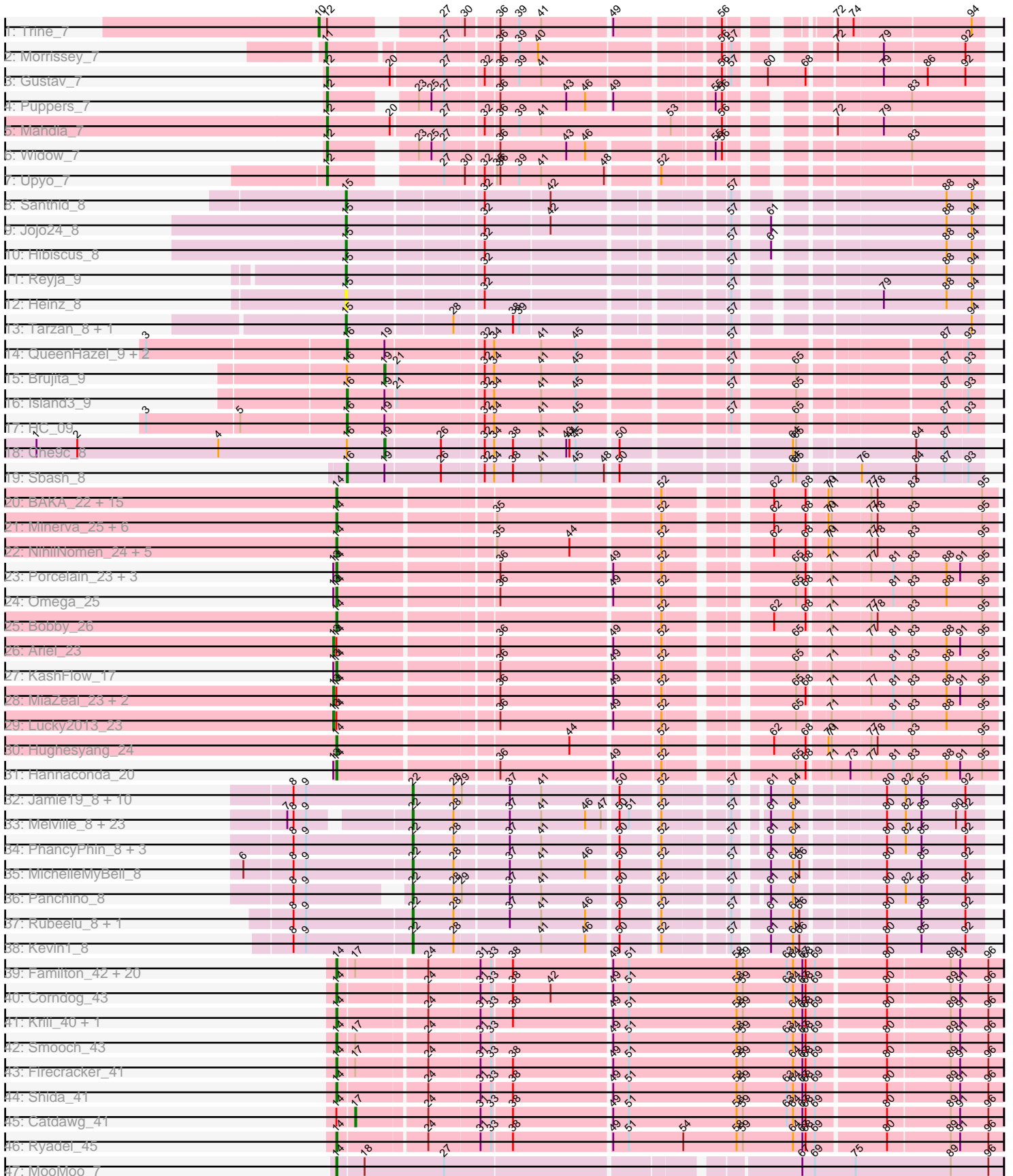


Pham 196354



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 196354 Report

This analysis was run 12/09/24 on database version 580.

Pham number 196354 has 139 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Trine_7
- Track 2 : Morrissey_7
- Track 3 : Gustav_7
- Track 4 : Poppers_7
- Track 5 : Mahdia_7
- Track 6 : Widow_7
- Track 7 : Upyo_7
- Track 8 : Santhid_8
- Track 9 : Jojo24_8
- Track 10 : Hibiscus_8
- Track 11 : Reyja_9
- Track 12 : Heinz_8
- Track 13 : Tarzan_8, DonkeyMan_8
- Track 14 : QueenHazel_9, Babsiella_9, Xula_8
- Track 15 : Brujita_9
- Track 16 : Island3_9
- Track 17 : HC_09
- Track 18 : Che9c_8
- Track 19 : Sbash_8
- Track 20 : BAKA_22, ThreeRngTarjay_24, HokkenD_20, Pound_25, EricMillard_25, Dallas_25, Optimus_23, Halley_25, Redno2_24, Bagrid_23, Ejimix_26, Kalah2_26, DmpstrDiver_24, Phoebus_25, Beem_25, Thibault_21
- Track 21 : Minerva_25, Yeet_23, Constella_20, Odette_24, Duke13_22, JuicyJay_27, Zelink_26
- Track 22 : NihilNomen_24, Schatzie_23, Klein_25, Wanda_26, Dove_23, Bombitas_22
- Track 23 : Porcelain_23, Superphikiman_23, Gonephishing_21, Squint_22
- Track 24 : Omega_25
- Track 25 : Bobby_26
- Track 26 : Ariel_23
- Track 27 : KashFlow_17
- Track 28 : MiaZeal_23, LittleE_23, Courthouse_23
- Track 29 : Lucky2013_23
- Track 30 : Hughesyang_24
- Track 31 : Hannaconda_20
- Track 32 : Jamie19_8, SkinnyPete_8, Snekmaggedon_8, Hanako_8, Redi_8, SpongeBob_8, Nenae_8, ShrimpFriedEgg_8, Rebel_8, BabeRuth_8,

Purgamenstris_8

- Track 33 : Melville_8, Xerxes_8, Carcharodon_8, Bosection6_8, Parmesanjohn_8, Andies_8, Duplicity_8, Scitech_8, Xeno_8, Fulbright_8, Schnauzer_8, Silvafighter_8, Tapioca_8, Journey_8, Magsby_8, Chewbacca_8, Aggie_8, Charlie_8, Philonius_8, Silvy_8, Smurph_8, Pipsqueaks_8, Gex_8, Phloss_8
- Track 34 : PhancyPhin_8, Phrann_8, Raymond7_8, Shweta_8
- Track 35 : MichelleMyBell_8
- Track 36 : Panchino_8
- Track 37 : Rubeelu_8, Butters_8
- Track 38 : Kevin1_8
- Track 39 : Familton_42, Mori_40, Ashwin_42, SchoolBus_41, Bora_38, YungJamal_44, Winget_42, Dylan_40, Blessica_42, JangDynasty_41, NiebruSaylor_40, MadKillah_42, TelAviv_38, Vorrrps_40, Zakhe101_41, FoulBall_41, Idergollasper_41, Alkhayr_39, Wildflower_41, Schuy_42, Vagabond_39
- Track 40 : Corndog_43
- Track 41 : Krili_40, Murai_41
- Track 42 : Smooch_43
- Track 43 : Firecracker_41
- Track 44 : Shida_41
- Track 45 : Catdawg_41
- Track 46 : Ryadel_45
- Track 47 : MooMoo_7

