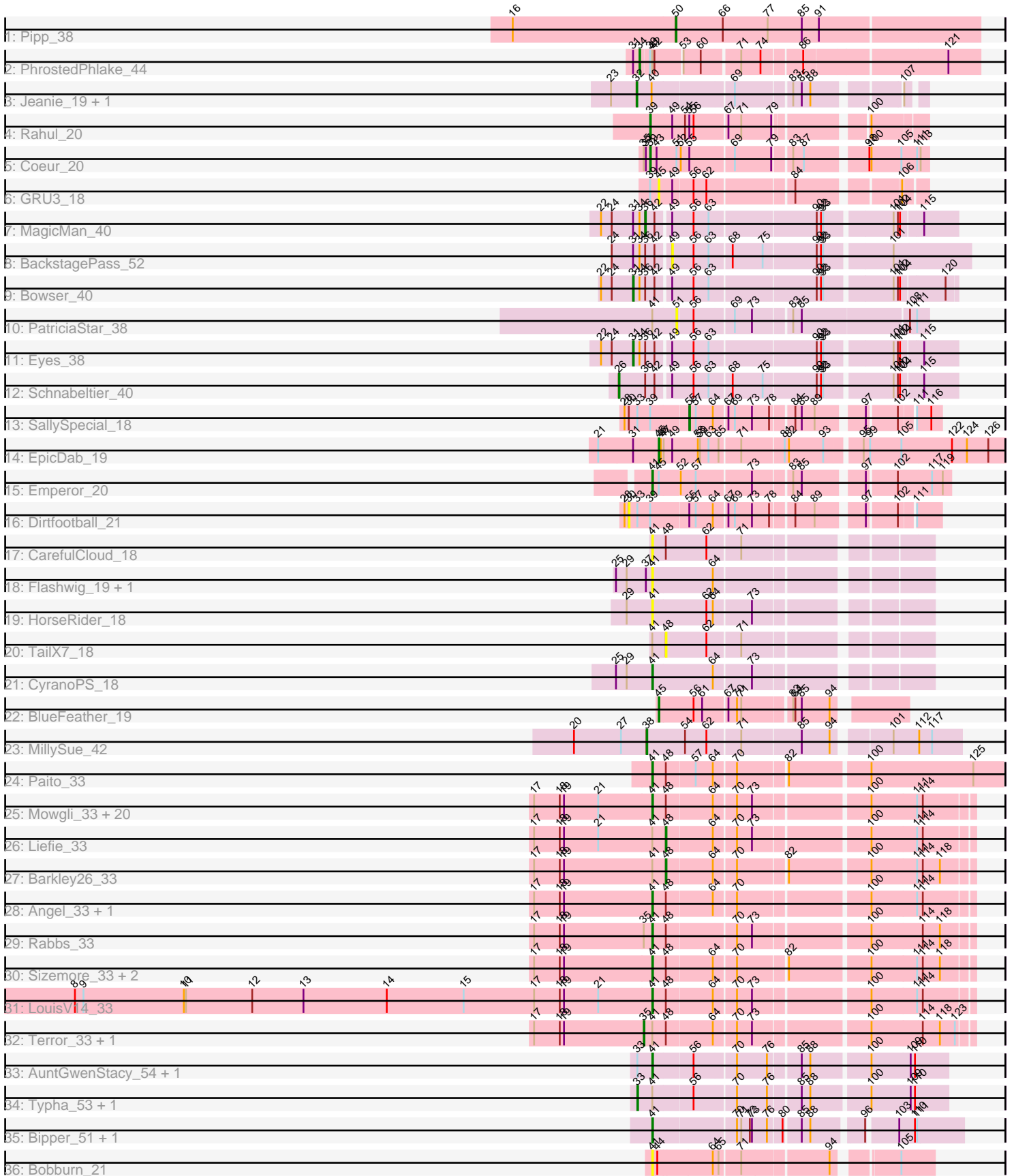


Zoomed Pham 311587



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 311587 Report

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

Pham number 311587 has 65 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Pipp_38
- Track 2 : PhrostedPhlake_44
- Track 3 : Jeanie_19, McGonagall_19
- Track 4 : Rahul_20
- Track 5 : Coeur_20
- Track 6 : GRU3_18
- Track 7 : MagicMan_40
- Track 8 : BackstagePass_52
- Track 9 : Bowser_40
- Track 10 : PatriciaStar_38
- Track 11 : Eyes_38
- Track 12 : Schnabeltier_40
- Track 13 : SallySpecial_18
- Track 14 : EpicDab_19
- Track 15 : Emperor_20
- Track 16 : Dirtfootball_21
- Track 17 : CarefulCloud_18
- Track 18 : Flashwig_19, Jalloh_18
- Track 19 : HorseRider_18
- Track 20 : TailX7_18
- Track 21 : CyranoPS_18
- Track 22 : BlueFeather_19
- Track 23 : MillySue_42
- Track 24 : Paito_33
- Track 25 : Mowgli_33, ShaboiShabazz_33, Periodt_33, TomBrady_33, Avrafan_33, BruceB_33, Cherrybomb426_33, BPs_33, Marmie_33, Sweets_33, Hotshotbaby7_33, Olga_33, JorRay_33, Halo_33, Chance64_33, Jonghyun_33, Annihilator_33, Phreak_33, Aroostook_33, Hope_33, Jane_33
- Track 26 : Liefie_33
- Track 27 : Barkley26_33
- Track 28 : Angel_33, Plagueis_33
- Track 29 : Rabbs_33
- Track 30 : Sizemore_33, Grizzly_33, Kasen3_33
- Track 31 : LouisV14_33
- Track 32 : Terror_33, Taheera_33
- Track 33 : AuntGwenStacy_54, Faiyaz_54
- Track 34 : Typha_53, Hilltopfarm_53

