 3388),

Gene: MadamMonkfish_8 Start: 2141, Stop: 3811, Start Num: 32

Candidate Starts for MadamMonkfish_8:

(Start: 32 @2141 has 46 MA's), (44, 2204), (75, 2438), (86, 2540), (103, 2720), (106, 2744), (108, 2762), (111, 2774), (115, 2837), (117, 2849), (122, 2894), (123, 2909), (131, 2987), (135, 3032), (139, 3086), (140, 3092), (153, 3206), (176, 3350), (180, 3386), (199, 3539), (201, 3551), (210, 3608), (215, 3644), (222, 3695), (224, 3731), (225, 3734), (234, 3800),

Gene: Madeline_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Madeline_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (48, 702), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (119, 1320), (121, 1344), (132, 1455), (134, 1482), (151, 1617), (153, 1641), (158, 1659), (164, 1692), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Manasvini_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Manasvini_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Maridalia_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Maridalia_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Maxxinista_9 Start: 2280, Stop: 3950, Start Num: 32

Candidate Starts for Maxxinista_9:

(Start: 32 @2280 has 46 MA's), (44, 2343), (75, 2577), (86, 2679), (103, 2859), (106, 2883), (108, 2901), (111, 2913), (115, 2976), (117, 2988), (122, 3033), (123, 3048), (131, 3126), (135, 3171), (139, 3225), (140, 3231), (153, 3345), (176, 3489), (180, 3525), (199, 3678), (201, 3690), (210, 3747), (215,

3783), (222, 3834), (224, 3870), (225, 3873), (234, 3939),

Gene: Mcklovin_3 Start: 962, Stop: 2683, Start Num: 15

Candidate Starts for Mcklovin_3:

(3, 890), (4, 893), (Start: 15 @962 has 2 MA's), (16, 965), (26, 1049), (48, 1163), (58, 1232), (65, 1265), (66, 1289), (67, 1295), (72, 1319), (73, 1325), (77, 1376), (83, 1448), (94, 1526), (104, 1646), (109, 1688), (111, 1694), (118, 1778), (119, 1781), (121, 1805), (130, 1880), (132, 1916), (134, 1943), (158, 2120), (193, 2393), (194, 2396), (196, 2402), (199, 2423), (206, 2456), (208, 2462), (211, 2510), (212, 2519), (217, 2543), (221, 2561), (225, 2618), (231, 2675),

Gene: Moldemort_9 Start: 2465, Stop: 4135, Start Num: 32

Candidate Starts for Moldemort_9:

(Start: 32 @2465 has 46 MA's), (44, 2528), (75, 2762), (86, 2864), (103, 3044), (106, 3068), (108, 3086), (111, 3098), (115, 3161), (117, 3173), (122, 3218), (123, 3233), (131, 3311), (135, 3356), (139, 3410), (140, 3416), (153, 3530), (176, 3674), (180, 3710), (199, 3863), (201, 3875), (210, 3932), (215, 3968), (222, 4019), (224, 4055), (225, 4058), (234, 4124),

Gene: Murphy_8 Start: 2182, Stop: 3852, Start Num: 32

Candidate Starts for Murphy_8:

(Start: 32 @2182 has 46 MA's), (44, 2245), (75, 2479), (86, 2581), (103, 2761), (106, 2785), (108, 2803), (111, 2815), (115, 2878), (117, 2890), (122, 2935), (123, 2950), (131, 3028), (135, 3073), (139, 3127), (140, 3133), (153, 3247), (176, 3391), (180, 3427), (199, 3580), (201, 3592), (210, 3649), (215, 3685), (222, 3736), (224, 3772), (225, 3775), (234, 3841),

Gene: Neobush_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Neobush_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Nesbitt_2 Start: 643, Stop: 2349, Start Num: 17

Candidate Starts for Nesbitt_2:

(8, 601), (Start: 15 @631 has 2 MA's), (Start: 17 @643 has 1 MA's), (20, 682), (25, 712), (44, 802), (49, 832), (59, 901), (60, 907), (68, 967), (72, 985), (79, 1063), (86, 1135), (88, 1141), (89, 1156), (91, 1168), (95, 1195), (100, 1261), (102, 1276), (106, 1333), (111, 1360), (119, 1447), (121, 1471), (138, 1645), (152, 1759), (156, 1780), (161, 1810), (166, 1840), (186, 2017), (189, 2032), (196, 2080), (199, 2101), (221, 2233), (224, 2287), (225, 2290),

