

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 311347 Report

This analysis was run 06/27/26 on database version 652.

Pham number 311347 has 136 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_22
- Track 2 : Fowlmouth_19
- Track 3 : MrMiyagi_19
- Track 4 : Cuke_18
- Track 5 : Madi_20, BiteSize_20, Terapin_20, Sienna_20, Beyoncage_20, Djokovic_20
- Track 6 : LilyPad_21
- Track 7 : Suzy_20
- Track 8 : LittleFella_22
- Track 9 : Riduram_22, Astralis_22, Alyssamiracle_24, Avian_22, RazorC_22, Genamy16_24, Rumi_24, Charminar_22, Jamemuya19_22, NovaSharks_24, Stormer_23
- Track 10 : Sadboi_25, OtterstedtS21_25, Alephilan_22, DaviePasture_25, Gibbin_26, Mima20_23, GretelLyn_25, Patos_26, Ranch_25, Erutan_25, Zany_23, Rukungu_25, Yikes_26, NorManre_26, LavAbarElk_23, DoobyDoo_24
- Track 11 : Sampudon_25, Lila22_24, Jalebi_24
- Track 12 : ParvusTarda_25, Lambo_25, Fulcrum_26, MoiGyank_27, BirthdayBoy_26, GOATification_26, Wojtek_24, Rota_24
- Track 13 : DumpTruck_24, Xenia2_25
- Track 14 : LuckyLeo_24, Apeppi_22, Tillicus_24
- Track 15 : Pywacket_24
- Track 16 : Krampus_27, Tiggy93_27, FountainFog_26, Gilda_27, Pharpay_27, Anakin_27, Karate_26, Rachella_27, Poultruss_26, Haunter_27, Kate_27, AnnaSerena_27, CoolCookie_27, Rie18_27, OhDear_27, Potty_27, Artiphact_27, Tedro_27, PhunaPhoke_27, Hager_28, NarutoRun_27, Tongui_26
- Track 17 : JDawG_26, Aesir_26, MortySmith_25
- Track 18 : LordBart_28, Ajin_28, Sparcetus_28
- Track 19 : Hiddenleaf_26, Snakehole_28, DannyDe_26, FreddieHg_26, Chivey_26, SilentWarrior_26
- Track 20 : Dauntless_26, Crestdrop_26, JingleBells_26, Annapurna_26, Erudite_26
- Track 21 : RikSengupta_28, TinyMiny_28, Kors_28
- Track 22 : Neptune_27, Cybele_27
- Track 23 : OverHedge_27
- Track 24 : Bramble_28
- Track 25 : Huwbert_48
- Track 26 : Triscuit_47
- Track 27 : Puissant_25

- Track 28 : BobtimousPrime_26, Phreeze_24, Beckerton_24, Oaker_24, Megatron06_26, Damien_24, Thumb_24
- Track 29 : Predator_28
- Track 30 : Cborch11_25, Nish23_25
- Track 31 : Konstantine_29
- Track 32 : DrLupo_33
- Track 33 : Barnyard_31
- Track 34 : Yelo_25
- Track 35 : Send513_25, Candle_25, Nilo_26, Riparian_25, Zenon_26
- Track 36 : Weiss13_25, Papyrus_25, Rope_25
- Track 37 : MontyDev_25
- Track 38 : Demikore_32, Labelle_31, SuperSonics_31
- Track 39 : Madruga_30
- Track 40 : Patience_32
- Track 41 : Wollypog_15
- Track 42 : Shrew_60

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

The start number called the most often in the published annotations is 17, it was called in 42 of the 124 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aesir_26, Ajin_28, Anakin_27, AnnaSerena_27, Annapurna_26, Artiphact_27, Bramble_28, Chivey_26, CoolCookie_27, Crestdrop_26, Cybele_27, DannyDe_26, Dauntless_26, Erudite_26, FountainFog_26, FreddieHg_26, Gilda_27, Hager_28, Haunter_27, Hiddenleaf_26, JDawG_26, JingleBells_26, Karate_26, Kate_27, Kors_28, Krampus_27, LordBart_28, MortySmith_25, NarutoRun_27, Neptune_27, OhDear_27, OverHedge_27, Pharpay_27, PhunaPhoke_27, Potty_27, Poultruss_26, Rachella_27, Rie18_27, RikSengupta_28, SilentWarrior_26, Snakehole_28, Sparcetus_28, Tedro_27, Tiggy93_27, TinyMiny_28, Tongui_26,

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

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

- Alephilan_22, Alyssamiracle_24, Apeppi_22, Astralis_22, Avian_22, Barnyard_31, Beckerton_24, Beyoncage_20, BirthdayBoy_26, BiteSize_20, BobtimousPrime_26, Candle_25, Cborch11_25, Charminar_22, Cuke_18, Damien_24, DaviePasture_25, Demikore_32, Djokovic_20, DoobyDoo_24, DrLupo_33, DumpTruck_24, Erutan_25, Fowlmouth_19, Fulcrum_26, GOATification_26, Genamy16_24, Gibbin_26, GretelLyn_25, Huwbert_48, Indlulamithi_22, Jalebi_24, Jamemuya19_22, Konstantine_29, Labelle_31, Lambo_25, LavAbarElk_23, Lila22_24, LilyPad_21, LittleFella_22, LuckyLeo_24, Madi_20, Madruga_30, Megatron06_26, Mima20_23, MoiGyank_27, MontyDev_25, MrMiyagi_19, Nilo_26, Nish23_25, NorManre_26, NovaSharks_24, Oaker_24, OtterstedtS21_25, Papyrus_25, ParvusTarda_25, Patience_32, Patos_26, Phreeze_24, Predator_28, Puissant_25, Pywacket_24, Ranch_25, RazorC_22, Riduram_22, Riparian_25, Rope_25, Rota_24, Rukungu_25, Rumi_24, Sadboi_25, Sampudon_25, Send513_25, Shrew_60, Sienna_20, Stormer_23, SuperSonics_31, Suzy_20, Terapin_20, Thumb_24, Tillicus_24,

Triscuit_47, Weiss13_25, Wojtek_24, Wollypog_15, Xenia2_25, Yelo_25, Yikes_26, Zany_23, Zenon_26,

Summary by start number:

Start 3:

- Found in 2 of 136 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MontyDev_25 (R), Yelo_25 (R),

Start 4:

- Found in 12 of 136 (8.8%) of genes in pham
- Manual Annotations of this start: 12 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle_25 (R), Cuke_18 (AC), Fowlmouth_19 (AC), Indulamithi_22 (AC), MrMiyagi_19 (AC), Nilo_26 (R), Papyrus_25 (R), Riparian_25 (R), Rope_25 (R), Send513_25 (R), Weiss13_25 (R), Zenon_26 (R),

Start 15:

- Found in 2 of 136 (1.5%) of genes in pham
- Manual Annotations of this start: 2 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Barnyard_31 (H2), DrLupo_33 (H2),

Start 17:

- Found in 46 of 136 (33.8%) of genes in pham
- Manual Annotations of this start: 42 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aesir_26 (EF), Ajin_28 (EF), Anakin_27 (EF), AnnaSerena_27 (EF), Annapurna_26 (EF), Artiphact_27 (EF), Bramble_28 (EF), Chivey_26 (EF), CoolCookie_27 (EF), Crestdrop_26 (EF), Cybele_27 (EF), DannyDe_26 (EF), Dauntless_26 (EF), Erudite_26 (EF), FountainFog_26 (EF), FreddieHg_26 (EF), Gilda_27 (EF), Hager_28 (EF), Haunter_27 (EF), Hiddenleaf_26 (EF), JDawG_26 (EF), JingleBells_26 (EF), Karate_26 (EF), Kate_27 (EF), Kors_28 (EF), Krampus_27 (EF), LordBart_28 (EF), MortySmith_25 (EF), NarutoRun_27 (EF), Neptune_27 (EF), OhDear_27 (EF), OverHedge_27 (EF), Pharpay_27 (EF), PhunaPhoke_27 (EF), Potty_27 (EF), Poultruss_26 (EF), Rachella_27 (EF), Rie18_27 (EF), RikSengupta_28 (EF), SilentWarrior_26 (EF), Snakehole_28 (EF), Sparcetus_28 (EF), Tedro_27 (EF), Tiggy93_27 (EF), TinyMiny_28 (EF), Tongui_26 (EF),

Start 18:

- Found in 3 of 136 (2.2%) of genes in pham
- Manual Annotations of this start: 3 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Huwbart_48 (GG), Shrew_60 (singleton), Triscuit_47 (GG),

Start 21:

- Found in 1 of 136 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 124

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wollypog_15 (singleton),

Start 22:

- Found in 21 of 136 (15.4%) of genes in pham
- Manual Annotations of this start: 20 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beckerton_24 (H1), Beyoncage_20 (DG1), BiteSize_20 (DG1), BobtimousPrime_26 (H1), Cborch11_25 (H1), Damien_24 (H1), Djokovic_20 (DG1), Konstantine_29 (H1), LilyPad_21 (DG1), LittleFella_22 (DG2), Madi_20 (DG1), Megatron06_26 (H1), Nish23_25 (H1), Oaker_24 (H1), Phreeze_24 (H1), Predator_28 (H1), Puissant_25 (H1), Sienna_20 (DG1), Suzy_20 (DG1), Terapin_20 (DG1), Thumb_24 (H1),

Start 23:

- Found in 49 of 136 (36.0%) of genes in pham
- Manual Annotations of this start: 42 of 124
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alephilan_22 (DV), Alyssamiracle_24 (DV), Apeppi_22 (DV), Astralis_22 (DV), Avian_22 (DV), BirthdayBoy_26 (DV), Charminar_22 (DV), DaviePasture_25 (DV), Demikore_32 (U), DoobyDoo_24 (DV), DumpTruck_24 (DV), Erutan_25 (DV), Fulcrum_26 (DV), GOATification_26 (DV), Genamy16_24 (DV), Gibbin_26 (DV), GretelLyn_25 (DV), Jalebi_24 (DV), Jamemuya19_22 (DV), Labelle_31 (U), Lambo_25 (DV), LavAbarElk_23 (DV), Lila22_24 (DV), LuckyLeo_24 (DV), Madruga_30 (U), Mima20_23 (DV), MoiGyank_27 (DV), NorManre_26 (DV), NovaSharks_24 (DV), OtterstedtS21_25 (DV), ParvusTarda_25 (DV), Patience_32 (U), Patos_26 (DV), Pywacket_24 (DV), Ranch_25 (DV), RazorC_22 (DV), Riduram_22 (DV), Rota_24 (DV), Rukungu_25 (DV), Rumi_24 (DV), Sadboi_25 (DV), Sampudon_25 (DV), Stormer_23 (DV), SuperSonics_31 (U), Tillicus_24 (DV), Wojtek_24 (DV), Xenia2_25 (DV), Yikes_26 (DV), Zany_23 (DV),

Summary by clusters:

There are 11 clusters represented in this pham: DG2, AC, EF, H2, H1, singleton, GG, R, U, DV, DG1,

Info for manual annotations of cluster AC:

- Start number 4 was manually annotated 4 times for cluster AC.

Info for manual annotations of cluster DG1:

- Start number 22 was manually annotated 8 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 22 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DV:

- Start number 23 was manually annotated 39 times for cluster DV.

Info for manual annotations of cluster EF:

- Start number 17 was manually annotated 42 times for cluster EF.

Info for manual annotations of cluster GG:

- Start number 18 was manually annotated 2 times for cluster GG.

Info for manual annotations of cluster H1:

- Start number 22 was manually annotated 11 times for cluster H1.

Info for manual annotations of cluster H2:

- Start number 15 was manually annotated 2 times for cluster H2.

Info for manual annotations of cluster R:

- Start number 3 was manually annotated 2 times for cluster R.
- Start number 4 was manually annotated 8 times for cluster R.

Info for manual annotations of cluster U:

- Start number 23 was manually annotated 3 times for cluster U.

Gene Information:

Gene: Aesir_26 Start: 13825, Stop: 14427, Start Num: 17

Candidate Starts for Aesir_26:

(Start: 17 @13825 has 42 MA's), (36, 13969), (42, 13993), (62, 14098), (63, 14113), (64, 14116), (65, 14122), (75, 14164), (99, 14275), (105, 14308), (106, 14317), (114, 14380),

Gene: Ajin_28 Start: 13971, Stop: 14564, Start Num: 17

Candidate Starts for Ajin_28:

(Start: 17 @13971 has 42 MA's), (63, 14253), (64, 14256), (70, 14286), (83, 14325), (92, 14373), (99, 14412), (100, 14418), (105, 14445), (106, 14454), (114, 14517),

Gene: Alephilan_22 Start: 15936, Stop: 16421, Start Num: 23

Candidate Starts for Alephilan_22:

(Start: 23 @15936 has 42 MA's), (36, 16041), (68, 16197), (69, 16200), (71, 16209), (97, 16302), (100, 16317), (104, 16341), (108, 16374), (110, 16383),

Gene: Alyssamiracle_24 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Alyssamiracle_24:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Anakin_27 Start: 14035, Stop: 14679, Start Num: 17

Candidate Starts for Anakin_27:

(Start: 17 @14035 has 42 MA's), (36, 14182), (42, 14206), (55, 14287), (63, 14326), (64, 14329), (75, 14377), (99, 14527), (105, 14560), (106, 14569), (114, 14632),

Gene: AnnaSerena_27 Start: 14044, Stop: 14688, Start Num: 17

Candidate Starts for AnnaSerena_27:

(Start: 17 @14044 has 42 MA's), (36, 14191), (42, 14215), (55, 14296), (63, 14335), (64, 14338), (75, 14386), (99, 14536), (105, 14569), (106, 14578), (114, 14641),

Gene: Annapurna_26 Start: 13248, Stop: 13889, Start Num: 17

Candidate Starts for Annapurna_26:

(Start: 17 @13248 has 42 MA's), (36, 13392), (42, 13416), (62, 13521), (63, 13536), (64, 13539), (65, 13545), (75, 13587), (78, 13599), (99, 13737), (105, 13770), (106, 13779), (114, 13842),

Gene: Apeppi_22 Start: 16058, Stop: 16555, Start Num: 23

Candidate Starts for Apeppi_22:

(Start: 23 @16058 has 42 MA's), (35, 16163), (36, 16169), (56, 16271), (68, 16331), (97, 16436), (104, 16475), (108, 16508), (110, 16517),

Gene: Artiphact_27 Start: 14036, Stop: 14680, Start Num: 17

Candidate Starts for Artiphact_27:

(Start: 17 @14036 has 42 MA's), (36, 14183), (42, 14207), (55, 14288), (63, 14327), (64, 14330), (75, 14378), (99, 14528), (105, 14561), (106, 14570), (114, 14633),

Gene: Astralis_22 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Astralis_22:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Avian_22 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Avian_22:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Barnyard_31 Start: 17229, Stop: 17840, Start Num: 15

Candidate Starts for Barnyard_31:

(Start: 15 @17229 has 2 MA's), (36, 17403), (43, 17439), (44, 17448), (47, 17463), (60, 17523), (63, 17547), (65, 17556), (68, 17571), (75, 17598), (97, 17676), (100, 17691), (108, 17745), (110, 17754), (115, 17796),

Gene: Beckerton_24 Start: 15907, Stop: 16452, Start Num: 22

Candidate Starts for Beckerton_24:

(Start: 22 @15907 has 20 MA's), (36, 16027), (40, 16045), (41, 16051), (44, 16072), (50, 16105), (54, 16162), (59, 16180), (63, 16207), (69, 16234), (72, 16246), (89, 16300), (95, 16327), (97, 16336), (100, 16351), (108, 16405),

Gene: Beyoncage_20 Start: 11749, Stop: 12312, Start Num: 22

Candidate Starts for Beyoncage_20:

(Start: 22 @11749 has 20 MA's), (28, 11812), (40, 11878), (63, 12004), (65, 12013), (66, 12016), (75, 12055), (101, 12169), (103, 12178), (104, 12187), (108, 12220), (110, 12229),

Gene: BirthdayBoy_26 Start: 16789, Stop: 17265, Start Num: 23

Candidate Starts for BirthdayBoy_26:

(Start: 23 @16789 has 42 MA's), (36, 16885), (68, 17041), (71, 17053), (97, 17146), (100, 17161), (104, 17185), (108, 17218), (110, 17227),

Gene: BiteSize_20 Start: 11749, Stop: 12312, Start Num: 22

Candidate Starts for BiteSize_20:

(Start: 22 @11749 has 20 MA's), (28, 11812), (40, 11878), (63, 12004), (65, 12013), (66, 12016), (75, 12055), (101, 12169), (103, 12178), (104, 12187), (108, 12220), (110, 12229),

Gene: BobtimousPrime_26 Start: 15827, Stop: 16372, Start Num: 22

Candidate Starts for BobtimousPrime_26:

(Start: 22 @15827 has 20 MA's), (36, 15947), (40, 15965), (41, 15971), (44, 15992), (50, 16025), (54, 16082), (59, 16100), (63, 16127), (69, 16154), (72, 16166), (89, 16220), (95, 16247), (97, 16256), (100, 16271), (108, 16325),

Gene: Bramble_28 Start: 13937, Stop: 14530, Start Num: 17

Candidate Starts for Bramble_28:

(2, 13700), (8, 13814), (Start: 17 @13937 has 42 MA's), (59, 14192), (63, 14219), (64, 14222), (70, 14252), (83, 14291), (92, 14339), (99, 14378), (100, 14384), (105, 14411), (106, 14420), (114, 14483),

Gene: Candle_25 Start: 15923, Stop: 16699, Start Num: 4

Candidate Starts for Candle_25:

(Start: 4 @15923 has 12 MA's), (10, 15992), (12, 16022), (31, 16166), (34, 16175), (51, 16289), (52, 16301), (59, 16325), (68, 16376), (80, 16421), (81, 16424), (88, 16490), (99, 16547), (105, 16580), (108, 16610), (109, 16616), (113, 16649), (115, 16661),

Gene: Cborch11_25 Start: 15369, Stop: 15914, Start Num: 22

Candidate Starts for Cborch11_25:

(Start: 22 @15369 has 20 MA's), (36, 15489), (40, 15507), (41, 15513), (44, 15534), (50, 15567), (54, 15624), (59, 15642), (63, 15669), (69, 15696), (72, 15708), (89, 15762), (95, 15789), (97, 15798), (100, 15813), (108, 15867),

Gene: Charminar_22 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Charminar_22:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Chivey_26 Start: 13241, Stop: 13843, Start Num: 17

Candidate Starts for Chivey_26:

(Start: 17 @13241 has 42 MA's), (36, 13385), (42, 13409), (62, 13514), (63, 13529), (64, 13532), (65, 13538), (99, 13691), (105, 13724), (106, 13733), (114, 13796),

Gene: CoolCookie_27 Start: 14042, Stop: 14686, Start Num: 17

Candidate Starts for CoolCookie_27:

(Start: 17 @14042 has 42 MA's), (36, 14189), (42, 14213), (55, 14294), (63, 14333), (64, 14336), (75, 14384), (99, 14534), (105, 14567), (106, 14576), (114, 14639),

Gene: Crestdrop_26 Start: 13111, Stop: 13752, Start Num: 17

Candidate Starts for Crestdrop_26:

(Start: 17 @13111 has 42 MA's), (36, 13255), (42, 13279), (62, 13384), (63, 13399), (64, 13402), (65, 13408), (75, 13450), (78, 13462), (99, 13600), (105, 13633), (106, 13642), (114, 13705),

Gene: Cuke_18 Start: 11044, Stop: 11877, Start Num: 4

Candidate Starts for Cuke_18:

(Start: 4 @11044 has 12 MA's), (13, 11191), (16, 11215), (19, 11230), (24, 11281), (29, 11329), (35, 11371), (37, 11380), (38, 11386), (46, 11434), (48, 11449), (58, 11512), (65, 11551), (67, 11563), (68, 11566), (91, 11683), (94, 11701), (105, 11758), (108, 11788), (109, 11794), (115, 11839),

Gene: Cybele_27 Start: 14012, Stop: 14656, Start Num: 17

Candidate Starts for Cybele_27:

(Start: 17 @14012 has 42 MA's), (36, 14159), (42, 14183), (55, 14264), (63, 14303), (64, 14306), (75, 14354), (78, 14366), (99, 14504), (105, 14537), (106, 14546), (114, 14609),

Gene: Damien_24 Start: 15370, Stop: 15915, Start Num: 22

Candidate Starts for Damien_24:

(Start: 22 @15370 has 20 MA's), (36, 15490), (40, 15508), (41, 15514), (44, 15535), (50, 15568), (54, 15625), (59, 15643), (63, 15670), (69, 15697), (72, 15709), (89, 15763), (95, 15790), (97, 15799), (100,

15814), (108, 15868),

Gene: DannyDe_26 Start: 13233, Stop: 13835, Start Num: 17

Candidate Starts for DannyDe_26:

(Start: 17 @13233 has 42 MA's), (36, 13377), (42, 13401), (62, 13506), (63, 13521), (64, 13524), (65, 13530), (99, 13683), (105, 13716), (106, 13725), (114, 13788),

Gene: Dauntless_26 Start: 13754, Stop: 14395, Start Num: 17

Candidate Starts for Dauntless_26:

(Start: 17 @13754 has 42 MA's), (36, 13898), (42, 13922), (62, 14027), (63, 14042), (64, 14045), (65, 14051), (75, 14093), (78, 14105), (99, 14243), (105, 14276), (106, 14285), (114, 14348),

Gene: DaviePasture_25 Start: 16546, Stop: 17034, Start Num: 23

Candidate Starts for DaviePasture_25:

(Start: 23 @16546 has 42 MA's), (36, 16654), (68, 16810), (69, 16813), (71, 16822), (97, 16915), (100, 16930), (104, 16954), (108, 16987), (110, 16996),

Gene: Demikore_32 Start: 18730, Stop: 19290, Start Num: 23

Candidate Starts for Demikore_32:

(Start: 23 @18730 has 42 MA's), (36, 18838), (44, 18883), (51, 18928), (63, 18979), (65, 18988), (69, 19006), (90, 19090), (92, 19096), (97, 19123), (98, 19129), (100, 19138), (104, 19159), (108, 19192), (110, 19201), (111, 19210), (112, 19225), (115, 19243),

