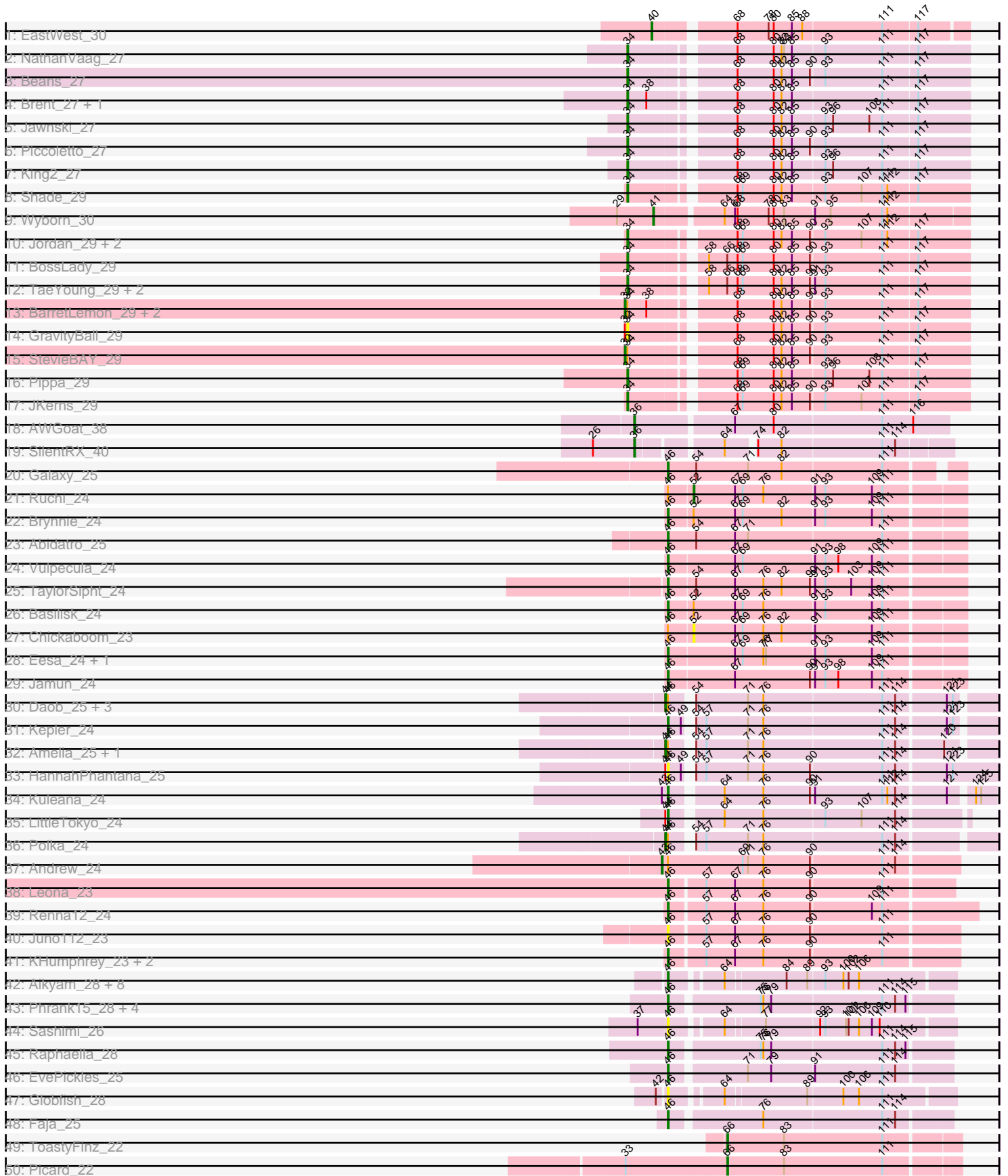
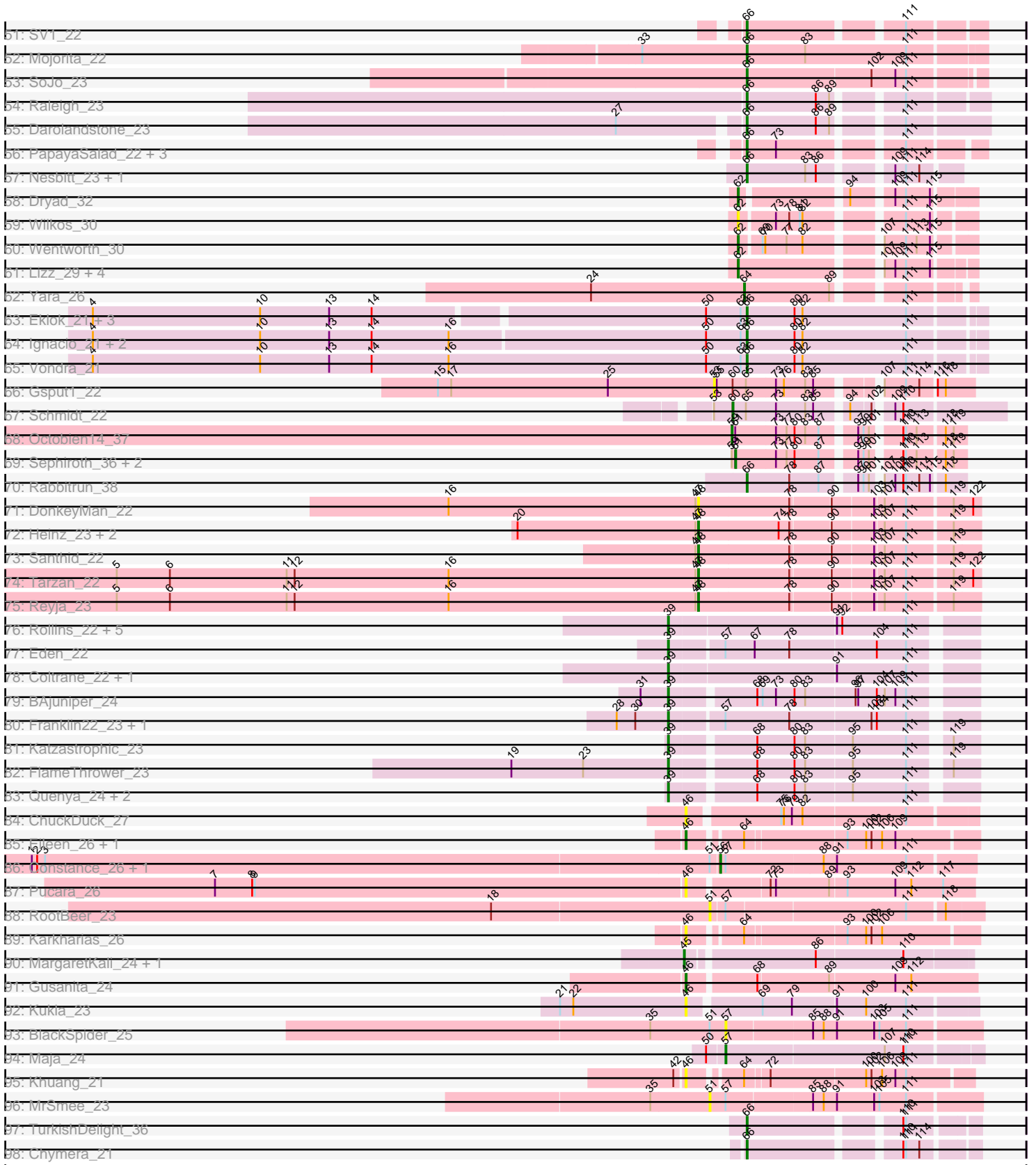


Pham 168033



Pham 168033



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 168033 Report

This analysis was run 07/09/24 on database version 566.

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

Pham number 168033 has 153 members, 28 are drafts.