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

The start number called the most often in the published annotations is 14, it was called in 62 of the 130 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Alkhayr_39, Ashwin_42, BAKA_22, Bagrid_23, Beem_25, Blessica_42, Bobby_26, Bombitas_22, Bora_38, Constella_20, Corndog_43, Dallas_25, DmpstrDiver_24, Dove_23, Duke13_22, Dylan_40, Ejimix_26, EricMillard_25, Familton_42, Firecracker_41, FoulBall_41, Gonephishing_21, Halley_25, Hannaconda_20, HokkenD_20, Hughesyang_24, Idergollasper_41, JangDynasty_41, JuicyJay_27, Kalah2_26, KashFlow_17, Klein_25, Krili_40, MadKillah_42, Minerva_25, MooMoo_7, Mori_40, Murai_41, NiebruSaylor_40, NihilNomen_24, Odette_24, Omega_25, Optimus_23, Phoebus_25, Porcelain_23, Pound_25, Redno2_24, Ryadel_45, Schatzie_23, SchoolBus_41, Schuy_42, Shida_41, Smooch_43, Squint_22, Superphikiman_23, TelAviv_38, Thibault_21, ThreeRngTarjay_24, Vagabond_39, Vorrrps_40, Wanda_26, Wildflower_41, Winget_42, Yeet_23, YungJamal_44, Zakhe101_41, Zelink_26,

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

- Ariel_23, Catdawg_41, Courthouse_23, LittleE_23, Lucky2013_23, MiaZeal_23,

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

- Aggie_8, Andies_8, BabeRuth_8, Babsiella_9, Bosection6_8, Brujita_9, Butters_8, Carcharodon_8, Charlie_8, Che9c_8, Chewbacca_8, DonkeyMan_8, Duplicity_8, Fulbright_8, Gex_8, Gustav_7, HC_09, Hanako_8, Heinz_8, Hibiscus_8, Island3_9, Jamie19_8, Jojo24_8, Journey_8, Kevin1_8, Magsby_8, Mahdia_7, Melville_8,

MichelleMyBell_8, Morrissey_7, Nenae_8, Panchino_8, Parmesanjohn_8, PhancyPhin_8, Philonius_8, Phloss_8, Phrann_8, Pipsqueaks_8, Puppies_7, Purgamenstris_8, QueenHazel_9, Raymond7_8, Rebel_8, Redi_8, Reyja_9, Rubeelu_8, Santhid_8, Sbash_8, Schnauzer_8, Scitech_8, ShrimpFriedEgg_8, Shweta_8, Silvafighter_8, Silvy_8, SkinnyPete_8, Smurph_8, Snekmaggon_8, SpongeBob_8, Tapioca_8, Tarzan_8, Trine_7, Upyo_7, Widow_7, Xeno_8, Xerxes_8, Xula_8,

Summary by start number:

Start 10:

- Found in 1 of 139 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 130
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Trine_7 (CD),

Start 11:

- Found in 1 of 139 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 130
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Morrissey_7 (CD),

Start 12:

- Found in 6 of 139 (4.3%) of genes in pham
- Manual Annotations of this start: 5 of 130
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Gustav_7 (CD), Mahdia_7 (CD), Puppies_7 (CD), Upyo_7 (CD), Widow_7 (CD),

Start 13:

- Found in 12 of 139 (8.6%) of genes in pham
- Manual Annotations of this start: 5 of 130
- Called 41.7% of time when present
- Phage (with cluster) where this start called: Ariel_23 (J), Courthouse_23 (J), LittleE_23 (J), Lucky2013_23 (J), MiaZeal_23 (J),

Start 14:

- Found in 73 of 139 (52.5%) of genes in pham
- Manual Annotations of this start: 62 of 130
- Called 91.8% of time when present
- Phage (with cluster) where this start called: Alkhayr_39 (O), Ashwin_42 (O), BAKA_22 (J), Bagrid_23 (J), Beem_25 (J), Blessica_42 (O), Bobby_26 (J), Bombitas_22 (J), Bora_38 (O), Constella_20 (J), Corndog_43 (O), Dallas_25 (J), DmpstrDiver_24 (J), Dove_23 (J), Duke13_22 (J), Dylan_40 (O), Ejimix_26 (J), EricMillard_25 (J), Familton_42 (O), Firecracker_41 (O), FoulBall_41 (O), Gonephishing_21 (J), Halley_25 (J), Hannaconda_20 (J), HokkenD_20 (J), Hughesyang_24 (J), Idergollasper_41 (O), JangDynasty_41 (O), JuicyJay_27 (J), Kalah2_26 (J), KashFlow_17 (J), Klein_25 (J), Krili_40 (O), MadKillah_42 (O), Minerva_25 (J), MooMoo_7 (singleton), Mori_40 (O), Murai_41 (O), NiebruSaylor_40 (O), NihilNomen_24 (J), Odette_24 (J), Omega_25 (J), Optimus_23 (J), Phoebus_25 (J), Porcelain_23 (J), Pound_25 (J), Redno2_24 (J), Ryadel_45 (O), Schatzie_23 (J), SchoolBus_41 (O), Schuy_42 (O), Shida_41 (O), Smooch_43 (O), Squint_22 (J), Superphikiman_23 (J), TelAviv_38 (O), Thibault_21 (J), ThreeRngTarjay_24 (J),

Vagabond_39 (O), Vorrps_40 (O), Wanda_26 (J), Wildflower_41 (O), Winget_42 (O), Yeet_23 (J), YungJamal_44 (O), Zakhe101_41 (O), Zelink_26 (J),

Start 15:

- Found in 7 of 139 (5.0%) of genes in pham
- Manual Annotations of this start: 5 of 130
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan_8 (DY), Heinz_8 (DY), Hibiscus_8 (DY), Jojo24_8 (DY), Reyja_9 (DY), Santhid_8 (DY), Tarzan_8 (DY),

Start 16:

- Found in 8 of 139 (5.8%) of genes in pham
- Manual Annotations of this start: 6 of 130
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Babsiella_9 (I1), HC_09 (I1), Island3_9 (I1), QueenHazel_9 (I1), Sbash_8 (I2), Xula_8 (I1),

Start 17:

- Found in 24 of 139 (17.3%) of genes in pham
- Manual Annotations of this start: 1 of 130
- Called 4.2% of time when present
- Phage (with cluster) where this start called: Catdawg_41 (O),

Start 19:

- Found in 8 of 139 (5.8%) of genes in pham
- Manual Annotations of this start: 2 of 130
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Brujita_9 (I1), Che9c_8 (I2),

Start 22:

- Found in 44 of 139 (31.7%) of genes in pham
- Manual Annotations of this start: 42 of 130
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aggie_8 (N), Andies_8 (N), BabeRuth_8 (N), Bosection6_8 (N), Butters_8 (N), Carcharodon_8 (N), Charlie_8 (N), Chewbacca_8 (N), Duplicity_8 (N), Fulbright_8 (N), Gex_8 (N), Hanako_8 (N), Jamie19_8 (N), Journey_8 (N), Kevin1_8 (N), Magsby_8 (N), Melville_8 (N), MichelleMyBell_8 (N), Nенаe_8 (N), Panchino_8 (N), Parmesanjohn_8 (N), PhancyPhin_8 (N), Philonius_8 (N), Phloss_8 (N), Phrann_8 (N), Pipsqueaks_8 (N), Purgamenstris_8 (N), Raymond7_8 (N), Rebel_8 (N), Redi_8 (N), Rubeelu_8 (N), Schnauzer_8 (N), Scitech_8 (N), ShrimpFriedEgg_8 (N), Shweta_8 (N), Silvafighter_8 (N), Silvy_8 (N), SkinnyPete_8 (N), Smurph_8 (N), Snekmaggedon_8 (N), SpongeBob_8 (N), Tapioca_8 (N), Xeno_8 (N), Xerxes_8 (N),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, I2, I1, J, O, N, DY, CD,

Info for manual annotations of cluster CD:

- Start number 10 was manually annotated 1 time for cluster CD.
- Start number 11 was manually annotated 1 time for cluster CD.
- Start number 12 was manually annotated 5 times for cluster CD.