Gene: Djokovic_20 Start: 11749, Stop: 12312, Start Num: 22

Candidate Starts for Djokovic_20:

(Start: 22 @11749 has 20 MA's), (28, 11812), (40, 11878), (63, 12004), (65, 12013), (66, 12016), (75, 12055), (101, 12169), (103, 12178), (104, 12187), (108, 12220), (110, 12229),

Gene: DoobyDoo_24 Start: 15723, Stop: 16199, Start Num: 23

Candidate Starts for DoobyDoo_24:

(Start: 23 @15723 has 42 MA's), (36, 15819), (68, 15975), (69, 15978), (71, 15987), (97, 16080), (100, 16095), (104, 16119), (108, 16152), (110, 16161),

Gene: DrLupo_33 Start: 17635, Stop: 18246, Start Num: 15

Candidate Starts for DrLupo_33:

(Start: 15 @17635 has 2 MA's), (35, 17803), (36, 17809), (43, 17845), (44, 17854), (47, 17869), (60, 17929), (63, 17953), (65, 17962), (68, 17977), (72, 17992), (97, 18082), (100, 18097), (108, 18151), (110, 18160), (115, 18202),

Gene: DumpTruck_24 Start: 15958, Stop: 16452, Start Num: 23

Candidate Starts for DumpTruck_24:

(Start: 23 @15958 has 42 MA's), (36, 16066), (71, 16240), (72, 16243), (75, 16255), (97, 16333), (103, 16363), (104, 16372), (110, 16414), (112, 16438),

Gene: Erudite_26 Start: 13754, Stop: 14395, Start Num: 17

Candidate Starts for Erudite_26:

(Start: 17 @13754 has 42 MA's), (36, 13898), (42, 13922), (62, 14027), (63, 14042), (64, 14045), (65, 14051), (75, 14093), (78, 14105), (99, 14243), (105, 14276), (106, 14285), (114, 14348),

Gene: Erutan_25 Start: 16236, Stop: 16712, Start Num: 23

Candidate Starts for Erutan_25:

(Start: 23 @16236 has 42 MA's), (36, 16332), (68, 16488), (69, 16491), (71, 16500), (97, 16593), (100, 16608), (104, 16632), (108, 16665), (110, 16674),

Gene: FountainFog_26 Start: 13354, Stop: 13998, Start Num: 17

Candidate Starts for FountainFog_26:

(Start: 17 @13354 has 42 MA's), (36, 13501), (42, 13525), (55, 13606), (63, 13645), (64, 13648), (75, 13696), (99, 13846), (105, 13879), (106, 13888), (114, 13951),

Gene: Fowlmouth_19 Start: 11198, Stop: 11980, Start Num: 4

Candidate Starts for Fowlmouth_19:

(Start: 4 @11198 has 12 MA's), (6, 11225), (7, 11237), (11, 11279), (13, 11294), (14, 11297), (16, 11318), (19, 11333), (24, 11384), (33, 11462), (37, 11483), (38, 11489), (48, 11552), (64, 11648), (65, 11654), (66, 11657), (68, 11669), (102, 11843), (105, 11861), (107, 11879), (109, 11897), (114, 11933), (115, 11942),

Gene: FreddieHg_26 Start: 13257, Stop: 13859, Start Num: 17

Candidate Starts for FreddieHg_26:

(Start: 17 @13257 has 42 MA's), (36, 13401), (42, 13425), (62, 13530), (63, 13545), (64, 13548), (65, 13554), (99, 13707), (105, 13740), (106, 13749), (114, 13812),

Gene: Fulcrum_26 Start: 16769, Stop: 17245, Start Num: 23

Candidate Starts for Fulcrum_26:

(Start: 23 @16769 has 42 MA's), (36, 16865), (68, 17021), (71, 17033), (97, 17126), (100, 17141), (104, 17165), (108, 17198), (110, 17207),

Gene: GOATification_26 Start: 16769, Stop: 17245, Start Num: 23

Candidate Starts for GOATification_26:

(Start: 23 @16769 has 42 MA's), (36, 16865), (68, 17021), (71, 17033), (97, 17126), (100, 17141), (104, 17165), (108, 17198), (110, 17207),

Gene: Genamy16_24 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Genamy16_24:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Gibbin_26 Start: 16829, Stop: 17317, Start Num: 23

Candidate Starts for Gibbin_26:

(Start: 23 @16829 has 42 MA's), (36, 16937), (68, 17093), (69, 17096), (71, 17105), (97, 17198), (100, 17213), (104, 17237), (108, 17270), (110, 17279),

Gene: Gilda_27 Start: 14036, Stop: 14680, Start Num: 17

Candidate Starts for Gilda_27:

(Start: 17 @14036 has 42 MA's), (36, 14183), (42, 14207), (55, 14288), (63, 14327), (64, 14330), (75, 14378), (99, 14528), (105, 14561), (106, 14570), (114, 14633),

Gene: Gretellyn_25 Start: 17103, Stop: 17579, Start Num: 23

Candidate Starts for Gretellyn_25:

(Start: 23 @17103 has 42 MA's), (36, 17199), (68, 17355), (69, 17358), (71, 17367), (97, 17460), (100, 17475), (104, 17499), (108, 17532), (110, 17541),

Gene: Hager_28 Start: 13598, Stop: 14242, Start Num: 17

Candidate Starts for Hager_28:

(Start: 17 @13598 has 42 MA's), (36, 13745), (42, 13769), (55, 13850), (63, 13889), (64, 13892), (75, 13940), (99, 14090), (105, 14123), (106, 14132), (114, 14195),

Gene: Haunter_27 Start: 13449, Stop: 14093, Start Num: 17

Candidate Starts for Haunter_27:

(Start: 17 @13449 has 42 MA's), (36, 13596), (42, 13620), (55, 13701), (63, 13740), (64, 13743), (75, 13791), (99, 13941), (105, 13974), (106, 13983), (114, 14046),

Gene: Hiddenleaf_26 Start: 13241, Stop: 13843, Start Num: 17

Candidate Starts for Hiddenleaf_26:

(Start: 17 @13241 has 42 MA's), (36, 13385), (42, 13409), (62, 13514), (63, 13529), (64, 13532), (65, 13538), (99, 13691), (105, 13724), (106, 13733), (114, 13796),

Gene: Huwbert_48 Start: 24385, Stop: 24990, Start Num: 18

Candidate Starts for Huwbert_48:

(1, 23998), (Start: 18 @24385 has 3 MA's), (25, 24460), (30, 24490), (34, 24502), (49, 24583), (61, 24643), (63, 24661), (64, 24664), (66, 24673), (77, 24718), (89, 24775), (114, 24919), (116, 24937),

Gene: Indlulamithi_22 Start: 13331, Stop: 14158, Start Num: 4

Candidate Starts for Indlulamithi_22:

(Start: 4 @13331 has 12 MA's), (9, 13391), (20, 13511), (24, 13544), (29, 13589), (35, 13631), (37, 13640), (38, 13646), (39, 13649), (43, 13673), (58, 13775), (65, 13814), (67, 13826), (68, 13829), (76, 13859), (79, 13871), (87, 13916), (92, 13958), (96, 13979), (103, 14018), (105, 14030), (108, 14060), (109, 14066), (113, 14099), (115, 14111), (117, 14135),

Gene: JDawG_26 Start: 13823, Stop: 14425, Start Num: 17

Candidate Starts for JDawG_26:

(Start: 17 @13823 has 42 MA's), (36, 13967), (42, 13991), (62, 14096), (63, 14111), (64, 14114), (65, 14120), (75, 14162), (99, 14273), (105, 14306), (106, 14315), (114, 14378),