Gene: NoSleep_9 Start: 2462, Stop: 4132, Start Num: 32

Candidate Starts for NoSleep_9:

(Start: 32 @2462 has 46 MA's), (44, 2525), (75, 2759), (86, 2861), (103, 3041), (106, 3065), (108, 3083), (111, 3095), (115, 3158), (117, 3170), (122, 3215), (123, 3230), (131, 3308), (135, 3353), (139, 3407), (140, 3413), (153, 3527), (176, 3671), (180, 3707), (199, 3860), (201, 3872), (210, 3929), (215, 3965), (222, 4016), (224, 4052), (225, 4055), (234, 4121),

Gene: NoSwimming_4 Start: 2180, Stop: 3946, Start Num: 12

Candidate Starts for NoSwimming_4:

(Start: 12 @2180 has 2 MA's), (26, 2303), (27, 2306), (43, 2381), (46, 2408), (51, 2450), (65, 2519), (68, 2552), (70, 2564), (80, 2660), (97, 2807), (110, 2942), (112, 2948), (118, 3029), (121, 3056), (122, 3059), (158, 3374), (163, 3404), (174, 3482), (199, 3677), (200, 3689), (211, 3764), (212, 3773), (215, 3791), (235, 3935),

Gene: Nymphadora_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Nymphadora_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: OrionPax_9 Start: 2465, Stop: 4135, Start Num: 32

Candidate Starts for OrionPax_9:

(Start: 32 @2465 has 46 MA's), (44, 2528), (75, 2762), (86, 2864), (103, 3044), (106, 3068), (108, 3086), (111, 3098), (115, 3161), (117, 3173), (122, 3218), (123, 3233), (131, 3311), (135, 3356), (139, 3410), (140, 3416), (153, 3530), (163, 3578), (176, 3674), (180, 3710), (199, 3863), (201, 3875), (210, 3932), (215, 3968), (222, 4019), (224, 4055), (225, 4058), (234, 4124),

Gene: Pat3_8 Start: 2003, Stop: 3673, Start Num: 29

Candidate Starts for Pat3_8:

(Start: 29 @2003 has 9 MA's), (75, 2300), (86, 2402), (103, 2582), (106, 2606), (108, 2624), (111, 2636), (115, 2699), (122, 2756), (123, 2771), (131, 2849), (135, 2894), (139, 2948), (140, 2954), (153, 3068), (163, 3116), (176, 3212), (180, 3248), (199, 3401), (201, 3413), (210, 3470), (215, 3506), (222, 3557), (224, 3593), (225, 3596), (234, 3662),

Gene: Peas_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for Peas_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (24, 685), (31, 718), (49, 820), (52, 859), (53, 865), (57, 883), (58, 898), (59, 901), (62, 919), (65, 931), (67, 961), (76, 1039), (79, 1063), (80, 1075), (83, 1114), (86, 1135), (91, 1168), (99, 1255), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (131, 1570), (151, 1747), (152, 1762), (157, 1786), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (196, 2083), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (224, 2290),

Gene: PeggyLeg03_2 Start: 626, Stop: 2374, Start Num: 14

Candidate Starts for PeggyLeg03_2:

(5, 575), (7, 602), (Start: 14 @626 has 37 MA's), (31, 719), (52, 860), (53, 866), (58, 899), (59, 902), (62, 920), (67, 962), (79, 1064), (80, 1076), (83, 1115), (86, 1136), (91, 1169), (97, 1223), (99, 1256), (100, 1262), (111, 1364), (114, 1421), (116, 1436), (121, 1475), (131, 1571), (151, 1748), (152, 1763), (157, 1787), (181, 1970), (185, 1997), (186, 2021), (190, 2039), (192, 2069), (202, 2126), (209, 2153), (211, 2177), (212, 2186), (221, 2237), (224, 2291),

Gene: Pepperoni_2 Start: 498, Stop: 2234, Start Num: 14

Candidate Starts for Pepperoni_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (39, 627), (48, 702), (51, 735), (53, 750), (58, 771), (65, 804), (66, 828), (72, 858), (77, 915), (83, 987), (84, 999), (100, 1134), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (136, 1500), (154, 1650), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (206, 1995), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (234, 2220), (235, 2223),

Gene: Phrux_8 Start: 2260, Stop: 3930, Start Num: 32

Candidate Starts for Phrux_8:

(Start: 32 @2260 has 46 MA's), (44, 2323), (75, 2557), (86, 2659), (103, 2839), (106, 2863), (108, 2881), (111, 2893), (115, 2956), (117, 2968), (122, 3013), (123, 3028), (131, 3106), (135, 3151), (139, 3205), (140, 3211), (153, 3325), (176, 3469), (179, 3490), (180, 3505), (199, 3658), (201, 3670), (210, 3727), (215, 3763), (222, 3814), (224, 3850), (225, 3853), (234, 3919),

Gene: Polly_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Polly_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Porky_7 Start: 1834, Stop: 3504, Start Num: 29

Candidate Starts for Porky_7:

(Start: 29 @1834 has 9 MA's), (75, 2131), (86, 2233), (103, 2413), (106, 2437), (108, 2455), (111, 2467), (115, 2530), (117, 2542), (122, 2587), (123, 2602), (131, 2680), (135, 2725), (139, 2779), (140, 2785), (153, 2899), (163, 2947), (176, 3043), (179, 3064), (180, 3079), (199, 3232), (201, 3244), (210, 3301), (215, 3337), (222, 3388), (224, 3424), (225, 3427), (234, 3493),

Gene: Pucara_2 Start: 625, Stop: 2373, Start Num: 14

Candidate Starts for Pucara_2:

(5, 574), (7, 601), (Start: 14 @625 has 37 MA's), (31, 718), (52, 859), (53, 865), (57, 883), (58, 898), (59, 901), (76, 1039), (83, 1114), (86, 1135), (100, 1261), (111, 1363), (114, 1420), (116, 1435), (121, 1474), (151, 1747), (152, 1762), (157, 1786), (185, 1996), (186, 2020), (190, 2038), (192, 2068), (202, 2125), (209, 2152), (211, 2176), (212, 2185), (224, 2290),

Gene: Pumpkin_9 Start: 2278, Stop: 3948, Start Num: 32

Candidate Starts for Pumpkin_9:

(Start: 32 @2278 has 46 MA's), (44, 2341), (75, 2575), (86, 2677), (103, 2857), (106, 2881), (108, 2899), (111, 2911), (115, 2974), (117, 2986), (122, 3031), (123, 3046), (131, 3124), (135, 3169), (139, 3223), (140, 3229), (153, 3343), (176, 3487), (180, 3523), (199, 3676), (201, 3688), (210, 3745), (215, 3781), (222, 3832), (224, 3868), (225, 3871), (234, 3937),

Gene: RavenCo17_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for RavenCo17_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (48, 702), (50, 714), (65, 804), (66, 828), (67, 834), (72, 858), (73, 864), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (131, 1440), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: RemusLoopin_2 Start: 597, Stop: 2147, Start Num: 36

Candidate Starts for RemusLoopin_2:

(Start: 36 @597 has 4 MA's), (46, 669), (69, 816), (72, 825), (75, 873), (80, 918), (82, 954), (86, 978), (90, 1008), (93, 1017), (98, 1062), (99, 1092), (102, 1113), (103, 1146), (109, 1191), (113, 1203), (116, 1266), (120, 1296), (129, 1356), (137, 1455), (149, 1551), (150, 1554), (160, 1623), (169, 1674), (170, 1680), (172, 1689), (178, 1731), (187, 1833), (188, 1836), (191, 1854), (195, 1881), (204, 1929), (217, 2010), (220, 2034), (221, 2037), (228, 2112), (230, 2133),

Gene: RiverMonster_8 Start: 2274, Stop: 3944, Start Num: 32

Candidate Starts for RiverMonster_8:

(Start: 32 @2274 has 46 MA's), (44, 2337), (75, 2571), (86, 2673), (103, 2853), (106, 2877), (108, 2895), (111, 2907), (115, 2970), (117, 2982), (122, 3027), (123, 3042), (131, 3120), (135, 3165), (139, 3219), (140, 3225), (153, 3339), (176, 3483), (180, 3519), (199, 3672), (201, 3684), (210, 3741), (215, 3777), (222, 3828), (224, 3864), (225, 3867), (234, 3933),

Gene: RootBeer_2 Start: 477, Stop: 2246, Start Num: 12

Candidate Starts for RootBeer_2:

(8, 459), (Start: 12 @477 has 2 MA's), (26, 594), (42, 660), (43, 672), (45, 690), (51, 741), (68, 843), (83, 990), (94, 1068), (112, 1239), (118, 1320), (122, 1350), (130, 1422), (146, 1593), (158, 1665), (185, 1869), (192, 1935), (194, 1944), (199, 1971), (206, 2004), (209, 2034), (211, 2058), (212, 2067), (221, 2109), (226, 2172), (235, 2235),

Gene: Rowa_2 Start: 530, Stop: 2230, Start Num: 14

Candidate Starts for Rowa_2:

(6, 494), (10, 518), (Start: 14 @530 has 37 MA's), (40, 638), (44, 683), (67, 842), (78, 926), (86, 1016), (92, 1055), (99, 1136), (111, 1241), (118, 1325), (121, 1352), (131, 1448), (138, 1526), (140, 1553), (144, 1580), (145, 1583), (152, 1640), (153, 1649), (156, 1661), (171, 1763), (184, 1868), (185, 1874), (186, 1898), (190, 1916), (194, 1955), (199, 1982), (206, 2015), (221, 2114), (225, 2171), (226, 2177),

Gene: Saints25_9 Start: 2474, Stop: 4144, Start Num: 32

Candidate Starts for Saints25_9:

(Start: 32 @2474 has 46 MA's), (44, 2537), (75, 2771), (86, 2873), (103, 3053), (106, 3077), (108, 3095), (111, 3107), (115, 3170), (117, 3182), (122, 3227), (123, 3242), (131, 3320), (135, 3365), (139, 3419), (140, 3425), (153, 3539), (163, 3587), (176, 3683), (179, 3704), (180, 3719), (199, 3872), (201, 3884), (210, 3941), (215, 3977), (222, 4028), (224, 4064), (225, 4067), (234, 4133),

Gene: Samora_2 Start: 588, Stop: 2150, Start Num: 36

Candidate Starts for Samora_2:

(Start: 36 @588 has 4 MA's), (72, 816), (73, 822), (75, 864), (82, 945), (83, 948), (86, 969), (87, 972), (90, 999), (98, 1053), (99, 1083), (101, 1098), (103, 1137), (105, 1149), (109, 1182), (120, 1287), (139, 1479), (148, 1542), (155, 1590), (159, 1602), (160, 1617), (169, 1668), (170, 1674), (172, 1683), (177, 1722), (187, 1827), (188, 1830), (198, 1899), (215, 1998), (217, 2004), (219, 2016), (220, 2028), (221, 2031),

Gene: Scotia_4 Start: 2180, Stop: 3946, Start Num: 12

Candidate Starts for Scotia_4:

(Start: 12 @2180 has 2 MA's), (26, 2303), (27, 2306), (43, 2381), (46, 2408), (51, 2450), (65, 2519), (68, 2552), (70, 2564), (80, 2660), (97, 2807), (110, 2942), (112, 2948), (118, 3029), (121, 3056), (122, 3059), (158, 3374), (163, 3404), (174, 3482), (199, 3677), (200, 3689), (211, 3764), (212, 3773), (215, 3791), (235, 3935),

Gene: Sebastisaurus_2 Start: 597, Stop: 2150, Start Num: 36

Candidate Starts for Sebastisaurus_2:

(Start: 36 @597 has 4 MA's), (46, 669), (69, 816), (72, 825), (75, 873), (78, 885), (82, 954), (86, 978), (90, 1008), (93, 1017), (98, 1062), (99, 1092), (102, 1113), (103, 1146), (109, 1191), (113, 1203), (116, 1266), (120, 1296), (129, 1356), (149, 1551), (150, 1554), (160, 1623), (169, 1674), (170, 1680), (172, 1689), (175, 1713), (178, 1731), (187, 1833), (188, 1836), (191, 1854), (195, 1881), (204, 1929), (217, 2010), (220, 2034), (221, 2037), (228, 2112), (230, 2133),

Gene: Shambre1_3 Start: 1934, Stop: 3703, Start Num: 12

Candidate Starts for Shambre1_3:

(1, 1796), (2, 1868), (Start: 12 @1934 has 2 MA's), (26, 2054), (27, 2057), (38, 2087), (41, 2096), (42, 2120), (47, 2162), (53, 2216), (65, 2270), (73, 2327), (83, 2450), (85, 2468), (91, 2504), (111, 2696), (115, 2759), (121, 2807), (128, 2855), (130, 2882), (146, 3053), (147, 3065), (192, 3398), (193, 3404), (194, 3407), (199, 3434), (200, 3446), (211, 3521), (212, 3530), (213, 3533), (214, 3542),