Phages represented in each track:

- Track 1 : EastWest_30
- Track 2 : NathanVaag_27
- Track 3 : Beans_27
- Track 4 : Brent_27, Franzy_27
- Track 5 : Jawnski_27
- Track 6 : Piccoletto_27
- Track 7 : King2_27
- Track 8 : Shade_29
- Track 9 : Wyborn_30
- Track 10 : Jordan_29, Zartrosa_29, Sonny_29
- Track 11 : BossLady_29
- Track 12 : TaeYoung_29, Martha_29, Grekaycon_29
- Track 13 : BarretLemon_29, LeeroyJ_29, Timinator_29
- Track 14 : GravityBall_29
- Track 15 : StevieBAY_29
- Track 16 : Pippa_29
- Track 17 : JKerns_29
- Track 18 : AWGoat_38
- Track 19 : SilentRX_40
- Track 20 : Galaxy_25
- Track 21 : Ruchi_24
- Track 22 : Brynnie_24
- Track 23 : Abidatro_25
- Track 24 : Vulpecula_24
- Track 25 : TaylorSipht_24
- Track 26 : Basilisk_24
- Track 27 : Chickaboom_23
- Track 28 : Eesa_24, Orcanus_24
- Track 29 : Jamun_24
- Track 30 : Daob_25, Melons_25, Cote_25, Lunar_25
- Track 31 : Kepler_24
- Track 32 : Amelia_25, Coral_24
- Track 33 : HannahPhantana_25

- Track 34 : Kuleana_24
- Track 35 : LittleTokyo_24
- Track 36 : Polka_24
- Track 37 : Andrew_24
- Track 38 : Leona_23
- Track 39 : Renna12_24
- Track 40 : Juno112_23
- Track 41 : KHumphrey_23, PhluffyCoco_23, RedFox_23
- Track 42 : Aikyam_28, CookieBear_29, RadFad_28, Richie_28, Auxilium_28, Hillester_28, YoungHarleezy_28, MidnightRain_28, BenchScraper_28
- Track 43 : Phrank15_28, Isolde_28, Sakai_28, BillyTP_28, Gorpy_28
- Track 44 : Sashimi_26
- Track 45 : Raphaella_28
- Track 46 : EvePickles_25
- Track 47 : Globfish_28
- Track 48 : Faja_25
- Track 49 : ToastyFinz_22
- Track 50 : Picard_22
- Track 51 : SV1_22
- Track 52 : Mojorita_22
- Track 53 : SoJo_23
- Track 54 : Raleigh_23
- Track 55 : Darolandstone_23
- Track 56 : PapayaSalad_22, Bioscum_22, Austintatious_22, Ididsumtinwong_22
- Track 57 : Nesbitt_23, AbbeyMikolon_23
- Track 58 : Dryad_32
- Track 59 : Wilkos_30
- Track 60 : Wentworth_30
- Track 61 : Lizz_29, PHTowN_29, Gibson_29, Rooney_29, ShakeNBake_29
- Track 62 : Yara_26
- Track 63 : Eklok_21, AxeJC_21, Piccadilly_21, Eastland_21
- Track 64 : Ignacio_21, HFrancette_21, Cumberbatch_21
- Track 65 : Vondra_21
- Track 66 : Gspu1_22
- Track 67 : Schmidt_22
- Track 68 : Octobien14_37
- Track 69 : Sephiroth_36, Syleon_36, Kudfre_35
- Track 70 : Rabbitrun_38
- Track 71 : DonkeyMan_22
- Track 72 : Heinz_23, Hibiscus_22, Jojo24_22
- Track 73 : Santhid_22
- Track 74 : Tarzan_22
- Track 75 : Reyja_23
- Track 76 : Rollins_22, Clayda5_22, Skylord_22, Bernstein_22, Armstrong_22, Vitas_22
- Track 77 : Eden_22
- Track 78 : Coltrane_22, Brahms_22
- Track 79 : BAjuniper_24
- Track 80 : Franklin22_23, Gack_22
- Track 81 : Katzastrophic_23
- Track 82 : FlameThrower_23
- Track 83 : Quenya_24, Celaena_23, Bachaco_23
- Track 84 : ChuckDuck_27

- Track 85 : Eileen_26, Peas_26
- Track 86 : Constance_26, PeggyLeg03_26
- Track 87 : Pucara_26
- Track 88 : RootBeer_23
- Track 89 : Karkharias_26
- Track 90 : MargaretKali_24, Kumotta_24
- Track 91 : Gusanita_24
- Track 92 : Kukla_23
- Track 93 : BlackSpider_25
- Track 94 : Maja_24
- Track 95 : Khuang_21
- Track 96 : MrSmee_23
- Track 97 : TurkishDelight_36
- Track 98 : Chymera_21

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

The start number called the most often in the published annotations is 46, it was called in 28 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abidatro_25, Aikyam_28, Auxilium_28, Basilisk_24, BenchScraper_28, BillyTP_28, Brynnie_24, ChuckDuck_27, CookieBear_29, Eesa_24, Eileen_26, EvePickles_25, Faja_25, Galaxy_25, Globfish_28, Gorpy_28, Gusanita_24, HannahPhantana_25, Hillester_28, Isolde_28, Jamun_24, Juno112_23, KHumphrey_23, Karkharias_26, Kepler_24, Khuang_21, Kukla_23, Kuleana_24, Leona_23, LittleTokyo_24, MidnightRain_28, Orcanus_24, Peas_26, PhluffyCoco_23, Phrank15_28, Pucara_26, RadFad_28, Raphaella_28, RedFox_23, Renna12_24, Richie_28, Sakai_28, Sashimi_26, TaylorSipht_24, Vulpecula_24, YoungHarleezy_28,

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

- Amelia_25, Andrew_24, Chickaboom_23, Coral_24, Cote_25, Daob_25, Lunar_25, Melons_25, Polka_24, Ruchi_24,

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

- AWGoat_38, AbbeyMikolon_23, Armstrong_22, Austintatious_22, AxeJC_21, BAjuniper_24, Bachaco_23, BarretLemon_29, Beans_27, Bernstein_22, Bioscum_22, BlackSpider_25, BossLady_29, Brahms_22, Brent_27, Celaena_23, Chymera_21, Clayda5_22, Coltrane_22, Constance_26, Cumberbatch_21, Darolandstone_23, DonkeyMan_22, Dryad_32, EastWest_30, Eastland_21, Eden_22, Eklok_21, FlameThrower_23, Franklin22_23, Franzy_27, Gack_22, Gibson_29, GravityBall_29, Grekaycon_29, Gsput1_22, HFrancette_21, Heinz_23, Hibiscus_22, Ididsumtinwong_22, Ignacio_21, JKerns_29, Jawnski_27, Jojo24_22, Jordan_29, Katzastrophic_23, King2_27, Kudrefre_35, Kumotta_24, LeeroyJ_29, Lizz_29, Maja_24, MargaretKali_24, Martha_29, Mojerita_22, MrSmee_23, NathanVaag_27, Nesbitt_23, Octobien14_37, PHTowN_29, PapayaSalad_22, PeggyLeg03_26, Picard_22, Piccadilly_21, Piccoletto_27, Pippa_29, Quenya_24, Rabbitrun_38, Raleigh_23, Reyja_23, Rollins_22, Rooney_29, RootBeer_23, SV1_22, Santhid_22, Schmidt_22, Sephiroth_36, Shade_29, ShakeNBake_29, SilentRX_40, Skylord_22, SoJo_23, Sonny_29, StevieBAY_29, Syleon_36, TaeYoung_29, Tarzan_22,

Timinator_29, ToastyFinz_22, TurkishDelight_36, Vitas_22, Vondra_21, Wentworth_30, Wilkos_30, Wyborn_30, Yara_26, Zartrosa_29,

Summary by start number:

Start 32:

- Found in 5 of 153 (3.3%) of genes in pham
- Manual Annotations of this start: 4 of 125
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BarretLemon_29 (AO2), LeeroyJ_29 (AO2), StevieBAY_29 (AO2), Timinator_29 (AO2),

Start 34:

- Found in 22 of 153 (14.4%) of genes in pham
- Manual Annotations of this start: 17 of 125
- Called 81.8% of time when present
- Phage (with cluster) where this start called: Beans_27 (AO1), BossLady_29 (AO2), Brent_27 (AO1), Franzy_27 (AO1), GravityBall_29 (AO2), Grekaycon_29 (AO2), JKerns_29 (AO2), Jawnski_27 (AO1), Jordan_29 (AO2), King2_27 (AO1), Martha_29 (AO2), NathanVaag_27 (AO1), Piccoletto_27 (AO1), Pippa_29 (AO2), Shade_29 (AO2), Sonny_29 (AO2), TaeYoung_29 (AO2), Zartrosa_29 (AO2),

Start 36:

- Found in 2 of 153 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AWGoat_38 (AP4), SilentRX_40 (AP4),

Start 39:

- Found in 17 of 153 (11.1%) of genes in pham
- Manual Annotations of this start: 16 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Armstrong_22 (EB), BAjuniper_24 (EB), Bachaco_23 (EB), Bernstein_22 (EB), Brahms_22 (EB), Celaena_23 (EB), Clayda5_22 (EB), Coltrane_22 (EB), Eden_22 (EB), FlameThrower_23 (EB), Franklin22_23 (EB), Gack_22 (EB), Katzastrophic_23 (EB), Quenya_24 (EB), Rollins_22 (EB), Skylord_22 (EB), Vitas_22 (EB),

Start 40:

- Found in 1 of 153 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EastWest_30 (AO),

Start 41:

- Found in 1 of 153 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Wyborn_30 (AO2),

Start 43:

- Found in 2 of 153 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 125

- Called 50.0% of time when present
- Phage (with cluster) where this start called: Andrew_24 (AS3),

Start 44:

- Found in 9 of 153 (5.9%) of genes in pham
- Manual Annotations of this start: 7 of 125
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Amelia_25 (AS2), Coral_24 (AS2), Cote_25 (AS2), Daob_25 (AS2), Lunar_25 (AS2), Melons_25 (AS2), Polka_24 (AS2),

Start 45:

- Found in 2 of 153 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumotta_24 (FB), MargaretKali_24 (FB),

Start 46:

- Found in 56 of 153 (36.6%) of genes in pham
- Manual Annotations of this start: 28 of 125
- Called 82.1% of time when present
- Phage (with cluster) where this start called: Abidatro_25 (AS1), Aikyam_28 (AY), Auxilium_28 (AY), Basilisk_24 (AS1), BenchScraper_28 (AY), BillyTP_28 (AY), Brynnie_24 (AS1), ChuckDuck_27 (FA), CookieBear_29 (AY), Eesa_24 (AS1), Eileen_26 (FA), EvePickles_25 (AY), Faja_25 (AY), Galaxy_25 (AS1), Globfish_28 (AY), Gorpy_28 (AY), Gusanita_24 (FF), HannahPhantana_25 (AS2), Hillester_28 (AY), Isolde_28 (AY), Jamun_24 (AS1), Juno112_23 (AS3), KHumphrey_23 (AS3), Karkharias_26 (FA), Kepler_24 (AS2), Khuang_21 (UNK), Kukla_23 (FJ), Kuleana_24 (AS2), Leona_23 (AS3), LittleTokyo_24 (AS2), MidnightRain_28 (AY), Orcanus_24 (AS1), Peas_26 (FA), PhluffyCoco_23 (AS3), Phrank15_28 (AY), Pucara_26 (FA), RadFad_28 (AY), Raphaella_28 (AY), RedFox_23 (AS3), Renna12_24 (AS3), Richie_28 (AY), Sakai_28 (AY), Sashimi_26 (AY), TaylorSipt_24 (AS1), Vulpecula_24 (AS1), YoungHarleezy_28 (AY),

Start 48:

- Found in 7 of 153 (4.6%) of genes in pham
- Manual Annotations of this start: 5 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: DonkeyMan_22 (DY), Heinz_23 (DY), Hibiscus_22 (DY), Jojo24_22 (DY), Reyja_23 (DY), Santhid_22 (DY), Tarzan_22 (DY),

Start 51:

- Found in 5 of 153 (3.3%) of genes in pham
- No Manual Annotations of this start.
- Called 40.0% of time when present
- Phage (with cluster) where this start called: MrSmee_23 (UNK), RootBeer_23 (FA),

Start 52:

- Found in 4 of 153 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Chickaboom_23 (AS1), Ruchi_24 (AS1),

Start 53:

- Found in 2 of 153 (1.3%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Gsput1_22 (CU2),

Start 56:

- Found in 2 of 153 (1.3%) of genes in pham
- Manual Annotations of this start: 2 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Constance_26 (FA), PeggyLeg03_26 (FA),

Start 57:

- Found in 20 of 153 (13.1%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 10.0% of time when present
- Phage (with cluster) where this start called: BlackSpider_25 (FN), Maja_24 (FO),

Start 59:

- Found in 4 of 153 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Octobien14_37 (DU1),

Start 60:

- Found in 2 of 153 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Schmidt_22 (CU4),

Start 61:

- Found in 4 of 153 (2.6%) of genes in pham
- Manual Annotations of this start: 3 of 125
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Kudrefre_35 (DU1), Sephiroth_36 (DU1), Syleon_36 (DU1),

Start 62:

- Found in 8 of 153 (5.2%) of genes in pham
- Manual Annotations of this start: 7 of 125
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dryad_32 (BN), Gibson_29 (BN), Lizz_29 (BN), PHTowN_29 (BN), Rooney_29 (BN), ShakeNBake_29 (BN), Wentworth_30 (BN), Wilkos_30 (BN),

Start 64:

- Found in 20 of 153 (13.1%) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 5.0% of time when present
- Phage (with cluster) where this start called: Yara_26 (BN),

Start 66:

- Found in 28 of 153 (18.3%) of genes in pham
- Manual Annotations of this start: 24 of 125
- Called 85.7% of time when present
- Phage (with cluster) where this start called: AbbeyMikolon_23 (BL), Austintatious_22 (BC3), AxeJC_21 (BP), Bioscum_22 (BC3), Chymera_21 (singleton), Cumberbatch_21 (BP), Darolandstone_23 (BC2), Eastland_21 (BP), Eklok_21 (BP), HFrancette_21 (BP), Ididsuntinwong_22 (BC3), Ignacio_21 (BP), Mojorita_22 (BC1), Nesbitt_23 (BL), PapayaSalad_22 (BC3), Picard_22 (BC1), Piccadilly_21 (BP), Rabbitrun_38 (DU2), Raleigh_23 (BC2), SV1_22 (BC1), SoJo_23 (BC1), ToastyFinz_22 (BC1), TurkishDelight_36 (singleton), Vondra_21 (BP),

Summary by clusters:

There are 28 clusters represented in this pham: singleton, BL, BN, AP4, FA, FB, BP, FF, DY, FJ, FN, FO, CU4, CU2, DU1, DU2, AS3, AS2, AS1, AO, EB, AO2, AO1, AY, UNK, BC1, BC2, BC3,

Info for manual annotations of cluster AO:

- Start number 40 was manually annotated 1 time for cluster AO.

Info for manual annotations of cluster AO1:

- Start number 34 was manually annotated 7 times for cluster AO1.

Info for manual annotations of cluster AO2:

- Start number 32 was manually annotated 4 times for cluster AO2.
- Start number 34 was manually annotated 10 times for cluster AO2.
- Start number 41 was manually annotated 1 time for cluster AO2.

Info for manual annotations of cluster AP4:

- Start number 36 was manually annotated 2 times for cluster AP4.

Info for manual annotations of cluster AS1:

- Start number 46 was manually annotated 9 times for cluster AS1.
- Start number 52 was manually annotated 1 time for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 44 was manually annotated 7 times for cluster AS2.
- Start number 46 was manually annotated 3 times for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 43 was manually annotated 1 time for cluster AS3.
- Start number 46 was manually annotated 3 times for cluster AS3.

Info for manual annotations of cluster AY:

- Start number 46 was manually annotated 10 times for cluster AY.

Info for manual annotations of cluster BC1:

- Start number 66 was manually annotated 5 times for cluster BC1.

Info for manual annotations of cluster BC2:

- Start number 66 was manually annotated 2 times for cluster BC2.

Info for manual annotations of cluster BC3:

- Start number 66 was manually annotated 4 times for cluster BC3.

Info for manual annotations of cluster BL:

- Start number 66 was manually annotated 2 times for cluster BL.

Info for manual annotations of cluster BN:

- Start number 62 was manually annotated 7 times for cluster BN.
- Start number 64 was manually annotated 1 time for cluster BN.

Info for manual annotations of cluster BP:

- Start number 66 was manually annotated 8 times for cluster BP.

Info for manual annotations of cluster CU4:

- Start number 60 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster DU1:

- Start number 59 was manually annotated 1 time for cluster DU1.
- Start number 61 was manually annotated 3 times for cluster DU1.

Info for manual annotations of cluster DU2:

- Start number 66 was manually annotated 1 time for cluster DU2.

Info for manual annotations of cluster DY:

- Start number 48 was manually annotated 5 times for cluster DY.

Info for manual annotations of cluster EB:

- Start number 39 was manually annotated 16 times for cluster EB.

Info for manual annotations of cluster FA:

- Start number 46 was manually annotated 2 times for cluster FA.
- Start number 56 was manually annotated 2 times for cluster FA.

Info for manual annotations of cluster FB:

- Start number 45 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FF:

- Start number 46 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster FO:

- Start number 57 was manually annotated 1 time for cluster FO.

Gene Information:

Gene: AWGoat_38 Start: 34355, Stop: 34708, Start Num: 36

Candidate Starts for AWGoat_38:

(Start: 36 @34355 has 2 MA's), (67, 34463), (80, 34508), (111, 34631), (116, 34667),

Gene: AbbeyMikolon_23 Start: 18386, Stop: 18598, Start Num: 66
Candidate Starts for AbbeyMikolon_23:
(Start: 66 @18386 has 24 MA's), (83, 18452), (86, 18464), (109, 18530), (111, 18542), (114, 18557),

Gene: Abidatro_25 Start: 18908, Stop: 19243, Start Num: 46
Candidate Starts for Abidatro_25:
(Start: 46 @18908 has 28 MA's), (54, 18941), (67, 18986), (71, 19001), (111, 19154),

Gene: Aikyam_28 Start: 20431, Stop: 20736, Start Num: 46
Candidate Starts for Aikyam_28:
(Start: 46 @20431 has 28 MA's), (Start: 64 @20482 has 1 MA's), (84, 20548), (89, 20572), (93, 20590), (100, 20611), (102, 20617), (106, 20629),

Gene: Amelia_25 Start: 18043, Stop: 18393, Start Num: 44
Candidate Starts for Amelia_25:
(Start: 44 @18043 has 7 MA's), (Start: 46 @18046 has 28 MA's), (54, 18064), (Start: 57 @18076 has 1 MA's), (71, 18124), (76, 18142), (111, 18277), (114, 18292), (120, 18343),

Gene: Andrew_24 Start: 18042, Stop: 18377, Start Num: 43
Candidate Starts for Andrew_24:
(Start: 43 @18042 has 1 MA's), (Start: 46 @18048 has 28 MA's), (69, 18135), (71, 18141), (76, 18159), (90, 18213), (111, 18294), (114, 18309),