Gene: Jalebi_24 Start: 17279, Stop: 17755, Start Num: 23

Candidate Starts for Jalebi_24:

(Start: 23 @17279 has 42 MA's), (36, 17375), (68, 17531), (69, 17534), (71, 17543), (97, 17636), (104, 17675), (108, 17708), (110, 17717),

Gene: Jamemuya19_22 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Jamemuya19_22:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: JingleBells_26 Start: 13318, Stop: 13959, Start Num: 17

Candidate Starts for JingleBells_26:

(Start: 17 @13318 has 42 MA's), (36, 13462), (42, 13486), (62, 13591), (63, 13606), (64, 13609), (65, 13615), (75, 13657), (78, 13669), (99, 13807), (105, 13840), (106, 13849), (114, 13912),

Gene: Karate_26 Start: 13448, Stop: 14092, Start Num: 17

Candidate Starts for Karate_26:

(Start: 17 @13448 has 42 MA's), (36, 13595), (42, 13619), (55, 13700), (63, 13739), (64, 13742), (75, 13790), (99, 13940), (105, 13973), (106, 13982), (114, 14045),

Gene: Kate_27 Start: 14044, Stop: 14688, Start Num: 17

Candidate Starts for Kate_27:

(Start: 17 @14044 has 42 MA's), (36, 14191), (42, 14215), (55, 14296), (63, 14335), (64, 14338), (75, 14386), (99, 14536), (105, 14569), (106, 14578), (114, 14641),

Gene: Konstantine_29 Start: 16571, Stop: 17116, Start Num: 22

Candidate Starts for Konstantine_29:

(Start: 22 @16571 has 20 MA's), (36, 16691), (40, 16709), (41, 16715), (44, 16736), (50, 16769), (54, 16826), (59, 16844), (63, 16871), (69, 16898), (72, 16910), (89, 16964), (95, 16991), (97, 17000), (100, 17015), (108, 17069),

Gene: Kors_28 Start: 14017, Stop: 14610, Start Num: 17

Candidate Starts for Kors_28:

(Start: 17 @14017 has 42 MA's), (59, 14272), (63, 14299), (64, 14302), (70, 14332), (83, 14371), (92, 14419), (99, 14458), (100, 14464), (105, 14491), (106, 14500), (114, 14563),

Gene: Krampus_27 Start: 14042, Stop: 14686, Start Num: 17

Candidate Starts for Krampus_27:

(Start: 17 @14042 has 42 MA's), (36, 14189), (42, 14213), (55, 14294), (63, 14333), (64, 14336), (75, 14384), (99, 14534), (105, 14567), (106, 14576), (114, 14639),

Gene: Labelle_31 Start: 18732, Stop: 19292, Start Num: 23

Candidate Starts for Labelle_31:

(Start: 23 @18732 has 42 MA's), (36, 18840), (44, 18885), (51, 18930), (63, 18981), (65, 18990), (69, 19008), (90, 19092), (92, 19098), (97, 19125), (98, 19131), (100, 19140), (104, 19161), (108, 19194), (110, 19203), (111, 19212), (112, 19227), (115, 19245),

Gene: Lambo_25 Start: 16772, Stop: 17257, Start Num: 23

Candidate Starts for Lambo_25:

(Start: 23 @16772 has 42 MA's), (36, 16877), (68, 17033), (71, 17045), (97, 17138), (100, 17153), (104, 17177), (108, 17210), (110, 17219),

Gene: LavAbarElk_23 Start: 15206, Stop: 15694, Start Num: 23

Candidate Starts for LavAbarElk_23:

(Start: 23 @15206 has 42 MA's), (36, 15314), (68, 15470), (69, 15473), (71, 15482), (97, 15575), (100, 15590), (104, 15614), (108, 15647), (110, 15656),

Gene: Lila22_24 Start: 16727, Stop: 17203, Start Num: 23

Candidate Starts for Lila22_24:

(Start: 23 @16727 has 42 MA's), (36, 16823), (68, 16979), (69, 16982), (71, 16991), (97, 17084), (104, 17123), (108, 17156), (110, 17165),

Gene: LilyPad_21 Start: 12413, Stop: 12973, Start Num: 22

Candidate Starts for LilyPad_21:

(Start: 22 @12413 has 20 MA's), (28, 12473), (32, 12500), (41, 12545), (57, 12635), (63, 12665), (66, 12677), (71, 12701), (89, 12773), (93, 12791), (101, 12830), (103, 12839), (104, 12848), (108, 12881), (110, 12890),

Gene: LittleFella_22 Start: 14288, Stop: 14845, Start Num: 22

Candidate Starts for LittleFella_22:

(Start: 22 @14288 has 20 MA's), (63, 14537), (65, 14546), (66, 14549), (103, 14711), (104, 14720), (108, 14753), (110, 14762),

Gene: LordBart_28 Start: 13933, Stop: 14526, Start Num: 17

Candidate Starts for LordBart_28:

(Start: 17 @13933 has 42 MA's), (63, 14215), (64, 14218), (70, 14248), (83, 14287), (92, 14335), (99, 14374), (100, 14380), (105, 14407), (106, 14416), (114, 14479),

Gene: LuckyLeo_24 Start: 16058, Stop: 16555, Start Num: 23

Candidate Starts for LuckyLeo_24:

(Start: 23 @16058 has 42 MA's), (35, 16163), (36, 16169), (56, 16271), (68, 16331), (97, 16436), (104, 16475), (108, 16508), (110, 16517),

Gene: Madi_20 Start: 11749, Stop: 12312, Start Num: 22

Candidate Starts for Madi_20:

(Start: 22 @11749 has 20 MA's), (28, 11812), (40, 11878), (63, 12004), (65, 12013), (66, 12016), (75, 12055), (101, 12169), (103, 12178), (104, 12187), (108, 12220), (110, 12229),

Gene: Madruga_30 Start: 18401, Stop: 18961, Start Num: 23

Candidate Starts for Madruga_30:

(Start: 23 @18401 has 42 MA's), (36, 18509), (44, 18554), (51, 18599), (63, 18650), (65, 18659), (69, 18677), (84, 18722), (90, 18761), (92, 18767), (97, 18794), (98, 18800), (100, 18809), (104, 18830), (108, 18863), (110, 18872), (111, 18881), (112, 18896), (115, 18914),

Gene: Megatron06_26 Start: 15903, Stop: 16448, Start Num: 22

Candidate Starts for Megatron06_26:

(Start: 22 @15903 has 20 MA's), (36, 16023), (40, 16041), (41, 16047), (44, 16068), (50, 16101), (54, 16158), (59, 16176), (63, 16203), (69, 16230), (72, 16242), (89, 16296), (95, 16323), (97, 16332), (100, 16347), (108, 16401),

Gene: Mima20_23 Start: 16456, Stop: 16944, Start Num: 23

Candidate Starts for Mima20_23:

(Start: 23 @16456 has 42 MA's), (36, 16564), (68, 16720), (69, 16723), (71, 16732), (97, 16825), (100, 16840), (104, 16864), (108, 16897), (110, 16906),

Gene: MoiGyank_27 Start: 17140, Stop: 17616, Start Num: 23

Candidate Starts for MoiGyank_27:

(Start: 23 @17140 has 42 MA's), (36, 17236), (68, 17392), (71, 17404), (97, 17497), (100, 17512), (104, 17536), (108, 17569), (110, 17578),

Gene: MontyDev_25 Start: 15564, Stop: 16340, Start Num: 3

Candidate Starts for MontyDev_25:

(Start: 3 @15564 has 2 MA's), (5, 15579), (10, 15633), (12, 15663), (31, 15807), (34, 15816), (51, 15930), (52, 15942), (59, 15966), (68, 16017), (80, 16062), (81, 16065), (88, 16131), (99, 16188), (105, 16221), (108, 16251), (109, 16257), (113, 16290), (115, 16302),

Gene: MortySmith_25 Start: 13216, Stop: 13818, Start Num: 17

Candidate Starts for MortySmith_25:

(Start: 17 @13216 has 42 MA's), (36, 13360), (42, 13384), (62, 13489), (63, 13504), (64, 13507), (65, 13513), (75, 13555), (99, 13666), (105, 13699), (106, 13708), (114, 13771),

Gene: MrMiyagi_19 Start: 11218, Stop: 12000, Start Num: 4

Candidate Starts for MrMiyagi_19:

(Start: 4 @11218 has 12 MA's), (6, 11245), (7, 11257), (11, 11299), (13, 11314), (14, 11317), (16, 11338), (19, 11353), (24, 11404), (33, 11482), (37, 11503), (38, 11509), (48, 11572), (64, 11668), (65, 11674), (66, 11677), (68, 11689), (105, 11881), (107, 11899), (109, 11917), (114, 11953), (115, 11962),

Gene: NarutoRun_27 Start: 14035, Stop: 14679, Start Num: 17

Candidate Starts for NarutoRun_27:

(Start: 17 @14035 has 42 MA's), (36, 14182), (42, 14206), (55, 14287), (63, 14326), (64, 14329), (75, 14377), (99, 14527), (105, 14560), (106, 14569), (114, 14632),

Gene: Neptune_27 Start: 14012, Stop: 14656, Start Num: 17

Candidate Starts for Neptune_27:

(Start: 17 @14012 has 42 MA's), (36, 14159), (42, 14183), (55, 14264), (63, 14303), (64, 14306), (75, 14354), (78, 14366), (99, 14504), (105, 14537), (106, 14546), (114, 14609),

Gene: Nilo_26 Start: 15920, Stop: 16696, Start Num: 4

Candidate Starts for Nilo_26:

(Start: 4 @15920 has 12 MA's), (10, 15989), (12, 16019), (31, 16163), (34, 16172), (51, 16286), (52, 16298), (59, 16322), (68, 16373), (80, 16418), (81, 16421), (88, 16487), (99, 16544), (105, 16577), (108, 16607), (109, 16613), (113, 16646), (115, 16658),

Gene: Nish23_25 Start: 15369, Stop: 15914, Start Num: 22

Candidate Starts for Nish23_25:

(Start: 22 @15369 has 20 MA's), (36, 15489), (40, 15507), (41, 15513), (44, 15534), (50, 15567), (54, 15624), (59, 15642), (63, 15669), (69, 15696), (72, 15708), (89, 15762), (95, 15789), (97, 15798), (100, 15813), (108, 15867),

Gene: NorManre_26 Start: 16335, Stop: 16823, Start Num: 23

Candidate Starts for NorManre_26:

(Start: 23 @16335 has 42 MA's), (36, 16443), (68, 16599), (69, 16602), (71, 16611), (97, 16704), (100, 16719), (104, 16743), (108, 16776), (110, 16785),

Gene: NovaSharks_24 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for NovaSharks_24:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Oaker_24 Start: 15627, Stop: 16172, Start Num: 22

Candidate Starts for Oaker_24:

(Start: 22 @15627 has 20 MA's), (36, 15747), (40, 15765), (41, 15771), (44, 15792), (50, 15825), (54, 15882), (59, 15900), (63, 15927), (69, 15954), (72, 15966), (89, 16020), (95, 16047), (97, 16056), (100, 16071), (108, 16125),

Gene: OhDear_27 Start: 14041, Stop: 14685, Start Num: 17

Candidate Starts for OhDear_27:

(Start: 17 @14041 has 42 MA's), (36, 14188), (42, 14212), (55, 14293), (63, 14332), (64, 14335), (75, 14383), (99, 14533), (105, 14566), (106, 14575), (114, 14638),

Gene: OtterstedtS21_25 Start: 16425, Stop: 16901, Start Num: 23

Candidate Starts for OtterstedtS21_25:

(Start: 23 @16425 has 42 MA's), (36, 16521), (68, 16677), (69, 16680), (71, 16689), (97, 16782), (100, 16797), (104, 16821), (108, 16854), (110, 16863),

Gene: OverHedge_27 Start: 14002, Stop: 14646, Start Num: 17

Candidate Starts for OverHedge_27:

(Start: 17 @14002 has 42 MA's), (36, 14149), (42, 14173), (55, 14254), (63, 14293), (64, 14296), (75, 14344), (87, 14410), (99, 14494), (105, 14527), (106, 14536), (114, 14599),

Gene: Papyrus_25 Start: 15582, Stop: 16358, Start Num: 4

Candidate Starts for Papyrus_25:

(Start: 4 @15582 has 12 MA's), (10, 15651), (12, 15681), (31, 15825), (34, 15834), (52, 15960), (59, 15984), (68, 16035), (80, 16080), (81, 16083), (88, 16149), (99, 16206), (105, 16239), (108, 16269),

(109, 16275), (113, 16308), (115, 16320),

Gene: ParvusTarda_25 Start: 15907, Stop: 16383, Start Num: 23

Candidate Starts for ParvusTarda_25:

(Start: 23 @15907 has 42 MA's), (36, 16003), (68, 16159), (71, 16171), (97, 16264), (100, 16279), (104, 16303), (108, 16336), (110, 16345),

Gene: Patience_32 Start: 19282, Stop: 19842, Start Num: 23

Candidate Starts for Patience_32:

(Start: 23 @19282 has 42 MA's), (36, 19390), (44, 19435), (47, 19450), (63, 19531), (65, 19540), (69, 19558), (90, 19642), (92, 19648), (97, 19675), (98, 19681), (100, 19690), (104, 19711), (108, 19744), (110, 19753), (111, 19762), (112, 19777), (115, 19795),

Gene: Patos_26 Start: 16335, Stop: 16823, Start Num: 23

Candidate Starts for Patos_26:

(Start: 23 @16335 has 42 MA's), (36, 16443), (68, 16599), (69, 16602), (71, 16611), (97, 16704), (100, 16719), (104, 16743), (108, 16776), (110, 16785),

Gene: Pharpay_27 Start: 14057, Stop: 14701, Start Num: 17

Candidate Starts for Pharpay_27:

(Start: 17 @14057 has 42 MA's), (36, 14204), (42, 14228), (55, 14309), (63, 14348), (64, 14351), (75, 14399), (99, 14549), (105, 14582), (106, 14591), (114, 14654),

Gene: Phreeze_24 Start: 15370, Stop: 15915, Start Num: 22

Candidate Starts for Phreeze_24:

(Start: 22 @15370 has 20 MA's), (36, 15490), (40, 15508), (41, 15514), (44, 15535), (50, 15568), (54, 15625), (59, 15643), (63, 15670), (69, 15697), (72, 15709), (89, 15763), (95, 15790), (97, 15799), (100, 15814), (108, 15868),

Gene: PhunaPhoke_27 Start: 14030, Stop: 14674, Start Num: 17

Candidate Starts for PhunaPhoke_27:

(Start: 17 @14030 has 42 MA's), (36, 14177), (42, 14201), (55, 14282), (63, 14321), (64, 14324), (75, 14372), (99, 14522), (105, 14555), (106, 14564), (114, 14627),