Info for manual annotations of cluster DY:

- Start number 15 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster I1:

- Start number 16 was manually annotated 5 times for cluster I1.
- Start number 19 was manually annotated 1 time for cluster I1.

Info for manual annotations of cluster I2:

- Start number 16 was manually annotated 1 time for cluster I2.
- Start number 19 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster J:

- Start number 13 was manually annotated 5 times for cluster J.
- Start number 14 was manually annotated 35 times for cluster J.

Info for manual annotations of cluster N:

- Start number 22 was manually annotated 42 times for cluster N.

Info for manual annotations of cluster O:

- Start number 14 was manually annotated 26 times for cluster O.
- Start number 17 was manually annotated 1 time for cluster O.

Gene Information:

Gene: Aggie_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Aggie_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Alkhayr_39 Start: 21489, Stop: 22094, Start Num: 14

Candidate Starts for Alkhayr_39:

(Start: 14 @21489 has 62 MA's), (Start: 17 @21504 has 1 MA's), (24, 21567), (31, 21615), (33, 21624), (38, 21642), (49, 21732), (51, 21747), (58, 21849), (59, 21855), (63, 21897), (64, 21903), (67, 21912), (68, 21915), (69, 21924), (80, 21987), (89, 22044), (91, 22053), (96, 22080),

Gene: Andies_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Andies_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Ariel_23 Start: 13524, Stop: 14096, Start Num: 13

Candidate Starts for Ariel_23:

(Start: 13 @13524 has 5 MA's), (Start: 14 @13527 has 62 MA's), (36, 13668), (49, 13770), (52, 13812), (65, 13914), (71, 13941), (77, 13977), (81, 13998), (83, 14016), (88, 14049), (91, 14061), (95, 14082),

Gene: Ashwin_42 Start: 21487, Stop: 22092, Start Num: 14

Candidate Starts for Ashwin_42:

(Start: 14 @21487 has 62 MA's), (Start: 17 @21502 has 1 MA's), (24, 21565), (31, 21613), (33, 21622), (38, 21640), (49, 21730), (51, 21745), (58, 21847), (59, 21853), (63, 21895), (64, 21901), (67, 21910), (68, 21913), (69, 21922), (80, 21985), (89, 22042), (91, 22051), (96, 22078),

Gene: BAKA_22 Start: 15634, Stop: 16203, Start Num: 14

Candidate Starts for BAKA_22:

(Start: 14 @15634 has 62 MA's), (52, 15919), (62, 16000), (68, 16030), (70, 16045), (71, 16048), (77, 16084), (78, 16090), (83, 16123), (95, 16189),

Gene: BabeRuth_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for BabeRuth_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Babsiella_9 Start: 6984, Stop: 7529, Start Num: 16

Candidate Starts for Babsiella_9:

(3, 6798), (Start: 16 @6984 has 6 MA's), (Start: 19 @7020 has 2 MA's), (32, 7107), (34, 7116), (41, 7161), (45, 7194), (57, 7320), (87, 7494), (93, 7515),

Gene: Bagrid_23 Start: 15423, Stop: 15992, Start Num: 14

Candidate Starts for Bagrid_23:

(Start: 14 @15423 has 62 MA's), (52, 15708), (62, 15789), (68, 15819), (70, 15834), (71, 15837), (77, 15873), (78, 15879), (83, 15912), (95, 15978),

Gene: Beem_25 Start: 15989, Stop: 16558, Start Num: 14

Candidate Starts for Beem_25:

(Start: 14 @15989 has 62 MA's), (52, 16274), (62, 16355), (68, 16385), (70, 16400), (71, 16403), (77, 16439), (78, 16445), (83, 16478), (95, 16544),

Gene: Blessica_42 Start: 21890, Stop: 22495, Start Num: 14

Candidate Starts for Blessica_42:

(Start: 14 @21890 has 62 MA's), (Start: 17 @21905 has 1 MA's), (24, 21968), (31, 22016), (33, 22025), (38, 22043), (49, 22133), (51, 22148), (58, 22250), (59, 22256), (63, 22298), (64, 22304), (67, 22313), (68, 22316), (69, 22325), (80, 22388), (89, 22445), (91, 22454), (96, 22481),

Gene: Bobby_26 Start: 15942, Stop: 16511, Start Num: 14

Candidate Starts for Bobby_26:

(Start: 14 @15942 has 62 MA's), (52, 16227), (62, 16308), (68, 16338), (71, 16356), (77, 16392), (78, 16398), (83, 16431), (95, 16497),

Gene: Bombitas_22 Start: 15299, Stop: 15868, Start Num: 14

Candidate Starts for Bombitas_22:

(Start: 14 @15299 has 62 MA's), (35, 15437), (44, 15506), (52, 15584), (62, 15665), (68, 15695), (70, 15710), (71, 15713), (77, 15749), (78, 15755), (83, 15788), (95, 15854),

Gene: Bora_38 Start: 20940, Stop: 21545, Start Num: 14

Candidate Starts for Bora_38:

(Start: 14 @20940 has 62 MA's), (Start: 17 @20955 has 1 MA's), (24, 21018), (31, 21066), (33, 21075), (38, 21093), (49, 21183), (51, 21198), (58, 21300), (59, 21306), (63, 21348), (64, 21354), (67, 21363), (68, 21366), (69, 21375), (80, 21438), (89, 21495), (91, 21504), (96, 21531),

Gene: Bosection6_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Bosection6_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Brujita_9 Start: 7024, Stop: 7533, Start Num: 19

Candidate Starts for Brujita_9:

(Start: 16 @6988 has 6 MA's), (Start: 19 @7024 has 2 MA's), (21, 7033), (32, 7111), (34, 7120), (41, 7165), (45, 7198), (57, 7324), (65, 7375), (87, 7498), (93, 7519),

Gene: Butters_8 Start: 5970, Stop: 6461, Start Num: 22

Candidate Starts for Butters_8:

(8, 5859), (9, 5871), (Start: 22 @5970 has 42 MA's), (28, 6009), (37, 6057), (41, 6087), (46, 6129), (50, 6156), (52, 6189), (57, 6246), (61, 6273), (64, 6294), (66, 6300), (80, 6369), (85, 6402), (92, 6444),

Gene: Carcharodon_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Carcharodon_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Catdawg_41 Start: 21594, Stop: 22184, Start Num: 17

Candidate Starts for Catdawg_41:

(Start: 14 @21579 has 62 MA's), (Start: 17 @21594 has 1 MA's), (24, 21657), (31, 21705), (33, 21714), (38, 21732), (49, 21822), (51, 21837), (58, 21939), (59, 21945), (63, 21987), (64, 21993), (67, 22002), (68, 22005), (69, 22014), (80, 22077), (89, 22134), (91, 22143), (96, 22170),