Gene: Armstrong_22 Start: 17107, Stop: 17433, Start Num: 39
Candidate Starts for Armstrong_22:
(Start: 39 @17107 has 16 MA's), (91, 17290), (92, 17296), (111, 17368),

Gene: Austintatious_22 Start: 17098, Stop: 17331, Start Num: 66
Candidate Starts for Austintatious_22:
(Start: 66 @17098 has 24 MA's), (73, 17131), (111, 17254),

Gene: Auxilium_28 Start: 20421, Stop: 20726, Start Num: 46
Candidate Starts for Auxilium_28:
(Start: 46 @20421 has 28 MA's), (Start: 64 @20472 has 1 MA's), (84, 20538), (89, 20562), (93, 20580), (100, 20601), (102, 20607), (106, 20619),

Gene: AxeJC_21 Start: 17926, Stop: 18183, Start Num: 66
Candidate Starts for AxeJC_21:
(4, 17209), (10, 17398), (13, 17476), (14, 17524), (50, 17881), (63, 17920), (Start: 66 @17926 has 24 MA's), (80, 17980), (82, 17989), (111, 18106),

Gene: BAjuniper_24 Start: 20341, Stop: 20658, Start Num: 39
Candidate Starts for BAjuniper_24:
(31, 20311), (Start: 39 @20341 has 16 MA's), (68, 20428), (69, 20434), (73, 20449), (80, 20470), (83, 20482), (96, 20536), (97, 20539), (104, 20560), (107, 20569), (109, 20581), (111, 20593),

Gene: Bachaco_23 Start: 20374, Stop: 20691, Start Num: 39
Candidate Starts for Bachaco_23:
(Start: 39 @20374 has 16 MA's), (68, 20461), (80, 20503), (83, 20515), (95, 20566), (111, 20626),

Gene: BarretLemon_29 Start: 25316, Stop: 25687, Start Num: 32
Candidate Starts for BarretLemon_29:

(Start: 32 @25316 has 4 MA's), (Start: 34 @25319 has 17 MA's), (38, 25340), (68, 25424), (80, 25466), (82, 25475), (85, 25487), (90, 25508), (93, 25523), (111, 25589), (117, 25628),

Gene: Basilisk_24 Start: 19320, Stop: 19652, Start Num: 46

Candidate Starts for Basilisk_24:

(Start: 46 @19320 has 28 MA's), (Start: 52 @19347 has 1 MA's), (67, 19395), (69, 19404), (76, 19428), (91, 19485), (93, 19497), (109, 19551), (111, 19563),

Gene: Beans_27 Start: 24983, Stop: 25351, Start Num: 34

Candidate Starts for Beans_27:

(Start: 34 @24983 has 17 MA's), (68, 25088), (80, 25130), (82, 25139), (85, 25151), (90, 25172), (93, 25187), (111, 25253), (117, 25292),

Gene: BenchScraper_28 Start: 20436, Stop: 20741, Start Num: 46

Candidate Starts for BenchScraper_28:

(Start: 46 @20436 has 28 MA's), (Start: 64 @20487 has 1 MA's), (84, 20553), (89, 20577), (93, 20595), (100, 20616), (102, 20622), (106, 20634),

Gene: Bernstein_22 Start: 17162, Stop: 17488, Start Num: 39

Candidate Starts for Bernstein_22:

(Start: 39 @17162 has 16 MA's), (91, 17345), (92, 17351), (111, 17423),

Gene: BillyTP_28 Start: 20144, Stop: 20452, Start Num: 46

Candidate Starts for BillyTP_28:

(Start: 46 @20144 has 28 MA's), (75, 20240), (76, 20243), (79, 20252), (111, 20378), (114, 20393), (115, 20405),

Gene: Bioscum_22 Start: 17134, Stop: 17367, Start Num: 66

Candidate Starts for Bioscum_22:

(Start: 66 @17134 has 24 MA's), (73, 17167), (111, 17290),

Gene: BlackSpider_25 Start: 20146, Stop: 20424, Start Num: 57

Candidate Starts for BlackSpider_25:

(35, 20062), (51, 20128), (Start: 57 @20146 has 1 MA's), (85, 20239), (88, 20251), (91, 20266), (103, 20308), (105, 20314), (111, 20344),

Gene: BossLady_29 Start: 25299, Stop: 25667, Start Num: 34

Candidate Starts for BossLady_29:

(Start: 34 @25299 has 17 MA's), (58, 25371), (Start: 66 @25392 has 24 MA's), (68, 25404), (69, 25410), (80, 25446), (85, 25467), (90, 25488), (93, 25503), (111, 25569), (117, 25608),

Gene: Brahms_22 Start: 17110, Stop: 17436, Start Num: 39

Candidate Starts for Brahms_22:

(Start: 39 @17110 has 16 MA's), (91, 17293), (111, 17371),

Gene: Brent_27 Start: 24986, Stop: 25354, Start Num: 34

Candidate Starts for Brent_27:

(Start: 34 @24986 has 17 MA's), (38, 25007), (68, 25091), (80, 25133), (82, 25142), (85, 25154), (111, 25256), (117, 25295),

Gene: Brynnie_24 Start: 19128, Stop: 19460, Start Num: 46

Candidate Starts for Brynnie_24:

(Start: 46 @19128 has 28 MA's), (Start: 52 @19155 has 1 MA's), (67, 19203), (69, 19212), (82, 19257), (91, 19293), (93, 19305), (109, 19359), (111, 19371),

Gene: Celaena_23 Start: 20322, Stop: 20639, Start Num: 39

Candidate Starts for Celaena_23:

(Start: 39 @20322 has 16 MA's), (68, 20409), (80, 20451), (83, 20463), (95, 20514), (111, 20574),

Gene: Chickaboom_23 Start: 18076, Stop: 18381, Start Num: 52

Candidate Starts for Chickaboom_23:

(Start: 46 @18049 has 28 MA's), (Start: 52 @18076 has 1 MA's), (67, 18124), (69, 18133), (76, 18157), (82, 18178), (91, 18214), (109, 18280), (111, 18292),

Gene: ChuckDuck_27 Start: 20261, Stop: 20569, Start Num: 46

Candidate Starts for ChuckDuck_27:

(Start: 46 @20261 has 28 MA's), (75, 20357), (76, 20360), (79, 20369), (82, 20381), (111, 20495),

Gene: Chymera_21 Start: 17166, Stop: 17393, Start Num: 66

Candidate Starts for Chymera_21:

(Start: 66 @17166 has 24 MA's), (110, 17319), (111, 17322), (114, 17337),

Gene: Clayda5_22 Start: 17113, Stop: 17439, Start Num: 39

Candidate Starts for Clayda5_22:

(Start: 39 @17113 has 16 MA's), (91, 17296), (92, 17302), (111, 17374),

Gene: Coltrane_22 Start: 17110, Stop: 17436, Start Num: 39

Candidate Starts for Coltrane_22:

(Start: 39 @17110 has 16 MA's), (91, 17293), (111, 17371),

Gene: Constance_26 Start: 20763, Stop: 21041, Start Num: 56

Candidate Starts for Constance_26:

(1, 19992), (2, 19998), (3, 20007), (51, 20754), (Start: 56 @20763 has 2 MA's), (Start: 57 @20769 has 1 MA's), (88, 20877), (91, 20892), (111, 20970),

Gene: CookieBear_29 Start: 20421, Stop: 20726, Start Num: 46

Candidate Starts for CookieBear_29:

(Start: 46 @20421 has 28 MA's), (Start: 64 @20472 has 1 MA's), (84, 20538), (89, 20562), (93, 20580), (100, 20601), (102, 20607), (106, 20619),

Gene: Coral_24 Start: 17882, Stop: 18232, Start Num: 44

Candidate Starts for Coral_24:

(Start: 44 @17882 has 7 MA's), (Start: 46 @17885 has 28 MA's), (54, 17903), (Start: 57 @17915 has 1 MA's), (71, 17963), (76, 17981), (111, 18116), (114, 18131), (120, 18182),

Gene: Cote_25 Start: 18034, Stop: 18384, Start Num: 44

Candidate Starts for Cote_25:

(Start: 44 @18034 has 7 MA's), (Start: 46 @18037 has 28 MA's), (54, 18055), (71, 18115), (76, 18133), (111, 18268), (114, 18283), (121, 18337), (123, 18343),

Gene: Cumberbatch_21 Start: 17942, Stop: 18202, Start Num: 66

Candidate Starts for Cumberbatch_21:

(4, 17210), (10, 17399), (13, 17477), (14, 17525), (16, 17612), (50, 17897), (63, 17936), (Start: 66 @17942 has 24 MA's), (80, 17996), (82, 18005), (111, 18122),

Gene: Daob_25 Start: 18039, Stop: 18389, Start Num: 44

Candidate Starts for Daob_25:

(Start: 44 @18039 has 7 MA's), (Start: 46 @18042 has 28 MA's), (54, 18060), (71, 18120), (76, 18138), (111, 18273), (114, 18288), (121, 18342), (123, 18348),

Gene: Darolandstone_23 Start: 19517, Stop: 19762, Start Num: 66

Candidate Starts for Darolandstone_23:

(27, 19388), (Start: 66 @19517 has 24 MA's), (86, 19595), (89, 19610), (111, 19673),

Gene: DonkeyMan_22 Start: 18572, Stop: 18871, Start Num: 48

Candidate Starts for DonkeyMan_22:

(16, 18290), (47, 18569), (Start: 48 @18572 has 5 MA's), (78, 18674), (90, 18716), (103, 18761), (107, 18770), (111, 18794), (119, 18842), (122, 18863),

Gene: Dryad_32 Start: 21653, Stop: 21880, Start Num: 62

Candidate Starts for Dryad_32:

(Start: 62 @21653 has 7 MA's), (94, 21758), (109, 21797), (111, 21809), (115, 21836),

Gene: EastWest_30 Start: 25176, Stop: 25514, Start Num: 40

Candidate Starts for EastWest_30:

(Start: 40 @25176 has 1 MA's), (68, 25257), (78, 25293), (80, 25299), (85, 25320), (88, 25332), (111, 25422), (117, 25461),

Gene: Eastland_21 Start: 17911, Stop: 18168, Start Num: 66

Candidate Starts for Eastland_21:

(4, 17194), (10, 17383), (13, 17461), (14, 17509), (50, 17866), (63, 17905), (Start: 66 @17911 has 24 MA's), (80, 17965), (82, 17974), (111, 18091),

Gene: Eden_22 Start: 17389, Stop: 17712, Start Num: 39

Candidate Starts for Eden_22:

(Start: 39 @17389 has 16 MA's), (Start: 57 @17446 has 1 MA's), (67, 17479), (78, 17518), (104, 17614), (111, 17647),

Gene: Eesa_24 Start: 19277, Stop: 19609, Start Num: 46

Candidate Starts for Eesa_24:

(Start: 46 @19277 has 28 MA's), (67, 19352), (69, 19361), (76, 19385), (77, 19388), (91, 19442), (93, 19454), (109, 19508), (111, 19520),

Gene: Eileen_26 Start: 20113, Stop: 20415, Start Num: 46

Candidate Starts for Eileen_26:

(Start: 46 @20113 has 28 MA's), (Start: 64 @20164 has 1 MA's), (93, 20272), (100, 20293), (102, 20299), (106, 20311), (109, 20326),

Gene: Eklok_21 Start: 17926, Stop: 18183, Start Num: 66

Candidate Starts for Eklok_21:

(4, 17209), (10, 17398), (13, 17476), (14, 17524), (50, 17881), (63, 17920), (Start: 66 @17926 has 24 MA's), (80, 17980), (82, 17989), (111, 18106),

Gene: EvePickles_25 Start: 18992, Stop: 19300, Start Num: 46

Candidate Starts for EvePickles_25:

(Start: 46 @18992 has 28 MA's), (71, 19073), (79, 19100), (91, 19148), (111, 19226), (114, 19241),

Gene: Faja_25 Start: 18886, Stop: 19194, Start Num: 46

Candidate Starts for Faja_25:

(Start: 46 @18886 has 28 MA's), (76, 18985), (111, 19120), (114, 19135),

Gene: FlameThrower_23 Start: 19859, Stop: 20176, Start Num: 39

Candidate Starts for FlameThrower_23:

(19, 19682), (23, 19763), (Start: 39 @19859 has 16 MA's), (68, 19946), (80, 19988), (83, 20000), (95, 20051), (111, 20111), (119, 20147),

Gene: Franklin22_23 Start: 17574, Stop: 17897, Start Num: 39

Candidate Starts for Franklin22_23:

(28, 17517), (30, 17538), (Start: 39 @17574 has 16 MA's), (Start: 57 @17631 has 1 MA's), (78, 17703), (102, 17793), (104, 17799), (111, 17832),

Gene: Franzy_27 Start: 24985, Stop: 25353, Start Num: 34

Candidate Starts for Franzy_27:

(Start: 34 @24985 has 17 MA's), (38, 25006), (68, 25090), (80, 25132), (82, 25141), (85, 25153), (111, 25255), (117, 25294),

Gene: Gack_22 Start: 17460, Stop: 17783, Start Num: 39

Candidate Starts for Gack_22:

(28, 17403), (30, 17424), (Start: 39 @17460 has 16 MA's), (Start: 57 @17517 has 1 MA's), (78, 17589), (102, 17679), (104, 17685), (111, 17718),

Gene: Galaxy_25 Start: 19013, Stop: 19336, Start Num: 46

Candidate Starts for Galaxy_25:

(Start: 46 @19013 has 28 MA's), (54, 19046), (71, 19106), (82, 19145), (111, 19259),

Gene: Gibson_29 Start: 20816, Stop: 21049, Start Num: 62

Candidate Starts for Gibson_29:

(Start: 62 @20816 has 7 MA's), (107, 20957), (109, 20969), (111, 20981), (115, 21008),

Gene: Globfish_28 Start: 20655, Stop: 20960, Start Num: 46

Candidate Starts for Globfish_28:

(42, 20646), (Start: 46 @20655 has 28 MA's), (Start: 64 @20706 has 1 MA's), (89, 20796), (100, 20835), (106, 20853), (111, 20880),

Gene: Gorpy_28 Start: 20369, Stop: 20677, Start Num: 46

Candidate Starts for Gorpy_28:

(Start: 46 @20369 has 28 MA's), (75, 20465), (76, 20468), (79, 20477), (111, 20603), (114, 20618), (115, 20630),

Gene: GravityBall_29 Start: 25318, Stop: 25686, Start Num: 34

Candidate Starts for GravityBall_29:

(Start: 32 @25315 has 4 MA's), (Start: 34 @25318 has 17 MA's), (68, 25423), (80, 25465), (82, 25474), (85, 25486), (90, 25507), (93, 25522), (111, 25588), (117, 25627),

Gene: Grekaycon_29 Start: 25245, Stop: 25613, Start Num: 34

Candidate Starts for Grekaycon_29:

(Start: 34 @25245 has 17 MA's), (58, 25317), (Start: 66 @25338 has 24 MA's), (68, 25350), (69, 25356), (80, 25392), (82, 25401), (85, 25413), (90, 25434), (91, 25437), (93, 25449), (111, 25515), (117, 25554),

Gene: Gspu1_22 Start: 18136, Stop: 18396, Start Num: 53

Candidate Starts for Gspu1_22:

(15, 17824), (17, 17839), (25, 18016), (53, 18136), (55, 18139), (Start: 60 @18157 has 1 MA's), (65, 18172), (73, 18205), (76, 18214), (83, 18238), (85, 18247), (107, 18301), (111, 18325), (114, 18340), (116, 18355), (118, 18364),

Gene: Gusanita_24 Start: 19423, Stop: 19737, Start Num: 46

Candidate Starts for Gusanita_24:

(Start: 46 @19423 has 28 MA's), (68, 19495), (89, 19573), (109, 19645), (112, 19663),

Gene: HFrancette_21 Start: 17957, Stop: 18214, Start Num: 66

Candidate Starts for HFrancette_21:

(4, 17225), (10, 17414), (13, 17492), (14, 17540), (16, 17627), (50, 17912), (63, 17951), (Start: 66 @17957 has 24 MA's), (80, 18011), (82, 18020), (111, 18137),

Gene: HannahPhantana_25 Start: 18037, Stop: 18396, Start Num: 46

Candidate Starts for HannahPhantana_25:

(Start: 44 @18034 has 7 MA's), (Start: 46 @18037 has 28 MA's), (49, 18052), (54, 18055), (Start: 57 @18067 has 1 MA's), (71, 18115), (76, 18133), (90, 18187), (111, 18268), (114, 18283), (121, 18337), (123, 18343),

Gene: Heinz_23 Start: 18664, Stop: 18963, Start Num: 48

Candidate Starts for Heinz_23:

(20, 18460), (47, 18661), (Start: 48 @18664 has 5 MA's), (74, 18754), (78, 18766), (90, 18808), (103, 18853), (107, 18862), (111, 18886), (119, 18934),

Gene: Hibiscus_22 Start: 18612, Stop: 18911, Start Num: 48

Candidate Starts for Hibiscus_22:

(20, 18408), (47, 18609), (Start: 48 @18612 has 5 MA's), (74, 18702), (78, 18714), (90, 18756), (103, 18801), (107, 18810), (111, 18834), (119, 18882),

Gene: Hillester_28 Start: 20421, Stop: 20726, Start Num: 46

Candidate Starts for Hillester_28:

(Start: 46 @20421 has 28 MA's), (Start: 64 @20472 has 1 MA's), (84, 20538), (89, 20562), (93, 20580), (100, 20601), (102, 20607), (106, 20619),

Gene: Ididsumtinwong_22 Start: 17134, Stop: 17367, Start Num: 66

Candidate Starts for Ididsumtinwong_22:

(Start: 66 @17134 has 24 MA's), (73, 17167), (111, 17290),

Gene: Ignacio_21 Start: 17957, Stop: 18214, Start Num: 66

Candidate Starts for Ignacio_21:

(4, 17225), (10, 17414), (13, 17492), (14, 17540), (16, 17627), (50, 17912), (63, 17951), (Start: 66 @17957 has 24 MA's), (80, 18011), (82, 18020), (111, 18137),