Gene: Potty_27 Start: 14035, Stop: 14679, Start Num: 17

Candidate Starts for Potty_27:

(Start: 17 @14035 has 42 MA's), (36, 14182), (42, 14206), (55, 14287), (63, 14326), (64, 14329), (75, 14377), (99, 14527), (105, 14560), (106, 14569), (114, 14632),

Gene: Poultruss_26 Start: 13799, Stop: 14443, Start Num: 17

Candidate Starts for Poultruss_26:

(Start: 17 @13799 has 42 MA's), (36, 13946), (42, 13970), (55, 14051), (63, 14090), (64, 14093), (75, 14141), (99, 14291), (105, 14324), (106, 14333), (114, 14396),

Gene: Predator_28 Start: 16911, Stop: 17432, Start Num: 22

Candidate Starts for Predator_28:

(Start: 22 @16911 has 20 MA's), (34, 17016), (36, 17031), (41, 17055), (44, 17076), (63, 17187), (65, 17196), (71, 17223), (84, 17253), (89, 17280), (108, 17385),

Gene: Puissant_25 Start: 15838, Stop: 16380, Start Num: 22

Candidate Starts for Puissant_25:

(Start: 22 @15838 has 20 MA's), (36, 15958), (40, 15976), (41, 15982), (44, 16003), (50, 16036), (53, 16087), (54, 16090), (59, 16108), (71, 16171), (89, 16228), (95, 16255), (97, 16264), (100, 16279),

(108, 16333),

Gene: Pywacket_24 Start: 17264, Stop: 17740, Start Num: 23

Candidate Starts for Pywacket_24:

(Start: 23 @17264 has 42 MA's), (36, 17360), (68, 17516), (71, 17528), (97, 17621), (104, 17660), (108, 17693), (110, 17702),

Gene: Rachella_27 Start: 14038, Stop: 14682, Start Num: 17

Candidate Starts for Rachella_27:

(Start: 17 @14038 has 42 MA's), (36, 14185), (42, 14209), (55, 14290), (63, 14329), (64, 14332), (75, 14380), (99, 14530), (105, 14563), (106, 14572), (114, 14635),

Gene: Ranch_25 Start: 15273, Stop: 15749, Start Num: 23

Candidate Starts for Ranch_25:

(Start: 23 @15273 has 42 MA's), (36, 15369), (68, 15525), (69, 15528), (71, 15537), (97, 15630), (100, 15645), (104, 15669), (108, 15702), (110, 15711),

Gene: RazorC_22 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for RazorC_22:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Riduram_22 Start: 14312, Stop: 14788, Start Num: 23

Candidate Starts for Riduram_22:

(Start: 23 @14312 has 42 MA's), (36, 14408), (63, 14540), (68, 14564), (69, 14567), (71, 14576), (97, 14669), (100, 14684), (104, 14708), (108, 14741), (110, 14750),

Gene: Rie18_27 Start: 13380, Stop: 14024, Start Num: 17

Candidate Starts for Rie18_27:

(Start: 17 @13380 has 42 MA's), (36, 13527), (42, 13551), (55, 13632), (63, 13671), (64, 13674), (75, 13722), (99, 13872), (105, 13905), (106, 13914), (114, 13977),

Gene: RikSengupta_28 Start: 14054, Stop: 14647, Start Num: 17

Candidate Starts for RikSengupta_28:

(Start: 17 @14054 has 42 MA's), (59, 14309), (63, 14336), (64, 14339), (70, 14369), (83, 14408), (92, 14456), (99, 14495), (100, 14501), (105, 14528), (106, 14537), (114, 14600),

Gene: Riparian_25 Start: 15381, Stop: 16157, Start Num: 4

Candidate Starts for Riparian_25:

(Start: 4 @15381 has 12 MA's), (10, 15450), (12, 15480), (31, 15624), (34, 15633), (51, 15747), (52, 15759), (59, 15783), (68, 15834), (80, 15879), (81, 15882), (88, 15948), (99, 16005), (105, 16038), (108, 16068), (109, 16074), (113, 16107), (115, 16119),

Gene: Rope_25 Start: 15573, Stop: 16349, Start Num: 4

Candidate Starts for Rope_25:

(Start: 4 @15573 has 12 MA's), (10, 15642), (12, 15672), (31, 15816), (34, 15825), (52, 15951), (59, 15975), (68, 16026), (80, 16071), (81, 16074), (88, 16140), (99, 16197), (105, 16230), (108, 16260), (109, 16266), (113, 16299), (115, 16311),

Gene: Rota_24 Start: 16231, Stop: 16707, Start Num: 23

Candidate Starts for Rota_24:

(Start: 23 @16231 has 42 MA's), (36, 16327), (68, 16483), (71, 16495), (97, 16588), (100, 16603), (104, 16627), (108, 16660), (110, 16669),

Gene: Rukungu_25 Start: 16972, Stop: 17448, Start Num: 23

Candidate Starts for Rukungu_25:

(Start: 23 @16972 has 42 MA's), (36, 17068), (68, 17224), (69, 17227), (71, 17236), (97, 17329), (100, 17344), (104, 17368), (108, 17401), (110, 17410),

Gene: Rumi_24 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Rumi_24:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: Sadboi_25 Start: 17103, Stop: 17579, Start Num: 23

Candidate Starts for Sadboi_25:

(Start: 23 @17103 has 42 MA's), (36, 17199), (68, 17355), (69, 17358), (71, 17367), (97, 17460), (100, 17475), (104, 17499), (108, 17532), (110, 17541),

Gene: Sampudon_25 Start: 17279, Stop: 17755, Start Num: 23

Candidate Starts for Sampudon_25:

(Start: 23 @17279 has 42 MA's), (36, 17375), (68, 17531), (69, 17534), (71, 17543), (97, 17636), (104, 17675), (108, 17708), (110, 17717),

Gene: Send513_25 Start: 15923, Stop: 16699, Start Num: 4

Candidate Starts for Send513_25:

(Start: 4 @15923 has 12 MA's), (10, 15992), (12, 16022), (31, 16166), (34, 16175), (51, 16289), (52, 16301), (59, 16325), (68, 16376), (80, 16421), (81, 16424), (88, 16490), (99, 16547), (105, 16580), (108, 16610), (109, 16616), (113, 16649), (115, 16661),

Gene: Shrew_60 Start: 29033, Stop: 29623, Start Num: 18

Candidate Starts for Shrew_60:

(Start: 18 @29033 has 3 MA's), (45, 29210), (63, 29309), (64, 29312), (65, 29318), (66, 29321), (67, 29330), (114, 29576), (115, 29585),

Gene: Sienna_20 Start: 11749, Stop: 12312, Start Num: 22

Candidate Starts for Sienna_20:

(Start: 22 @11749 has 20 MA's), (28, 11812), (40, 11878), (63, 12004), (65, 12013), (66, 12016), (75, 12055), (101, 12169), (103, 12178), (104, 12187), (108, 12220), (110, 12229),

Gene: SilentWarrior_26 Start: 13249, Stop: 13851, Start Num: 17

Candidate Starts for SilentWarrior_26:

(Start: 17 @13249 has 42 MA's), (36, 13393), (42, 13417), (62, 13522), (63, 13537), (64, 13540), (65, 13546), (99, 13699), (105, 13732), (106, 13741), (114, 13804),

Gene: Snakehole_28 Start: 13338, Stop: 13940, Start Num: 17

Candidate Starts for Snakehole_28:

(Start: 17 @13338 has 42 MA's), (36, 13482), (42, 13506), (62, 13611), (63, 13626), (64, 13629), (65, 13635), (99, 13788), (105, 13821), (106, 13830), (114, 13893),