- Track 35 : Bipper_51, Cracklewink_51
- Track 36 : Bobburn_21

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

The start number called the most often in the published annotations is 41, it was called in 35 of the 55 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Angel_33, Annihilator_33, Aroostook_33, AuntGwenStacy_54, Avrafan_33, BPs_33, Bipper_51, Bobburn_21, BruceB_33, CarefulCloud_18, Chance64_33, Cherrybomb426_33, Cracklewink_51, CyranoPS_18, Emperor_20, Faiyaz_54, Flashwig_19, Grizzly_33, Halo_33, Hope_33, HorseRider_18, Hotshotbaby7_33, Jalloh_18, Jane_33, Jonghyun_33, JorRay_33, Kasen3_33, LouisV14_33, Marmie_33, Mowgli_33, Olga_33, Paito_33, Periodt_33, Phreak_33, Plagueis_33, Rabbs_33, ShaboiShabazz_33, Sizemore_33, Sweets_33, TomBrady_33,

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

- Barkley26_33, Hilltopfarm_53, Liefie_33, PatriciaStar_38, PhrostedPhlake_44, Taheera_33, TailX7_18, Terror_33, Typha_53,

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

- BackstagePass_52, BlueFeather_19, Bowser_40, Coeur_20, Dirtfootball_21, EpicDab_19, Eyes_38, GRU3_18, Jeanie_19, MagicMan_40, McGonagall_19, MillySue_42, Pipp_38, Rahul_20, SallySpecial_18, Schnabeltier_40,

Summary by start number:

Start 26:

- Found in 1 of 65 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Schnabeltier_40 (DB),

Start 30:

- Found in 2 of 65 (3.1%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Dirtfootball_21 (DM),

Start 31:

- Found in 6 of 65 (9.2%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Bowser_40 (DB), Eyes_38 (DB),

Start 32:

- Found in 2 of 65 (3.1%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Jeanie_19 (CW1), McGonagall_19 (CW1),

Start 33:

- Found in 6 of 65 (9.2%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Hilltopfarm_53 (Y), Typha_53 (Y),

Start 34:

- Found in 5 of 65 (7.7%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 20.0% of time when present
- Phage (with cluster) where this start called: PhrostedPhlake_44 (CV),

Start 35:

- Found in 4 of 65 (6.2%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Taheera_33 (G1), Terror_33 (G1),

Start 36:

- Found in 5 of 65 (7.7%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 20.0% of time when present
- Phage (with cluster) where this start called: MagicMan_40 (DB),

Start 38:

- Found in 1 of 65 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MillySue_42 (FF),

Start 39:

- Found in 6 of 65 (9.2%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Coeur_20 (CW2), Rahul_20 (CW2),

Start 41:

- Found in 49 of 65 (75.4%) of genes in pham
- Manual Annotations of this start: 35 of 55
- Called 81.6% of time when present
- Phage (with cluster) where this start called: Angel_33 (G1), Annihilator_33 (G1), Aroostook_33 (G1), AuntGwenStacy_54 (Y), Avrafan_33 (G1), BPs_33 (G1), Bipper_51 (Y), Bobburn_21 (singleton), BruceB_33 (G1), CarefulCloud_18 (ER), Chance64_33 (G1), Cherrybomb426_33 (G1), Cracklewink_51 (Y), CyranoPS_18 (ER), Emperor_20 (DM), Faiyaz_54 (Y), Flashwig_19 (ER), Grizzly_33 (G1), Halo_33 (G1), Hope_33 (G1), HorseRider_18 (ER), Hotshotbaby7_33 (G1), Jalloh_18 (ER), Jane_33 (G1), Jonghyun_33 (G1), JorRay_33 (G1), Kasen3_33 (G1), LouisV14_33 (G1), Marmie_33 (G1), Mowgli_33 (G1), Olga_33 (G1), Paito_33 (G1), Periodt_33 (G1), Phreak_33 (G1), Plagueis_33 (G1), Rabbs_33 (G1), ShaboiShabazz_33 (G1), Sizemore_33 (G1), Sweets_33 (G1), TomBrady_33 (G1),