Gene: Isolde_28 Start: 20195, Stop: 20503, Start Num: 46

Candidate Starts for Isolde_28:

(Start: 46 @20195 has 28 MA's), (75, 20291), (76, 20294), (79, 20303), (111, 20429), (114, 20444), (115, 20456),

Gene: JKerns_29 Start: 25272, Stop: 25640, Start Num: 34

Candidate Starts for JKerns_29:

(Start: 34 @25272 has 17 MA's), (68, 25377), (69, 25383), (80, 25419), (82, 25428), (85, 25440), (90, 25461), (93, 25476), (107, 25518), (111, 25542), (117, 25581),

Gene: Jamun_24 Start: 18726, Stop: 19058, Start Num: 46

Candidate Starts for Jamun_24:

(Start: 46 @18726 has 28 MA's), (67, 18801), (90, 18888), (91, 18891), (93, 18903), (98, 18918), (109, 18957), (111, 18969),

Gene: Jawnski_27 Start: 24995, Stop: 25363, Start Num: 34

Candidate Starts for Jawnski_27:

(Start: 34 @24995 has 17 MA's), (68, 25100), (80, 25142), (82, 25151), (85, 25163), (93, 25199), (96, 25208), (108, 25250), (111, 25265), (117, 25304),

Gene: Jojo24_22 Start: 18609, Stop: 18908, Start Num: 48

Candidate Starts for Jojo24_22:

(20, 18405), (47, 18606), (Start: 48 @18609 has 5 MA's), (74, 18699), (78, 18711), (90, 18753), (103, 18798), (107, 18807), (111, 18831), (119, 18879),

Gene: Jordan_29 Start: 25242, Stop: 25610, Start Num: 34

Candidate Starts for Jordan_29:

(Start: 34 @25242 has 17 MA's), (68, 25347), (69, 25353), (80, 25389), (82, 25398), (85, 25410), (90, 25431), (93, 25446), (107, 25488), (111, 25512), (112, 25518), (117, 25551),

Gene: Juno112_23 Start: 17622, Stop: 17945, Start Num: 46

Candidate Starts for Juno112_23:

(Start: 46 @17622 has 28 MA's), (Start: 57 @17661 has 1 MA's), (67, 17694), (76, 17727), (90, 17781), (111, 17862),

Gene: KHumphrey_23 Start: 17620, Stop: 17943, Start Num: 46

Candidate Starts for KHumphrey_23:

(Start: 46 @17620 has 28 MA's), (Start: 57 @17659 has 1 MA's), (67, 17692), (76, 17725), (90, 17779), (111, 17860),

Gene: Karkharias_26 Start: 20115, Stop: 20417, Start Num: 46

Candidate Starts for Karkharias_26:

(Start: 46 @20115 has 28 MA's), (Start: 64 @20166 has 1 MA's), (93, 20274), (100, 20295), (102, 20301), (106, 20313),

Gene: Katzastrophic_23 Start: 19980, Stop: 20297, Start Num: 39

Candidate Starts for Katzastrophic_23:

(Start: 39 @19980 has 16 MA's), (68, 20067), (80, 20109), (83, 20121), (95, 20172), (111, 20232), (119, 20268),

Gene: Kepler_24 Start: 17872, Stop: 18219, Start Num: 46

Candidate Starts for Kepler_24:

(Start: 46 @17872 has 28 MA's), (49, 17887), (54, 17890), (Start: 57 @17902 has 1 MA's), (71, 17950), (76, 17968), (111, 18103), (114, 18118), (121, 18172), (123, 18178),

Gene: Khuang_21 Start: 17688, Stop: 17984, Start Num: 46

Candidate Starts for Khuang_21:

(42, 17679), (Start: 46 @17688 has 28 MA's), (Start: 64 @17739 has 1 MA's), (72, 17763), (100, 17868), (102, 17874), (106, 17886), (109, 17901), (111, 17913),

Gene: King2_27 Start: 24982, Stop: 25350, Start Num: 34

Candidate Starts for King2_27:

(Start: 34 @24982 has 17 MA's), (68, 25087), (80, 25129), (82, 25138), (85, 25150), (93, 25186), (96, 25195), (111, 25252), (117, 25291),

Gene: Kudefre_35 Start: 29727, Stop: 29957, Start Num: 61

Candidate Starts for Kudefre_35:

(Start: 59 @29724 has 1 MA's), (Start: 61 @29727 has 3 MA's), (73, 29772), (77, 29784), (80, 29793), (87, 29820), (97, 29853), (99, 29859), (101, 29865), (110, 29892), (111, 29895), (113, 29907), (118, 29934), (119, 29943),

Gene: Kukla_23 Start: 18379, Stop: 18687, Start Num: 46

Candidate Starts for Kukla_23:

(21, 18238), (22, 18253), (Start: 46 @18379 has 28 MA's), (69, 18454), (79, 18487), (91, 18535), (100, 18568), (111, 18613),

Gene: Kuleana_24 Start: 17910, Stop: 18254, Start Num: 46

Candidate Starts for Kuleana_24:

(Start: 43 @17904 has 1 MA's), (Start: 46 @17910 has 28 MA's), (Start: 64 @17961 has 1 MA's), (76, 18006), (90, 18060), (91, 18063), (111, 18141), (112, 18147), (114, 18156), (121, 18210), (124, 18231), (125, 18237),

Gene: Kumotta_24 Start: 18861, Stop: 19166, Start Num: 45

Candidate Starts for Kumotta_24:

(Start: 45 @18861 has 2 MA's), (86, 18996), (110, 19092),

Gene: LeeroyJ_29 Start: 25315, Stop: 25686, Start Num: 32

Candidate Starts for LeeroyJ_29:

(Start: 32 @25315 has 4 MA's), (Start: 34 @25318 has 17 MA's), (38, 25339), (68, 25423), (80, 25465), (82, 25474), (85, 25486), (90, 25507), (93, 25522), (111, 25588), (117, 25627),

Gene: Leona_23 Start: 17683, Stop: 18000, Start Num: 46

Candidate Starts for Leona_23:

(Start: 46 @17683 has 28 MA's), (Start: 57 @17722 has 1 MA's), (67, 17755), (76, 17788), (90, 17842), (111, 17923),

Gene: LittleTokyo_24 Start: 17866, Stop: 18186, Start Num: 46

Candidate Starts for LittleTokyo_24:

(Start: 44 @17863 has 7 MA's), (Start: 46 @17866 has 28 MA's), (Start: 64 @17917 has 1 MA's), (76, 17962), (93, 18031), (107, 18073), (114, 18112),

Gene: Lizz_29 Start: 20625, Stop: 20858, Start Num: 62

Candidate Starts for Lizz_29:

(Start: 62 @20625 has 7 MA's), (107, 20766), (109, 20778), (111, 20790), (115, 20817),

Gene: Lunar_25 Start: 18034, Stop: 18384, Start Num: 44

Candidate Starts for Lunar_25:

(Start: 44 @18034 has 7 MA's), (Start: 46 @18037 has 28 MA's), (54, 18055), (71, 18115), (76, 18133), (111, 18268), (114, 18283), (121, 18337), (123, 18343),

Gene: Maja_24 Start: 18850, Stop: 19128, Start Num: 57

Candidate Starts for Maja_24:

(50, 18832), (Start: 57 @18850 has 1 MA's), (107, 19027), (110, 19048), (111, 19051),

Gene: MargaretKali_24 Start: 18496, Stop: 18801, Start Num: 45

Candidate Starts for MargaretKali_24:
(Start: 45 @18496 has 2 MA's), (86, 18631), (110, 18727),

Gene: Martha_29 Start: 25246, Stop: 25614, Start Num: 34
Candidate Starts for Martha_29:
(Start: 34 @25246 has 17 MA's), (58, 25318), (Start: 66 @25339 has 24 MA's), (68, 25351), (69, 25357), (80, 25393), (82, 25402), (85, 25414), (90, 25435), (91, 25438), (93, 25450), (111, 25516), (117, 25555),

Gene: Melons_25 Start: 18034, Stop: 18384, Start Num: 44
Candidate Starts for Melons_25:
(Start: 44 @18034 has 7 MA's), (Start: 46 @18037 has 28 MA's), (54, 18055), (71, 18115), (76, 18133), (111, 18268), (114, 18283), (121, 18337), (123, 18343),

Gene: MidnightRain_28 Start: 20420, Stop: 20725, Start Num: 46
Candidate Starts for MidnightRain_28:
(Start: 46 @20420 has 28 MA's), (Start: 64 @20471 has 1 MA's), (84, 20537), (89, 20561), (93, 20579), (100, 20600), (102, 20606), (106, 20618),

Gene: Mojarita_22 Start: 17147, Stop: 17407, Start Num: 66
Candidate Starts for Mojarita_22:
(33, 17030), (Start: 66 @17147 has 24 MA's), (83, 17213), (111, 17327),

Gene: MrSmee_23 Start: 18054, Stop: 18350, Start Num: 51
Candidate Starts for MrSmee_23:
(35, 17988), (51, 18054), (Start: 57 @18072 has 1 MA's), (85, 18165), (88, 18177), (91, 18192), (103, 18234), (105, 18240), (111, 18270),