Gene: Sparcetus_28 Start: 13933, Stop: 14526, Start Num: 17

Candidate Starts for Sparcetus_28:

(Start: 17 @13933 has 42 MA's), (63, 14215), (64, 14218), (70, 14248), (83, 14287), (92, 14335), (99, 14374), (100, 14380), (105, 14407), (106, 14416), (114, 14479),

Gene: Stormer_23 Start: 14342, Stop: 14818, Start Num: 23

Candidate Starts for Stormer_23:

(Start: 23 @14342 has 42 MA's), (36, 14438), (63, 14570), (68, 14594), (69, 14597), (71, 14606), (97, 14699), (100, 14714), (104, 14738), (108, 14771), (110, 14780),

Gene: SuperSonics_31 Start: 18458, Stop: 19018, Start Num: 23

Candidate Starts for SuperSonics_31:

(Start: 23 @18458 has 42 MA's), (36, 18566), (44, 18611), (51, 18656), (63, 18707), (65, 18716), (69, 18734), (90, 18818), (92, 18824), (97, 18851), (98, 18857), (100, 18866), (104, 18887), (108, 18920), (110, 18929), (111, 18938), (112, 18953), (115, 18971),

Gene: Suzy_20 Start: 12976, Stop: 13545, Start Num: 22

Candidate Starts for Suzy_20:

(Start: 22 @12976 has 20 MA's), (26, 13039), (27, 13042), (40, 13111), (63, 13237), (65, 13246), (66, 13249), (75, 13288), (86, 13333), (101, 13402), (103, 13411), (104, 13420), (108, 13453), (110, 13462),

Gene: Tedro_27 Start: 13508, Stop: 14152, Start Num: 17

Candidate Starts for Tedro_27:

(Start: 17 @13508 has 42 MA's), (36, 13655), (42, 13679), (55, 13760), (63, 13799), (64, 13802), (75, 13850), (99, 14000), (105, 14033), (106, 14042), (114, 14105),

Gene: Terapin_20 Start: 11749, Stop: 12312, Start Num: 22

Candidate Starts for Terapin_20:

(Start: 22 @11749 has 20 MA's), (28, 11812), (40, 11878), (63, 12004), (65, 12013), (66, 12016), (75, 12055), (101, 12169), (103, 12178), (104, 12187), (108, 12220), (110, 12229),

Gene: Thumb_24 Start: 15370, Stop: 15915, Start Num: 22

Candidate Starts for Thumb_24:

(Start: 22 @15370 has 20 MA's), (36, 15490), (40, 15508), (41, 15514), (44, 15535), (50, 15568), (54, 15625), (59, 15643), (63, 15670), (69, 15697), (72, 15709), (89, 15763), (95, 15790), (97, 15799), (100, 15814), (108, 15868),

Gene: Tiggy93_27 Start: 14041, Stop: 14685, Start Num: 17

Candidate Starts for Tiggy93_27:

(Start: 17 @14041 has 42 MA's), (36, 14188), (42, 14212), (55, 14293), (63, 14332), (64, 14335), (75, 14383), (99, 14533), (105, 14566), (106, 14575), (114, 14638),

Gene: Tillicus_24 Start: 15652, Stop: 16149, Start Num: 23

Candidate Starts for Tillicus_24:

(Start: 23 @15652 has 42 MA's), (35, 15757), (36, 15763), (56, 15865), (68, 15925), (97, 16030), (104, 16069), (108, 16102), (110, 16111),

Gene: TinyMiny_28 Start: 13952, Stop: 14545, Start Num: 17

Candidate Starts for TinyMiny_28:

(Start: 17 @13952 has 42 MA's), (59, 14207), (63, 14234), (64, 14237), (70, 14267), (83, 14306), (92, 14354), (99, 14393), (100, 14399), (105, 14426), (106, 14435), (114, 14498),

Gene: Tongui_26 Start: 13372, Stop: 14016, Start Num: 17

Candidate Starts for Tongui_26:

(Start: 17 @13372 has 42 MA's), (36, 13519), (42, 13543), (55, 13624), (63, 13663), (64, 13666), (75, 13714), (99, 13864), (105, 13897), (106, 13906), (114, 13969),

Gene: Triscuit_47 Start: 24305, Stop: 24910, Start Num: 18

Candidate Starts for Triscuit_47:

(Start: 18 @24305 has 3 MA's), (34, 24422), (49, 24503), (53, 24533), (61, 24563), (63, 24581), (64, 24584), (66, 24593), (77, 24638), (85, 24659), (114, 24839),

Gene: Weiss13_25 Start: 15613, Stop: 16389, Start Num: 4

Candidate Starts for Weiss13_25:

(Start: 4 @15613 has 12 MA's), (10, 15682), (12, 15712), (31, 15856), (34, 15865), (52, 15991), (59, 16015), (68, 16066), (80, 16111), (81, 16114), (88, 16180), (99, 16237), (105, 16270), (108, 16300), (109, 16306), (113, 16339), (115, 16351),

Gene: Wojtek_24 Start: 15980, Stop: 16456, Start Num: 23

Candidate Starts for Wojtek_24:

(Start: 23 @15980 has 42 MA's), (36, 16076), (68, 16232), (71, 16244), (97, 16337), (100, 16352), (104, 16376), (108, 16409), (110, 16418),

Gene: Wollypog_15 Start: 10559, Stop: 11137, Start Num: 21

Candidate Starts for Wollypog_15:

(Start: 21 @10559 has 1 MA's), (36, 10679), (73, 10859), (74, 10862), (82, 10889), (87, 10919), (90, 10940), (100, 10991), (114, 11090),

Gene: Xenia2_25 Start: 16000, Stop: 16494, Start Num: 23

Candidate Starts for Xenia2_25:

(Start: 23 @16000 has 42 MA's), (36, 16108), (71, 16282), (72, 16285), (75, 16297), (97, 16375), (103, 16405), (104, 16414), (110, 16456), (112, 16480),

Gene: Yelo_25 Start: 15906, Stop: 16682, Start Num: 3

Candidate Starts for Yelo_25:

(Start: 3 @15906 has 2 MA's), (5, 15921), (10, 15975), (12, 16005), (34, 16158), (51, 16272), (52, 16284), (59, 16308), (68, 16359), (80, 16404), (81, 16407), (88, 16473), (99, 16530), (105, 16563), (108, 16593), (109, 16599), (113, 16632), (115, 16644),

Gene: Yikes_26 Start: 17364, Stop: 17840, Start Num: 23

Candidate Starts for Yikes_26:

(Start: 23 @17364 has 42 MA's), (36, 17460), (68, 17616), (69, 17619), (71, 17628), (97, 17721), (100, 17736), (104, 17760), (108, 17793), (110, 17802),

Gene: Zany_23 Start: 16493, Stop: 16969, Start Num: 23

Candidate Starts for Zany_23:

(Start: 23 @16493 has 42 MA's), (36, 16589), (68, 16745), (69, 16748), (71, 16757), (97, 16850), (100, 16865), (104, 16889), (108, 16922), (110, 16931),

Gene: Zenon_26 Start: 15925, Stop: 16701, Start Num: 4

Candidate Starts for Zenon_26:

(Start: 4 @15925 has 12 MA's), (10, 15994), (12, 16024), (31, 16168), (34, 16177), (51, 16291), (52, 16303), (59, 16327), (68, 16378), (80, 16423), (81, 16426), (88, 16492), (99, 16549), (105, 16582), (108, 16612), (109, 16618), (113, 16651), (115, 16663),