Gene: Charlie_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Charlie_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Che9c_8 Start: 6622, Stop: 7134, Start Num: 19

Candidate Starts for Che9c_8:

(1, 6289), (2, 6328), (4, 6463), (Start: 16 @6586 has 6 MA's), (Start: 19 @6622 has 2 MA's), (26, 6673), (32, 6709), (34, 6718), (38, 6736), (41, 6763), (43, 6787), (44, 6790), (45, 6796), (50, 6832), (64, 6970), (65, 6973), (84, 7072), (87, 7099),

Gene: Chewbacca_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Chewbacca_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Constella_20 Start: 14812, Stop: 15381, Start Num: 14

Candidate Starts for Constella_20:

(Start: 14 @14812 has 62 MA's), (35, 14950), (52, 15097), (62, 15178), (68, 15208), (70, 15223), (71, 15226), (77, 15262), (78, 15268), (83, 15301), (95, 15367),

Gene: Corndog_43 Start: 22037, Stop: 22642, Start Num: 14

Candidate Starts for Corndog_43:

(Start: 14 @22037 has 62 MA's), (24, 22115), (31, 22163), (33, 22172), (38, 22190), (42, 22226), (49, 22280), (51, 22295), (58, 22397), (59, 22403), (63, 22445), (64, 22451), (67, 22460), (68, 22463), (69,

22472), (80, 22535), (89, 22592), (91, 22601), (96, 22628),

Gene: Courthouse_23 Start: 13926, Stop: 14498, Start Num: 13

Candidate Starts for Courthouse_23:

(Start: 13 @13926 has 5 MA's), (Start: 14 @13929 has 62 MA's), (36, 14070), (49, 14172), (52, 14214), (65, 14316), (68, 14325), (71, 14343), (77, 14379), (81, 14400), (83, 14418), (88, 14451), (91, 14463), (95, 14484),

Gene: Dallas_25 Start: 15529, Stop: 16098, Start Num: 14

Candidate Starts for Dallas_25:

(Start: 14 @15529 has 62 MA's), (52, 15814), (62, 15895), (68, 15925), (70, 15940), (71, 15943), (77, 15979), (78, 15985), (83, 16018), (95, 16084),

Gene: DmpstrDiver_24 Start: 16165, Stop: 16734, Start Num: 14

Candidate Starts for DmpstrDiver_24:

(Start: 14 @16165 has 62 MA's), (52, 16450), (62, 16531), (68, 16561), (70, 16576), (71, 16579), (77, 16615), (78, 16621), (83, 16654), (95, 16720),

Gene: DonkeyMan_8 Start: 6278, Stop: 6811, Start Num: 15

Candidate Starts for DonkeyMan_8:

(Start: 15 @6278 has 5 MA's), (28, 6374), (38, 6425), (39, 6431), (57, 6605), (94, 6800),

Gene: Dove_23 Start: 15298, Stop: 15867, Start Num: 14

Candidate Starts for Dove_23:

(Start: 14 @15298 has 62 MA's), (35, 15436), (44, 15505), (52, 15583), (62, 15664), (68, 15694), (70, 15709), (71, 15712), (77, 15748), (78, 15754), (83, 15787), (95, 15853),

Gene: Duke13_22 Start: 15563, Stop: 16132, Start Num: 14

Candidate Starts for Duke13_22:

(Start: 14 @15563 has 62 MA's), (35, 15701), (52, 15848), (62, 15929), (68, 15959), (70, 15974), (71, 15977), (77, 16013), (78, 16019), (83, 16052), (95, 16118),

Gene: Duplicity_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Duplicity_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Dylan_40 Start: 21292, Stop: 21897, Start Num: 14

Candidate Starts for Dylan_40:

(Start: 14 @21292 has 62 MA's), (Start: 17 @21307 has 1 MA's), (24, 21370), (31, 21418), (33, 21427), (38, 21445), (49, 21535), (51, 21550), (58, 21652), (59, 21658), (63, 21700), (64, 21706), (67, 21715), (68, 21718), (69, 21727), (80, 21790), (89, 21847), (91, 21856), (96, 21883),

Gene: Ejimix_26 Start: 16739, Stop: 17308, Start Num: 14

Candidate Starts for Ejimix_26:

(Start: 14 @16739 has 62 MA's), (52, 17024), (62, 17105), (68, 17135), (70, 17150), (71, 17153), (77, 17189), (78, 17195), (83, 17228), (95, 17294),

Gene: EricMillard_25 Start: 16275, Stop: 16844, Start Num: 14

Candidate Starts for EricMillard_25:

(Start: 14 @16275 has 62 MA's), (52, 16560), (62, 16641), (68, 16671), (70, 16686), (71, 16689), (77, 16725), (78, 16731), (83, 16764), (95, 16830),

Gene: Familton_42 Start: 21583, Stop: 22188, Start Num: 14

Candidate Starts for Familton_42:

(Start: 14 @21583 has 62 MA's), (Start: 17 @21598 has 1 MA's), (24, 21661), (31, 21709), (33, 21718), (38, 21736), (49, 21826), (51, 21841), (58, 21943), (59, 21949), (63, 21991), (64, 21997), (67, 22006), (68, 22009), (69, 22018), (80, 22081), (89, 22138), (91, 22147), (96, 22174),

Gene: Firecracker_41 Start: 21190, Stop: 21795, Start Num: 14

Candidate Starts for Firecracker_41:

(Start: 14 @21190 has 62 MA's), (Start: 17 @21205 has 1 MA's), (24, 21268), (31, 21316), (33, 21325), (38, 21343), (49, 21433), (51, 21448), (58, 21550), (59, 21556), (64, 21604), (67, 21613), (68, 21616), (69, 21625), (80, 21688), (89, 21745), (91, 21754), (96, 21781),

Gene: FoulBall_41 Start: 21577, Stop: 22182, Start Num: 14

Candidate Starts for FoulBall_41:

(Start: 14 @21577 has 62 MA's), (Start: 17 @21592 has 1 MA's), (24, 21655), (31, 21703), (33, 21712), (38, 21730), (49, 21820), (51, 21835), (58, 21937), (59, 21943), (63, 21985), (64, 21991), (67, 22000), (68, 22003), (69, 22012), (80, 22075), (89, 22132), (91, 22141), (96, 22168),

Gene: Fulbright_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Fulbright_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Gex_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Gex_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Gonephishing_21 Start: 14102, Stop: 14671, Start Num: 14

Candidate Starts for Gonephishing_21:

(Start: 13 @14099 has 5 MA's), (Start: 14 @14102 has 62 MA's), (36, 14243), (49, 14345), (52, 14387), (65, 14489), (68, 14498), (71, 14516), (77, 14552), (81, 14573), (83, 14591), (88, 14624), (91, 14636), (95, 14657),

Gene: Gustav_7 Start: 6033, Stop: 6599, Start Num: 12

Candidate Starts for Gustav_7:

(Start: 12 @6033 has 5 MA's), (20, 6093), (27, 6141), (32, 6174), (36, 6186), (39, 6204), (41, 6225), (56, 6378), (57, 6384), (60, 6408), (68, 6444), (79, 6507), (86, 6546), (92, 6582),

Gene: HC_09 Start: 6987, Stop: 7532, Start Num: 16

Candidate Starts for HC_09:

(3, 6801), (5, 6888), (Start: 16 @6987 has 6 MA's), (Start: 19 @7023 has 2 MA's), (32, 7110), (34, 7119), (41, 7164), (45, 7197), (57, 7323), (65, 7374), (87, 7497), (93, 7518),

Gene: Halley_25 Start: 15988, Stop: 16557, Start Num: 14

Candidate Starts for Halley_25:

(Start: 14 @15988 has 62 MA's), (52, 16273), (62, 16354), (68, 16384), (70, 16399), (71, 16402), (77, 16438), (78, 16444), (83, 16477), (95, 16543),

Gene: Hanako_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Hanako_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Hannaconda_20 Start: 12609, Stop: 13178, Start Num: 14

Candidate Starts for Hannaconda_20:

(Start: 13 @12606 has 5 MA's), (Start: 14 @12609 has 62 MA's), (36, 12750), (49, 12852), (52, 12894), (65, 12996), (68, 13005), (71, 13023), (73, 13041), (77, 13059), (81, 13080), (83, 13098), (88, 13131), (91, 13143), (95, 13164),

Gene: Heinz_8 Start: 6314, Stop: 6847, Start Num: 15

Candidate Starts for Heinz_8:

(Start: 15 @6314 has 5 MA's), (32, 6434), (57, 6641), (79, 6752), (88, 6812), (94, 6836),

Gene: Hibiscus_8 Start: 6288, Stop: 6821, Start Num: 15

Candidate Starts for Hibiscus_8:

(Start: 15 @6288 has 5 MA's), (32, 6408), (57, 6615), (61, 6642), (88, 6786), (94, 6810),

Gene: HokkenD_20 Start: 15558, Stop: 16127, Start Num: 14

Candidate Starts for HokkenD_20:

(Start: 14 @15558 has 62 MA's), (52, 15843), (62, 15924), (68, 15954), (70, 15969), (71, 15972), (77, 16008), (78, 16014), (83, 16047), (95, 16113),

Gene: Hughesyang_24 Start: 16171, Stop: 16740, Start Num: 14

Candidate Starts for Hughesyang_24:

(Start: 14 @16171 has 62 MA's), (44, 16378), (52, 16456), (62, 16537), (68, 16567), (70, 16582), (71, 16585), (77, 16621), (78, 16627), (83, 16660), (95, 16726),

Gene: Idergollasper_41 Start: 21577, Stop: 22182, Start Num: 14

Candidate Starts for Idergollasper_41:

(Start: 14 @21577 has 62 MA's), (Start: 17 @21592 has 1 MA's), (24, 21655), (31, 21703), (33, 21712), (38, 21730), (49, 21820), (51, 21835), (58, 21937), (59, 21943), (63, 21985), (64, 21991), (67, 22000), (68, 22003), (69, 22012), (80, 22075), (89, 22132), (91, 22141), (96, 22168),

Gene: Island3_9 Start: 6988, Stop: 7533, Start Num: 16

Candidate Starts for Island3_9:

(Start: 16 @6988 has 6 MA's), (Start: 19 @7024 has 2 MA's), (21, 7033), (32, 7111), (34, 7120), (41, 7165), (45, 7198), (57, 7324), (65, 7375), (87, 7498), (93, 7519),

Gene: Jamie19_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Jamie19_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: JangDynasty_41 Start: 21672, Stop: 22277, Start Num: 14

Candidate Starts for JangDynasty_41:

(Start: 14 @21672 has 62 MA's), (Start: 17 @21687 has 1 MA's), (24, 21750), (31, 21798), (33, 21807), (38, 21825), (49, 21915), (51, 21930), (58, 22032), (59, 22038), (63, 22080), (64, 22086), (67, 22095), (68, 22098), (69, 22107), (80, 22170), (89, 22227), (91, 22236), (96, 22263),

Gene: Jojo24_8 Start: 6283, Stop: 6816, Start Num: 15

Candidate Starts for Jojo24_8:

(Start: 15 @6283 has 5 MA's), (32, 6403), (42, 6463), (57, 6610), (61, 6637), (88, 6781), (94, 6805),

Gene: Journey_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Journey_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: JuicyJay_27 Start: 16822, Stop: 17391, Start Num: 14

Candidate Starts for JuicyJay_27:

(Start: 14 @16822 has 62 MA's), (35, 16960), (52, 17107), (62, 17188), (68, 17218), (70, 17233), (71, 17236), (77, 17272), (78, 17278), (83, 17311), (95, 17377),

Gene: Kalah2_26 Start: 16590, Stop: 17159, Start Num: 14

Candidate Starts for Kalah2_26:

(Start: 14 @16590 has 62 MA's), (52, 16875), (62, 16956), (68, 16986), (70, 17001), (71, 17004), (77, 17040), (78, 17046), (83, 17079), (95, 17145),

Gene: KashFlow_17 Start: 12175, Stop: 12744, Start Num: 14

Candidate Starts for KashFlow_17:

(Start: 13 @12172 has 5 MA's), (Start: 14 @12175 has 62 MA's), (36, 12316), (49, 12418), (52, 12460), (65, 12562), (71, 12589), (81, 12646), (83, 12664), (88, 12697), (95, 12730),

Gene: Kevin1_8 Start: 5970, Stop: 6461, Start Num: 22

Candidate Starts for Kevin1_8:

(8, 5859), (9, 5871), (Start: 22 @5970 has 42 MA's), (28, 6009), (41, 6087), (46, 6129), (50, 6156), (52, 6189), (57, 6246), (61, 6273), (64, 6294), (66, 6300), (80, 6369), (85, 6402), (92, 6444),

Gene: Klein_25 Start: 15568, Stop: 16137, Start Num: 14

Candidate Starts for Klein_25:

(Start: 14 @15568 has 62 MA's), (35, 15706), (44, 15775), (52, 15853), (62, 15934), (68, 15964), (70, 15979), (71, 15982), (77, 16018), (78, 16024), (83, 16057), (95, 16123),

Gene: Krili_40 Start: 21294, Stop: 21899, Start Num: 14

Candidate Starts for Krili_40:

(Start: 14 @21294 has 62 MA's), (24, 21372), (31, 21420), (33, 21429), (38, 21447), (49, 21537), (51, 21552), (58, 21654), (59, 21660), (64, 21708), (67, 21717), (68, 21720), (69, 21729), (80, 21792), (89, 21849), (91, 21858), (96, 21885),

Gene: LittleE_23 Start: 15311, Stop: 15883, Start Num: 13

Candidate Starts for LittleE_23:

(Start: 13 @15311 has 5 MA's), (Start: 14 @15314 has 62 MA's), (36, 15455), (49, 15557), (52, 15599), (65, 15701), (68, 15710), (71, 15728), (77, 15764), (81, 15785), (83, 15803), (88, 15836), (91, 15848), (95, 15869),

Gene: Lucky2013_23 Start: 14054, Stop: 14626, Start Num: 13

Candidate Starts for Lucky2013_23:

(Start: 13 @14054 has 5 MA's), (Start: 14 @14057 has 62 MA's), (36, 14198), (49, 14300), (52, 14342), (65, 14444), (71, 14471), (81, 14528), (83, 14546), (88, 14579), (95, 14612),

Gene: MadKillah_42 Start: 21516, Stop: 22121, Start Num: 14

Candidate Starts for MadKillah_42:

(Start: 14 @21516 has 62 MA's), (Start: 17 @21531 has 1 MA's), (24, 21594), (31, 21642), (33, 21651), (38, 21669), (49, 21759), (51, 21774), (58, 21876), (59, 21882), (63, 21924), (64, 21930), (67,

21939), (68, 21942), (69, 21951), (80, 22014), (89, 22071), (91, 22080), (96, 22107),

Gene: Magsby_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Magsby_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Mahdia_7 Start: 6047, Stop: 6601, Start Num: 12

Candidate Starts for Mahdia_7:

(Start: 12 @6047 has 5 MA's), (20, 6107), (27, 6155), (32, 6188), (36, 6200), (39, 6218), (41, 6239), (53, 6356), (56, 6395), (72, 6467), (79, 6509),

Gene: Melville_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Melville_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: MiaZeal_23 Start: 13745, Stop: 14317, Start Num: 13

Candidate Starts for MiaZeal_23:

(Start: 13 @13745 has 5 MA's), (Start: 14 @13748 has 62 MA's), (36, 13889), (49, 13991), (52, 14033), (65, 14135), (68, 14144), (71, 14162), (77, 14198), (81, 14219), (83, 14237), (88, 14270), (91, 14282), (95, 14303),

Gene: MichelleMyBell_8 Start: 5990, Stop: 6481, Start Num: 22

Candidate Starts for MichelleMyBell_8:

(6, 5834), (8, 5879), (9, 5891), (Start: 22 @5990 has 42 MA's), (28, 6029), (37, 6077), (41, 6107), (46, 6149), (50, 6176), (52, 6209), (57, 6266), (61, 6293), (64, 6314), (66, 6320), (80, 6389), (85, 6422), (92, 6464),

Gene: Minerva_25 Start: 16053, Stop: 16622, Start Num: 14

Candidate Starts for Minerva_25:

(Start: 14 @16053 has 62 MA's), (35, 16191), (52, 16338), (62, 16419), (68, 16449), (70, 16464), (71, 16467), (77, 16503), (78, 16509), (83, 16542), (95, 16608),

Gene: MooMoo_7 Start: 5220, Stop: 5819, Start Num: 14

Candidate Starts for MooMoo_7:

(Start: 14 @5220 has 62 MA's), (18, 5244), (27, 5319), (67, 5628), (69, 5640), (75, 5679), (89, 5769), (96, 5805),

Gene: Mori_40 Start: 21165, Stop: 21770, Start Num: 14

Candidate Starts for Mori_40:

(Start: 14 @21165 has 62 MA's), (Start: 17 @21180 has 1 MA's), (24, 21243), (31, 21291), (33, 21300), (38, 21318), (49, 21408), (51, 21423), (58, 21525), (59, 21531), (63, 21573), (64, 21579), (67, 21588), (68, 21591), (69, 21600), (80, 21663), (89, 21720), (91, 21729), (96, 21756),

Gene: Morrissey_7 Start: 6029, Stop: 6574, Start Num: 11

Candidate Starts for Morrissey_7:

(Start: 11 @6029 has 1 MA's), (27, 6131), (36, 6176), (39, 6194), (40, 6212), (56, 6368), (57, 6374), (72, 6440), (79, 6482), (92, 6557),

Gene: Murai_41 Start: 21355, Stop: 21960, Start Num: 14

Candidate Starts for Murai_41:

(Start: 14 @21355 has 62 MA's), (24, 21433), (31, 21481), (33, 21490), (38, 21508), (49, 21598), (51, 21613), (58, 21715), (59, 21721), (64, 21769), (67, 21778), (68, 21781), (69, 21790), (80, 21853), (89, 21910), (91, 21919), (96, 21946),

Gene: Nенаe_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Nенаe_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: NiebruSaylor_40 Start: 21166, Stop: 21771, Start Num: 14

Candidate Starts for NiebruSaylor_40:

(Start: 14 @21166 has 62 MA's), (Start: 17 @21181 has 1 MA's), (24, 21244), (31, 21292), (33, 21301), (38, 21319), (49, 21409), (51, 21424), (58, 21526), (59, 21532), (63, 21574), (64, 21580), (67, 21589), (68, 21592), (69, 21601), (80, 21664), (89, 21721), (91, 21730), (96, 21757),

Gene: NihilNomen_24 Start: 16050, Stop: 16619, Start Num: 14

Candidate Starts for NihilNomen_24:

(Start: 14 @16050 has 62 MA's), (35, 16188), (44, 16257), (52, 16335), (62, 16416), (68, 16446), (70, 16461), (71, 16464), (77, 16500), (78, 16506), (83, 16539), (95, 16605),

Gene: Odette_24 Start: 15531, Stop: 16100, Start Num: 14

Candidate Starts for Odette_24:

(Start: 14 @15531 has 62 MA's), (35, 15669), (52, 15816), (62, 15897), (68, 15927), (70, 15942), (71, 15945), (77, 15981), (78, 15987), (83, 16020), (95, 16086),

Gene: Omega_25 Start: 17674, Stop: 18243, Start Num: 14

Candidate Starts for Omega_25:

(Start: 13 @17671 has 5 MA's), (Start: 14 @17674 has 62 MA's), (36, 17815), (49, 17917), (52, 17959), (65, 18061), (68, 18070), (71, 18088), (81, 18145), (83, 18163), (88, 18196), (95, 18229),

Gene: Optimus_23 Start: 15628, Stop: 16197, Start Num: 14

Candidate Starts for Optimus_23:

(Start: 14 @15628 has 62 MA's), (52, 15913), (62, 15994), (68, 16024), (70, 16039), (71, 16042), (77, 16078), (78, 16084), (83, 16117), (95, 16183),

Gene: Panchino_8 Start: 5973, Stop: 6458, Start Num: 22

Candidate Starts for Panchino_8:

(8, 5883), (9, 5895), (Start: 22 @5973 has 42 MA's), (28, 6012), (29, 6018), (37, 6060), (41, 6090), (50, 6159), (52, 6192), (57, 6249), (61, 6270), (64, 6291), (80, 6366), (82, 6384), (85, 6399), (92, 6441),

Gene: Parmesanjohn_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Parmesanjohn_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: PhancyPhin_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for PhancyPhin_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Philonius_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Philonius_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Phloss_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Phloss_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Phoebus_25 Start: 16275, Stop: 16844, Start Num: 14

Candidate Starts for Phoebus_25:

(Start: 14 @16275 has 62 MA's), (52, 16560), (62, 16641), (68, 16671), (70, 16686), (71, 16689), (77, 16725), (78, 16731), (83, 16764), (95, 16830),

Gene: Phrann_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Phrann_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Pipsqueaks_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Pipsqueaks_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Porcelain_23 Start: 13748, Stop: 14317, Start Num: 14

Candidate Starts for Porcelain_23:

(Start: 13 @13745 has 5 MA's), (Start: 14 @13748 has 62 MA's), (36, 13889), (49, 13991), (52, 14033), (65, 14135), (68, 14144), (71, 14162), (77, 14198), (81, 14219), (83, 14237), (88, 14270), (91, 14282), (95, 14303),

Gene: Pound_25 Start: 16367, Stop: 16936, Start Num: 14

Candidate Starts for Pound_25:

(Start: 14 @16367 has 62 MA's), (52, 16652), (62, 16733), (68, 16763), (70, 16778), (71, 16781), (77, 16817), (78, 16823), (83, 16856), (95, 16922),