Gene: Shawty_2 Start: 588, Stop: 2165, Start Num: 34

Candidate Starts for Shawty_2:

(Start: 34 @588 has 3 MA's), (63, 771), (64, 774), (72, 825), (73, 831), (75, 873), (78, 885), (82, 954), (86, 978), (87, 981), (90, 1008), (94, 1029), (98, 1062), (101, 1107), (103, 1146), (109, 1191), (111,

1197), (129, 1356), (138, 1467), (143, 1512), (149, 1557), (150, 1560), (169, 1680), (170, 1686), (187, 1839), (217, 2016), (221, 2043), (227, 2115), (232, 2160),

Gene: Simpliphy_9 Start: 2465, Stop: 4135, Start Num: 32

Candidate Starts for Simpliphy_9:

(Start: 32 @2465 has 46 MA's), (44, 2528), (75, 2762), (86, 2864), (103, 3044), (106, 3068), (108, 3086), (111, 3098), (115, 3161), (117, 3173), (122, 3218), (123, 3233), (131, 3311), (135, 3356), (139, 3410), (140, 3416), (153, 3530), (176, 3674), (180, 3710), (199, 3863), (201, 3875), (210, 3932), (215, 3968), (222, 4019), (224, 4055), (225, 4058), (234, 4124),

Gene: SirDuracell_8 Start: 1963, Stop: 3633, Start Num: 29

Candidate Starts for SirDuracell_8:

(Start: 29 @1963 has 9 MA's), (75, 2260), (86, 2362), (103, 2542), (106, 2566), (108, 2584), (111, 2596), (115, 2659), (117, 2671), (122, 2716), (123, 2731), (131, 2809), (135, 2854), (139, 2908), (140, 2914), (153, 3028), (163, 3076), (176, 3172), (180, 3208), (199, 3361), (201, 3373), (210, 3430), (215, 3466), (222, 3517), (224, 3553), (225, 3556), (234, 3622),

Gene: Stank_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Stank_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Stark_9 Start: 2277, Stop: 3947, Start Num: 32

Candidate Starts for Stark_9:

(Start: 32 @2277 has 46 MA's), (44, 2340), (75, 2574), (86, 2676), (103, 2856), (106, 2880), (108, 2898), (111, 2910), (115, 2973), (117, 2985), (122, 3030), (123, 3045), (131, 3123), (135, 3168), (139, 3222), (140, 3228), (153, 3342), (176, 3486), (180, 3522), (199, 3675), (201, 3687), (210, 3744), (215, 3780), (222, 3831), (224, 3867), (225, 3870), (234, 3936),

Gene: StolenFromERC_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for StolenFromERC_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Suscepit_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Suscepit_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: TBrady12_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for TBrady12_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: TG1_2 Start: 587, Stop: 2161, Start Num: 34

Candidate Starts for TG1_2:

(Start: 34 @587 has 3 MA's), (56, 734), (72, 824), (75, 872), (78, 884), (82, 953), (86, 977), (90, 1007), (94, 1028), (98, 1061), (109, 1190), (111, 1196), (129, 1355), (138, 1466), (141, 1499), (149, 1553), (150, 1556), (160, 1625), (170, 1682), (187, 1835), (191, 1856), (201, 1919), (215, 2006), (217, 2012), (219, 2024), (220, 2036), (221, 2039), (227, 2111),

Gene: Tayonia_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Tayonia_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Teaspoon_8 Start: 2003, Stop: 3673, Start Num: 29

Candidate Starts for Teaspoon_8:

(Start: 29 @2003 has 9 MA's), (75, 2300), (86, 2402), (103, 2582), (106, 2606), (108, 2624), (111, 2636), (115, 2699), (117, 2711), (122, 2756), (123, 2771), (131, 2849), (135, 2894), (139, 2948), (140, 2954), (153, 3068), (163, 3116), (176, 3212), (179, 3233), (180, 3248), (199, 3401), (201, 3413), (210, 3470), (215, 3506), (222, 3557), (224, 3593), (225, 3596), (234, 3662),