Gene: NathanVaag_27 Start: 24958, Stop: 25326, Start Num: 34
Candidate Starts for NathanVaag_27:
(Start: 34 @24958 has 17 MA's), (68, 25063), (80, 25105), (82, 25114), (83, 25117), (85, 25126), (93, 25162), (111, 25228), (117, 25267),

Gene: Nesbitt_23 Start: 18458, Stop: 18670, Start Num: 66
Candidate Starts for Nesbitt_23:
(Start: 66 @18458 has 24 MA's), (83, 18524), (86, 18536), (109, 18602), (111, 18614), (114, 18629),

Gene: Octobien14_37 Start: 30411, Stop: 30644, Start Num: 59
Candidate Starts for Octobien14_37:
(Start: 59 @30411 has 1 MA's), (Start: 61 @30414 has 3 MA's), (73, 30459), (77, 30471), (80, 30480), (83, 30492), (87, 30507), (97, 30540), (99, 30546), (101, 30552), (110, 30579), (111, 30582), (113, 30594), (118, 30621), (119, 30630),

Gene: Orcanus_24 Start: 18977, Stop: 19309, Start Num: 46
Candidate Starts for Orcanus_24:
(Start: 46 @18977 has 28 MA's), (67, 19052), (69, 19061), (76, 19085), (77, 19088), (91, 19142), (93, 19154), (109, 19208), (111, 19220),

Gene: PHTowN_29 Start: 20623, Stop: 20856, Start Num: 62
Candidate Starts for PHTowN_29:
(Start: 62 @20623 has 7 MA's), (107, 20764), (109, 20776), (111, 20788), (115, 20815),

Gene: PapayaSalad_22 Start: 17109, Stop: 17342, Start Num: 66

Candidate Starts for PapayaSalad_22:

(Start: 66 @17109 has 24 MA's), (73, 17142), (111, 17265),

Gene: Peas_26 Start: 20113, Stop: 20415, Start Num: 46

Candidate Starts for Peas_26:

(Start: 46 @20113 has 28 MA's), (Start: 64 @20164 has 1 MA's), (93, 20272), (100, 20293), (102, 20299), (106, 20311), (109, 20326),

Gene: PeggyLeg03_26 Start: 20763, Stop: 21041, Start Num: 56

Candidate Starts for PeggyLeg03_26:

(1, 19992), (2, 19998), (3, 20007), (51, 20754), (Start: 56 @20763 has 2 MA's), (Start: 57 @20769 has 1 MA's), (88, 20877), (91, 20892), (111, 20970),

Gene: PhluffyCoco_23 Start: 17622, Stop: 17930, Start Num: 46

Candidate Starts for PhluffyCoco_23:

(Start: 46 @17622 has 28 MA's), (Start: 57 @17661 has 1 MA's), (67, 17694), (76, 17727), (90, 17781), (111, 17862),

Gene: Phrank15_28 Start: 20294, Stop: 20602, Start Num: 46

Candidate Starts for Phrank15_28:

(Start: 46 @20294 has 28 MA's), (75, 20390), (76, 20393), (79, 20402), (111, 20528), (114, 20543), (115, 20555),

Gene: Picard_22 Start: 17138, Stop: 17398, Start Num: 66

Candidate Starts for Picard_22:

(33, 17024), (Start: 66 @17138 has 24 MA's), (83, 17204), (111, 17318),

Gene: Piccadilly_21 Start: 17910, Stop: 18167, Start Num: 66

Candidate Starts for Piccadilly_21:

(4, 17193), (10, 17382), (13, 17460), (14, 17508), (50, 17865), (63, 17904), (Start: 66 @17910 has 24 MA's), (80, 17964), (82, 17973), (111, 18090),

Gene: Piccoletto_27 Start: 24960, Stop: 25328, Start Num: 34

Candidate Starts for Piccoletto_27:

(Start: 34 @24960 has 17 MA's), (68, 25065), (80, 25107), (82, 25116), (85, 25128), (90, 25149), (93, 25164), (111, 25230), (117, 25269),

Gene: Pippa_29 Start: 25371, Stop: 25739, Start Num: 34

Candidate Starts for Pippa_29:

(Start: 34 @25371 has 17 MA's), (68, 25476), (69, 25482), (80, 25518), (82, 25527), (85, 25539), (93, 25575), (96, 25584), (108, 25626), (111, 25641), (117, 25680),

Gene: Polka_24 Start: 17889, Stop: 18239, Start Num: 44

Candidate Starts for Polka_24:

(Start: 44 @17889 has 7 MA's), (Start: 46 @17892 has 28 MA's), (54, 17910), (Start: 57 @17922 has 1 MA's), (71, 17970), (76, 17988), (111, 18123), (114, 18138),

Gene: Pucara_26 Start: 20288, Stop: 20599, Start Num: 46

Candidate Starts for Pucara_26:

(7, 19760), (8, 19802), (9, 19805), (Start: 46 @20288 has 28 MA's), (72, 20372), (73, 20378), (89, 20438), (93, 20456), (109, 20510), (112, 20528), (117, 20564),

Gene: Quenya_24 Start: 19845, Stop: 20162, Start Num: 39

Candidate Starts for Quenya_24:

(Start: 39 @19845 has 16 MA's), (68, 19932), (80, 19974), (83, 19986), (95, 20037), (111, 20097),

Gene: Rabbitrun_38 Start: 31471, Stop: 31689, Start Num: 66

Candidate Starts for Rabbitrun_38:

(Start: 66 @31471 has 24 MA's), (78, 31519), (87, 31552), (97, 31585), (99, 31591), (101, 31597), (107, 31603), (109, 31615), (110, 31624), (111, 31627), (114, 31642), (115, 31654), (118, 31666),

Gene: RadFad_28 Start: 20421, Stop: 20726, Start Num: 46

Candidate Starts for RadFad_28:

(Start: 46 @20421 has 28 MA's), (Start: 64 @20472 has 1 MA's), (84, 20538), (89, 20562), (93, 20580), (100, 20601), (102, 20607), (106, 20619),

Gene: Raleigh_23 Start: 19748, Stop: 19987, Start Num: 66

Candidate Starts for Raleigh_23:

(Start: 66 @19748 has 24 MA's), (86, 19826), (89, 19841), (111, 19904),

Gene: Raphaella_28 Start: 20360, Stop: 20668, Start Num: 46

Candidate Starts for Raphaella_28:

(Start: 46 @20360 has 28 MA's), (75, 20456), (76, 20459), (79, 20468), (111, 20594), (114, 20609), (115, 20621),

Gene: RedFox_23 Start: 17622, Stop: 17945, Start Num: 46

Candidate Starts for RedFox_23:

(Start: 46 @17622 has 28 MA's), (Start: 57 @17661 has 1 MA's), (67, 17694), (76, 17727), (90, 17781), (111, 17862),

Gene: Renna12_24 Start: 17975, Stop: 18319, Start Num: 46

Candidate Starts for Renna12_24:

(Start: 46 @17975 has 28 MA's), (Start: 57 @18014 has 1 MA's), (67, 18047), (76, 18080), (90, 18134), (109, 18203), (111, 18215),

Gene: Reyja_23 Start: 18783, Stop: 19082, Start Num: 48

Candidate Starts for Reyja_23:

(5, 18126), (6, 18186), (11, 18318), (12, 18327), (16, 18501), (47, 18780), (Start: 48 @18783 has 5 MA's), (78, 18885), (90, 18927), (103, 18972), (107, 18981), (111, 19005), (119, 19053),

Gene: Richie_28 Start: 20436, Stop: 20741, Start Num: 46

Candidate Starts for Richie_28:

(Start: 46 @20436 has 28 MA's), (Start: 64 @20487 has 1 MA's), (84, 20553), (89, 20577), (93, 20595), (100, 20616), (102, 20622), (106, 20634),

Gene: Rollins_22 Start: 17162, Stop: 17488, Start Num: 39

Candidate Starts for Rollins_22:

(Start: 39 @17162 has 16 MA's), (91, 17345), (92, 17351), (111, 17423),

Gene: Rooney_29 Start: 20813, Stop: 21046, Start Num: 62

Candidate Starts for Rooney_29:

(Start: 62 @20813 has 7 MA's), (107, 20954), (109, 20966), (111, 20978), (115, 21005),

Gene: RootBeer_23 Start: 17975, Stop: 18268, Start Num: 51

Candidate Starts for RootBeer_23:

(18, 17732), (51, 17975), (Start: 57 @17990 has 1 MA's), (111, 18188), (118, 18227),

Gene: Ruchi_24 Start: 19293, Stop: 19598, Start Num: 52

Candidate Starts for Ruchi_24:

(Start: 46 @19266 has 28 MA's), (Start: 52 @19293 has 1 MA's), (67, 19341), (69, 19350), (76, 19374), (91, 19431), (93, 19443), (109, 19497), (111, 19509),

Gene: SV1_22 Start: 17352, Stop: 17588, Start Num: 66

Candidate Starts for SV1_22:

(Start: 66 @17352 has 24 MA's), (111, 17508),

Gene: Sakai_28 Start: 20369, Stop: 20677, Start Num: 46

Candidate Starts for Sakai_28:

(Start: 46 @20369 has 28 MA's), (75, 20465), (76, 20468), (79, 20477), (111, 20603), (114, 20618), (115, 20630),

Gene: Santhid_22 Start: 18617, Stop: 18916, Start Num: 48

Candidate Starts for Santhid_22:

(47, 18614), (Start: 48 @18617 has 5 MA's), (78, 18719), (90, 18761), (103, 18806), (107, 18815), (111, 18839), (119, 18887),

Gene: Sashimi_26 Start: 18795, Stop: 19100, Start Num: 46

Candidate Starts for Sashimi_26:

(37, 18762), (Start: 46 @18795 has 28 MA's), (Start: 64 @18846 has 1 MA's), (77, 18888), (92, 18948), (93, 18954), (101, 18978), (102, 18981), (106, 18993), (109, 19008), (110, 19017),

Gene: Schmidt_22 Start: 17098, Stop: 17373, Start Num: 60

Candidate Starts for Schmidt_22:

(53, 17077), (Start: 60 @17098 has 1 MA's), (65, 17113), (73, 17146), (83, 17179), (85, 17188), (94, 17218), (102, 17239), (109, 17254), (110, 17263),

Gene: Sephiroth_36 Start: 29898, Stop: 30128, Start Num: 61

Candidate Starts for Sephiroth_36:

(Start: 59 @29895 has 1 MA's), (Start: 61 @29898 has 3 MA's), (73, 29943), (77, 29955), (80, 29964), (87, 29991), (97, 30024), (99, 30030), (101, 30036), (110, 30063), (111, 30066), (113, 30078), (118, 30105), (119, 30114),

Gene: Shade_29 Start: 25212, Stop: 25580, Start Num: 34

Candidate Starts for Shade_29:

(Start: 34 @25212 has 17 MA's), (68, 25317), (69, 25323), (80, 25359), (82, 25368), (85, 25380), (93, 25416), (107, 25458), (111, 25482), (112, 25488), (117, 25521),

Gene: ShakeNBake_29 Start: 20641, Stop: 20874, Start Num: 62

Candidate Starts for ShakeNBake_29:

(Start: 62 @20641 has 7 MA's), (107, 20782), (109, 20794), (111, 20806), (115, 20833),

Gene: SilentRX_40 Start: 35414, Stop: 35743, Start Num: 36

Candidate Starts for SilentRX_40:

(26, 35366), (Start: 36 @35414 has 2 MA's), (Start: 64 @35498 has 1 MA's), (74, 35525), (82, 35552), (111, 35666), (114, 35681),

Gene: Skylord_22 Start: 17110, Stop: 17436, Start Num: 39

Candidate Starts for Skylord_22:

(Start: 39 @17110 has 16 MA's), (91, 17293), (92, 17299), (111, 17371),

Gene: SoJo_23 Start: 19328, Stop: 19582, Start Num: 66
Candidate Starts for SoJo_23:
(Start: 66 @19328 has 24 MA's), (102, 19466), (109, 19493), (111, 19505),

Gene: Sonny_29 Start: 25242, Stop: 25610, Start Num: 34
Candidate Starts for Sonny_29:
(Start: 34 @25242 has 17 MA's), (68, 25347), (69, 25353), (80, 25389), (82, 25398), (85, 25410), (90, 25431), (93, 25446), (107, 25488), (111, 25512), (112, 25518), (117, 25551),

Gene: StevieBAY_29 Start: 25315, Stop: 25686, Start Num: 32
Candidate Starts for StevieBAY_29:
(Start: 32 @25315 has 4 MA's), (Start: 34 @25318 has 17 MA's), (68, 25423), (80, 25465), (82, 25474), (85, 25486), (90, 25507), (93, 25522), (111, 25588), (117, 25627),

Gene: Syleon_36 Start: 29820, Stop: 30050, Start Num: 61
Candidate Starts for Syleon_36:
(Start: 59 @29817 has 1 MA's), (Start: 61 @29820 has 3 MA's), (73, 29865), (77, 29877), (80, 29886), (87, 29913), (97, 29946), (99, 29952), (101, 29958), (110, 29985), (111, 29988), (113, 30000), (118, 30027), (119, 30036),

Gene: TaeYoung_29 Start: 25246, Stop: 25614, Start Num: 34
Candidate Starts for TaeYoung_29:
(Start: 34 @25246 has 17 MA's), (58, 25318), (Start: 66 @25339 has 24 MA's), (68, 25351), (69, 25357), (80, 25393), (82, 25402), (85, 25414), (90, 25435), (91, 25438), (93, 25450), (111, 25516), (117, 25555),

Gene: Tarzan_22 Start: 18586, Stop: 18885, Start Num: 48
Candidate Starts for Tarzan_22:
(5, 17929), (6, 17989), (11, 18121), (12, 18130), (16, 18304), (47, 18583), (Start: 48 @18586 has 5 MA's), (78, 18688), (90, 18730), (103, 18775), (107, 18784), (111, 18808), (119, 18856), (122, 18877),

Gene: TaylorSipht_24 Start: 18002, Stop: 18337, Start Num: 46
Candidate Starts for TaylorSipht_24:
(Start: 46 @18002 has 28 MA's), (54, 18032), (67, 18077), (76, 18110), (82, 18131), (90, 18164), (91, 18167), (93, 18179), (103, 18209), (109, 18233), (111, 18245),

Gene: Timinator_29 Start: 25315, Stop: 25686, Start Num: 32
Candidate Starts for Timinator_29:
(Start: 32 @25315 has 4 MA's), (Start: 34 @25318 has 17 MA's), (38, 25339), (68, 25423), (80, 25465), (82, 25474), (85, 25486), (90, 25507), (93, 25522), (111, 25588), (117, 25627),

Gene: ToastyFinz_22 Start: 19068, Stop: 19331, Start Num: 66
Candidate Starts for ToastyFinz_22:
(Start: 66 @19068 has 24 MA's), (83, 19134), (111, 19248),

Gene: TurkishDelight_36 Start: 34260, Stop: 34487, Start Num: 66
Candidate Starts for TurkishDelight_36:
(Start: 66 @34260 has 24 MA's), (110, 34413), (111, 34416),

Gene: Vitas_22 Start: 17102, Stop: 17428, Start Num: 39
Candidate Starts for Vitas_22:
(Start: 39 @17102 has 16 MA's), (91, 17285), (92, 17291), (111, 17363),

Gene: Vondra_21 Start: 17962, Stop: 18219, Start Num: 66

Candidate Starts for Vondra_21:

(4, 17224), (10, 17413), (13, 17491), (14, 17539), (16, 17626), (50, 17917), (63, 17956), (Start: 66 @17962 has 24 MA's), (80, 18016), (82, 18025), (111, 18142),

Gene: Vulpecula_24 Start: 18724, Stop: 19056, Start Num: 46

Candidate Starts for Vulpecula_24:

(Start: 46 @18724 has 28 MA's), (67, 18799), (69, 18808), (91, 18889), (93, 18901), (98, 18916), (109, 18955), (111, 18967),

Gene: Wentworth_30 Start: 20992, Stop: 21219, Start Num: 62

Candidate Starts for Wentworth_30:

(Start: 62 @20992 has 7 MA's), (69, 21013), (70, 21016), (77, 21040), (82, 21058), (107, 21127), (111, 21151), (113, 21163), (115, 21178),

Gene: Wilkos_30 Start: 20904, Stop: 21131, Start Num: 62

Candidate Starts for Wilkos_30:

(Start: 62 @20904 has 7 MA's), (73, 20940), (78, 20955), (81, 20967), (82, 20970), (111, 21063), (115, 21090),

Gene: Wyborn_30 Start: 25584, Stop: 25931, Start Num: 41

Candidate Starts for Wyborn_30:

(29, 25542), (Start: 41 @25584 has 1 MA's), (Start: 64 @25656 has 1 MA's), (67, 25668), (68, 25671), (78, 25707), (80, 25713), (83, 25725), (91, 25758), (95, 25776), (111, 25836), (112, 25842),

Gene: Yara_26 Start: 20240, Stop: 20461, Start Num: 64

Candidate Starts for Yara_26:

(24, 20069), (Start: 64 @20240 has 1 MA's), (89, 20336), (111, 20399),

Gene: YoungHarleezy_28 Start: 20434, Stop: 20739, Start Num: 46

Candidate Starts for YoungHarleezy_28:

(Start: 46 @20434 has 28 MA's), (Start: 64 @20485 has 1 MA's), (84, 20551), (89, 20575), (93, 20593), (100, 20614), (102, 20620), (106, 20632),

Gene: Zartrosa_29 Start: 25236, Stop: 25604, Start Num: 34

Candidate Starts for Zartrosa_29:

(Start: 34 @25236 has 17 MA's), (68, 25341), (69, 25347), (80, 25383), (82, 25392), (85, 25404), (90, 25425), (93, 25440), (107, 25482), (111, 25506), (112, 25512), (117, 25545),