Gene: Puppies_7 Start: 5969, Stop: 6499, Start Num: 12

Candidate Starts for Puppies_7:

(Start: 12 @5969 has 5 MA's), (23, 6032), (25, 6044), (27, 6056), (36, 6101), (43, 6164), (46, 6182), (49, 6203), (55, 6284), (56, 6290), (83, 6431),

Gene: Purgamenstris_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Purgamenstris_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: QueenHazel_9 Start: 6990, Stop: 7535, Start Num: 16

Candidate Starts for QueenHazel_9:

(3, 6804), (Start: 16 @6990 has 6 MA's), (Start: 19 @7026 has 2 MA's), (32, 7113), (34, 7122), (41, 7167), (45, 7200), (57, 7326), (87, 7500), (93, 7521),

Gene: Raymond7_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Raymond7_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Rebel_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Rebel_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Redi_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Redi_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Redno2_24 Start: 15759, Stop: 16328, Start Num: 14

Candidate Starts for Redno2_24:

(Start: 14 @15759 has 62 MA's), (52, 16044), (62, 16125), (68, 16155), (70, 16170), (71, 16173), (77, 16209), (78, 16215), (83, 16248), (95, 16314),

Gene: Reyja_9 Start: 6424, Stop: 6957, Start Num: 15

Candidate Starts for Reyja_9:

(Start: 15 @6424 has 5 MA's), (32, 6544), (57, 6751), (88, 6922), (94, 6946),

Gene: Rubeelu_8 Start: 5970, Stop: 6461, Start Num: 22

Candidate Starts for Rubeelu_8:

(8, 5859), (9, 5871), (Start: 22 @5970 has 42 MA's), (28, 6009), (37, 6057), (41, 6087), (46, 6129), (50, 6156), (52, 6189), (57, 6246), (61, 6273), (64, 6294), (66, 6300), (80, 6369), (85, 6402), (92, 6444),

Gene: Ryadel_45 Start: 22639, Stop: 23244, Start Num: 14

Candidate Starts for Ryadel_45:

(Start: 14 @22639 has 62 MA's), (24, 22717), (31, 22765), (33, 22774), (38, 22792), (49, 22882), (51, 22897), (54, 22948), (58, 22999), (59, 23005), (64, 23053), (67, 23062), (68, 23065), (69, 23074), (80, 23137), (89, 23194), (91, 23203), (96, 23230),

Gene: Santhid_8 Start: 6292, Stop: 6825, Start Num: 15

Candidate Starts for Santhid_8:

(Start: 15 @6292 has 5 MA's), (32, 6412), (42, 6472), (57, 6619), (88, 6790), (94, 6814),

Gene: Sbash_8 Start: 6564, Stop: 7112, Start Num: 16

Candidate Starts for Sbash_8:

(Start: 16 @6564 has 6 MA's), (Start: 19 @6600 has 2 MA's), (26, 6651), (32, 6687), (34, 6696), (38, 6714), (41, 6741), (45, 6774), (48, 6801), (50, 6810), (64, 6948), (65, 6951), (76, 6999), (84, 7050), (87, 7077), (93, 7098),

Gene: Schatzie_23 Start: 15300, Stop: 15869, Start Num: 14

Candidate Starts for Schatzie_23:

(Start: 14 @15300 has 62 MA's), (35, 15438), (44, 15507), (52, 15585), (62, 15666), (68, 15696), (70, 15711), (71, 15714), (77, 15750), (78, 15756), (83, 15789), (95, 15855),

Gene: Schnauzer_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Schnauzer_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: SchoolBus_41 Start: 21580, Stop: 22185, Start Num: 14

Candidate Starts for SchoolBus_41:

(Start: 14 @21580 has 62 MA's), (Start: 17 @21595 has 1 MA's), (24, 21658), (31, 21706), (33, 21715), (38, 21733), (49, 21823), (51, 21838), (58, 21940), (59, 21946), (63, 21988), (64, 21994), (67, 22003), (68, 22006), (69, 22015), (80, 22078), (89, 22135), (91, 22144), (96, 22171),

Gene: Schuy_42 Start: 21513, Stop: 22118, Start Num: 14

Candidate Starts for Schuy_42:

(Start: 14 @21513 has 62 MA's), (Start: 17 @21528 has 1 MA's), (24, 21591), (31, 21639), (33, 21648), (38, 21666), (49, 21756), (51, 21771), (58, 21873), (59, 21879), (63, 21921), (64, 21927), (67, 21936), (68, 21939), (69, 21948), (80, 22011), (89, 22068), (91, 22077), (96, 22104),

Gene: Scitech_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Scitech_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Shida_41 Start: 21420, Stop: 22025, Start Num: 14

Candidate Starts for Shida_41:

(Start: 14 @21420 has 62 MA's), (24, 21498), (31, 21546), (33, 21555), (38, 21573), (49, 21663), (51, 21678), (58, 21780), (59, 21786), (63, 21828), (64, 21834), (67, 21843), (68, 21846), (69, 21855), (80, 21918), (89, 21975), (91, 21984), (96, 22011),

Gene: ShrimpFriedEgg_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for ShrimpFriedEgg_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Shweta_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Shweta_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Silvafighter_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Silvafighter_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Silvy_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Silvy_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: SkinnyPete_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for SkinnyPete_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Smooch_43 Start: 22708, Stop: 23313, Start Num: 14

Candidate Starts for Smooch_43:

(Start: 14 @22708 has 62 MA's), (Start: 17 @22723 has 1 MA's), (24, 22786), (31, 22834), (33, 22843), (49, 22951), (51, 22966), (58, 23068), (59, 23074), (63, 23116), (64, 23122), (67, 23131), (68, 23134), (69, 23143), (80, 23206), (89, 23263), (91, 23272), (96, 23299),

Gene: Smurph_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Smurph_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Snekmaggedon_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for Snekmaggedon_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: SpongeBob_8 Start: 5997, Stop: 6482, Start Num: 22

Candidate Starts for SpongeBob_8:

(8, 5883), (9, 5895), (Start: 22 @5997 has 42 MA's), (28, 6036), (29, 6042), (37, 6084), (41, 6114), (50, 6183), (52, 6216), (57, 6273), (61, 6294), (64, 6315), (80, 6390), (82, 6408), (85, 6423), (92, 6465),

Gene: Squint_22 Start: 13875, Stop: 14444, Start Num: 14

Candidate Starts for Squint_22:

(Start: 13 @13872 has 5 MA's), (Start: 14 @13875 has 62 MA's), (36, 14016), (49, 14118), (52, 14160), (65, 14262), (68, 14271), (71, 14289), (77, 14325), (81, 14346), (83, 14364), (88, 14397), (91, 14409), (95, 14430),

Gene: Superphikiman_23 Start: 13929, Stop: 14498, Start Num: 14

Candidate Starts for Superphikiman_23:

(Start: 13 @13926 has 5 MA's), (Start: 14 @13929 has 62 MA's), (36, 14070), (49, 14172), (52, 14214), (65, 14316), (68, 14325), (71, 14343), (77, 14379), (81, 14400), (83, 14418), (88, 14451), (91, 14463), (95, 14484),

Gene: Tapioca_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Tapioca_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Tarzan_8 Start: 6283, Stop: 6816, Start Num: 15

Candidate Starts for Tarzan_8:

(Start: 15 @6283 has 5 MA's), (28, 6379), (38, 6430), (39, 6436), (57, 6610), (94, 6805),