Gene: ThankyouJordi_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for ThankyouJordi_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (48, 702), (65, 804), (66, 828), (67, 834), (72, 858), (73, 864), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (119, 1320), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (206, 1995), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Thimble_9 Start: 2256, Stop: 3926, Start Num: 32

Candidate Starts for Thimble_9:

(Start: 32 @2256 has 46 MA's), (44, 2319), (75, 2553), (86, 2655), (103, 2835), (106, 2859), (108, 2877), (111, 2889), (115, 2952), (117, 2964), (122, 3009), (123, 3024), (131, 3102), (135, 3147), (139, 3201), (140, 3207), (153, 3321), (176, 3465), (180, 3501), (199, 3654), (201, 3666), (210, 3723), (215, 3759), (222, 3810), (224, 3846), (225, 3849), (234, 3915),

Gene: TimTam_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for TimTam_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Trumpet_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Trumpet_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Ukulele_8 Start: 2277, Stop: 3947, Start Num: 32

Candidate Starts for Ukulele_8:

(Start: 32 @2277 has 46 MA's), (44, 2340), (75, 2574), (86, 2676), (103, 2856), (106, 2880), (108, 2898), (111, 2910), (115, 2973), (117, 2985), (122, 3030), (123, 3045), (131, 3123), (135, 3168), (139,

3222), (140, 3228), (153, 3342), (176, 3486), (180, 3522), (199, 3675), (201, 3687), (210, 3744), (215, 3780), (222, 3831), (224, 3867), (225, 3870), (234, 3936),

Gene: Vash_2 Start: 591, Stop: 2153, Start Num: 37

Candidate Starts for Vash_2:

(Start: 37 @591 has 2 MA's), (46, 660), (72, 816), (75, 864), (82, 945), (83, 948), (86, 969), (87, 972), (89, 990), (90, 999), (94, 1020), (98, 1053), (99, 1083), (101, 1098), (112, 1191), (124, 1314), (129, 1347), (131, 1380), (139, 1479), (148, 1542), (150, 1548), (160, 1617), (163, 1623), (169, 1668), (170, 1674), (177, 1722), (187, 1827), (188, 1830), (191, 1848), (217, 2004), (220, 2028), (221, 2031), (227, 2103),

Gene: WelcomeAyanna_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for WelcomeAyanna_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (48, 702), (65, 804), (66, 828), (67, 834), (72, 858), (73, 864), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (119, 1320), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (206, 1995), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Wiggin_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Wiggin_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Xandras_10 Start: 2509, Stop: 4179, Start Num: 32

Candidate Starts for Xandras_10:

(Start: 32 @2509 has 46 MA's), (44, 2572), (75, 2806), (86, 2908), (103, 3088), (106, 3112), (108, 3130), (111, 3142), (115, 3205), (117, 3217), (122, 3262), (123, 3277), (131, 3355), (135, 3400), (139, 3454), (140, 3460), (153, 3574), (163, 3622), (176, 3718), (179, 3739), (180, 3754), (199, 3907), (201, 3919), (210, 3976), (215, 4012), (222, 4063), (224, 4099), (225, 4102), (234, 4168),

Gene: Zameen_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Zameen_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: Zirinka_2 Start: 498, Stop: 2222, Start Num: 14

Candidate Starts for Zirinka_2:

(Start: 9 @483 has 1 MA's), (Start: 14 @498 has 37 MA's), (26, 588), (65, 804), (66, 828), (67, 834), (72, 858), (77, 915), (83, 987), (104, 1185), (109, 1227), (111, 1233), (118, 1317), (121, 1344), (132, 1455), (134, 1482), (158, 1659), (193, 1932), (194, 1935), (196, 1941), (199, 1962), (208, 2001), (211, 2049), (212, 2058), (217, 2082), (221, 2100), (225, 2157), (231, 2214),

Gene: phiBT1_33 Start: 597, Stop: 2180, Start Num: 30

Candidate Starts for phiBT1_33:

(28, 591), (30, 597), (46, 687), (71, 840), (72, 843), (73, 849), (75, 891), (82, 972), (83, 975), (86, 996), (87, 999), (90, 1026), (94, 1047), (97, 1077), (98, 1080), (101, 1125), (109, 1209), (129, 1374), (139, 1506), (155, 1620), (160, 1647), (163, 1653), (169, 1698), (170, 1704), (177, 1752), (187, 1857), (188, 1860), (198, 1929), (205, 1956), (217, 2034), (218, 2037), (220, 2058), (221, 2061),