Gene: TelAviv_38 Start: 21574, Stop: 22179, Start Num: 14

Candidate Starts for TelAviv_38:

(Start: 14 @21574 has 62 MA's), (Start: 17 @21589 has 1 MA's), (24, 21652), (31, 21700), (33, 21709), (38, 21727), (49, 21817), (51, 21832), (58, 21934), (59, 21940), (63, 21982), (64, 21988), (67, 21997), (68, 22000), (69, 22009), (80, 22072), (89, 22129), (91, 22138), (96, 22165),

Gene: Thibault_21 Start: 15559, Stop: 16128, Start Num: 14

Candidate Starts for Thibault_21:

(Start: 14 @15559 has 62 MA's), (52, 15844), (62, 15925), (68, 15955), (70, 15970), (71, 15973), (77, 16009), (78, 16015), (83, 16048), (95, 16114),

Gene: ThreeRngTarjay_24 Start: 16125, Stop: 16694, Start Num: 14

Candidate Starts for ThreeRngTarjay_24:

(Start: 14 @16125 has 62 MA's), (52, 16410), (62, 16491), (68, 16521), (70, 16536), (71, 16539), (77, 16575), (78, 16581), (83, 16614), (95, 16680),

Gene: Trine_7 Start: 5978, Stop: 6505, Start Num: 10

Candidate Starts for Trine_7:

(Start: 10 @5978 has 1 MA's), (Start: 12 @5984 has 5 MA's), (27, 6071), (30, 6089), (36, 6116), (39, 6134), (41, 6155), (49, 6218), (56, 6305), (72, 6371), (74, 6386), (94, 6494),

Gene: Upyo_7 Start: 5995, Stop: 6522, Start Num: 12

Candidate Starts for Upyo_7:

(Start: 12 @5995 has 5 MA's), (27, 6082), (30, 6100), (32, 6115), (35, 6124), (36, 6127), (39, 6145), (41, 6166), (48, 6226), (52, 6268),

Gene: Vagabond_39 Start: 21407, Stop: 22012, Start Num: 14

Candidate Starts for Vagabond_39:

(Start: 14 @21407 has 62 MA's), (Start: 17 @21422 has 1 MA's), (24, 21485), (31, 21533), (33, 21542), (38, 21560), (49, 21650), (51, 21665), (58, 21767), (59, 21773), (63, 21815), (64, 21821), (67, 21830), (68, 21833), (69, 21842), (80, 21905), (89, 21962), (91, 21971), (96, 21998),

Gene: Vorrps_40 Start: 21166, Stop: 21771, Start Num: 14

Candidate Starts for Vorrps_40:

(Start: 14 @21166 has 62 MA's), (Start: 17 @21181 has 1 MA's), (24, 21244), (31, 21292), (33, 21301), (38, 21319), (49, 21409), (51, 21424), (58, 21526), (59, 21532), (63, 21574), (64, 21580), (67, 21589), (68, 21592), (69, 21601), (80, 21664), (89, 21721), (91, 21730), (96, 21757),

Gene: Wanda_26 Start: 15568, Stop: 16137, Start Num: 14

Candidate Starts for Wanda_26:

(Start: 14 @15568 has 62 MA's), (35, 15706), (44, 15775), (52, 15853), (62, 15934), (68, 15964), (70, 15979), (71, 15982), (77, 16018), (78, 16024), (83, 16057), (95, 16123),

Gene: Widow_7 Start: 5960, Stop: 6490, Start Num: 12

Candidate Starts for Widow_7:

(Start: 12 @5960 has 5 MA's), (23, 6023), (25, 6035), (27, 6047), (36, 6092), (43, 6155), (46, 6173), (55, 6275), (56, 6281), (83, 6422),

Gene: Wildflower_41 Start: 21152, Stop: 21757, Start Num: 14

Candidate Starts for Wildflower_41:

(Start: 14 @21152 has 62 MA's), (Start: 17 @21167 has 1 MA's), (24, 21230), (31, 21278), (33, 21287), (38, 21305), (49, 21395), (51, 21410), (58, 21512), (59, 21518), (63, 21560), (64, 21566), (67, 21575), (68, 21578), (69, 21587), (80, 21650), (89, 21707), (91, 21716), (96, 21743),

Gene: Winget_42 Start: 21846, Stop: 22451, Start Num: 14

Candidate Starts for Winget_42:

(Start: 14 @21846 has 62 MA's), (Start: 17 @21861 has 1 MA's), (24, 21924), (31, 21972), (33, 21981), (38, 21999), (49, 22089), (51, 22104), (58, 22206), (59, 22212), (63, 22254), (64, 22260), (67, 22269), (68, 22272), (69, 22281), (80, 22344), (89, 22401), (91, 22410), (96, 22437),

Gene: Xeno_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Xeno_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Xerxes_8 Start: 5956, Stop: 6441, Start Num: 22

Candidate Starts for Xerxes_8:

(7, 5854), (8, 5860), (9, 5872), (Start: 22 @5956 has 42 MA's), (28, 5995), (37, 6043), (41, 6073), (46, 6115), (47, 6130), (50, 6142), (51, 6151), (52, 6175), (57, 6232), (61, 6253), (64, 6274), (80, 6349), (82, 6367), (85, 6382), (90, 6415), (92, 6424),

Gene: Xula_8 Start: 6619, Stop: 7164, Start Num: 16

Candidate Starts for Xula_8:

(3, 6433), (Start: 16 @6619 has 6 MA's), (Start: 19 @6655 has 2 MA's), (32, 6742), (34, 6751), (41, 6796), (45, 6829), (57, 6955), (87, 7129), (93, 7150),

Gene: Yeet_23 Start: 15301, Stop: 15870, Start Num: 14

Candidate Starts for Yeet_23:

(Start: 14 @15301 has 62 MA's), (35, 15439), (52, 15586), (62, 15667), (68, 15697), (70, 15712), (71, 15715), (77, 15751), (78, 15757), (83, 15790), (95, 15856),

Gene: YungJamal_44 Start: 21885, Stop: 22490, Start Num: 14

Candidate Starts for YungJamal_44:

(Start: 14 @21885 has 62 MA's), (Start: 17 @21900 has 1 MA's), (24, 21963), (31, 22011), (33, 22020), (38, 22038), (49, 22128), (51, 22143), (58, 22245), (59, 22251), (63, 22293), (64, 22299), (67, 22308), (68, 22311), (69, 22320), (80, 22383), (89, 22440), (91, 22449), (96, 22476),

Gene: Zakhe101_41 Start: 21296, Stop: 21901, Start Num: 14

Candidate Starts for Zakhe101_41:

(Start: 14 @21296 has 62 MA's), (Start: 17 @21311 has 1 MA's), (24, 21374), (31, 21422), (33, 21431), (38, 21449), (49, 21539), (51, 21554), (58, 21656), (59, 21662), (63, 21704), (64, 21710), (67, 21719), (68, 21722), (69, 21731), (80, 21794), (89, 21851), (91, 21860), (96, 21887),

Gene: Zelink_26 Start: 16153, Stop: 16722, Start Num: 14

Candidate Starts for Zelink_26:

(Start: 14 @16153 has 62 MA's), (35, 16291), (52, 16438), (62, 16519), (68, 16549), (70, 16564), (71, 16567), (77, 16603), (78, 16609), (83, 16642), (95, 16708),