Start 45:

- Found in 4 of 65 (6.2%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 75.0% of time when present
- Phage (with cluster) where this start called: BlueFeather_19 (FE), EpicDab_19 (DM), GRU3_18 (CW2),

Start 48:

- Found in 35 of 65 (53.8%) of genes in pham
- Manual Annotations of this start: 2 of 55
- Called 8.6% of time when present
- Phage (with cluster) where this start called: Barkley26_33 (G1), Liefie_33 (G1), TailX7_18 (ER),

Start 49:

- Found in 8 of 65 (12.3%) of genes in pham
- No Manual Annotations of this start.
- Called 12.5% of time when present
- Phage (with cluster) where this start called: BackstagePass_52 (DB),

Start 50:

- Found in 1 of 65 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Pipp_38 (CV),

Start 51:

- Found in 2 of 65 (3.1%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: PatriciaStar_38 (DB),

Start 55:

- Found in 4 of 65 (6.2%) of genes in pham
- Manual Annotations of this start: 1 of 55
- Called 25.0% of time when present
- Phage (with cluster) where this start called: SallySpecial_18 (DM),

Summary by clusters:

There are 11 clusters represented in this pham: singleton, DM, G1, CW1, CW2, DB, FE, FF, Y, CV, ER,

Info for manual annotations of cluster CV:

- Start number 34 was manually annotated 1 time for cluster CV.
- Start number 50 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CW1:

- Start number 32 was manually annotated 2 times for cluster CW1.

Info for manual annotations of cluster CW2:

- Start number 39 was manually annotated 2 times for cluster CW2.

Info for manual annotations of cluster DB:

- Start number 26 was manually annotated 1 time for cluster DB.
- Start number 31 was manually annotated 2 times for cluster DB.
- Start number 36 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DM:

- Start number 41 was manually annotated 1 time for cluster DM.
- Start number 45 was manually annotated 1 time for cluster DM.
- Start number 55 was manually annotated 1 time for cluster DM.

Info for manual annotations of cluster ER:

- Start number 41 was manually annotated 1 time for cluster ER.

Info for manual annotations of cluster FE:

- Start number 45 was manually annotated 1 time for cluster FE.

Info for manual annotations of cluster FF:

- Start number 38 was manually annotated 1 time for cluster FF.

Info for manual annotations of cluster G1:

- Start number 35 was manually annotated 2 times for cluster G1.
- Start number 41 was manually annotated 29 times for cluster G1.
- Start number 48 was manually annotated 2 times for cluster G1.

Info for manual annotations of cluster Y:

- Start number 33 was manually annotated 2 times for cluster Y.
- Start number 41 was manually annotated 4 times for cluster Y.

Gene Information:

Gene: Angel_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Angel_33:

(17, 29489), (18, 29453), (19, 29447), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (100, 29048), (111, 28985), (114, 28979),

Gene: Annihilator_33 Start: 29315, Stop: 28905, Start Num: 41

Candidate Starts for Annihilator_33:

(17, 29480), (18, 29444), (19, 29438), (21, 29390), (Start: 41 @29315 has 35 MA's), (Start: 48 @29297 has 2 MA's), (64, 29234), (70, 29207), (73, 29186), (100, 29039), (111, 28976), (114, 28970),

Gene: Aroostook_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Aroostook_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: AuntGwenStacy_54 Start: 41177, Stop: 40797, Start Num: 41

Candidate Starts for AuntGwenStacy_54:

(Start: 33 @41198 has 2 MA's), (Start: 41 @41177 has 35 MA's), (56, 41123), (70, 41069), (76, 41027), (85, 40988), (88, 40976), (100, 40901), (109, 40847), (110, 40841),

Gene: Avrafan_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Avrafan_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: BPs_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for BPs_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: BackstagePass_52 Start: 34454, Stop: 34846, Start Num: 49

Candidate Starts for BackstagePass_52:

(24, 34379), (Start: 31 @34409 has 2 MA's), (Start: 34 @34418 has 1 MA's), (Start: 36 @34424 has 1 MA's), (42, 34436), (49, 34454), (56, 34484), (63, 34505), (68, 34532), (75, 34574), (90, 34646), (92, 34652), (93, 34655), (101, 34742),

Gene: Barkley26_33 Start: 29328, Stop: 28936, Start Num: 48

Candidate Starts for Barkley26_33:

(17, 29511), (18, 29475), (19, 29469), (Start: 41 @29346 has 35 MA's), (Start: 48 @29328 has 2 MA's), (64, 29265), (70, 29238), (82, 29175), (100, 29070), (111, 29007), (114, 29001), (118, 28977),

Gene: Bipper_51 Start: 39965, Stop: 39576, Start Num: 41

Candidate Starts for Bipper_51:

(Start: 41 @39965 has 35 MA's), (70, 39857), (71, 39851), (72, 39839), (73, 39836), (76, 39815), (80, 39797), (85, 39776), (88, 39764), (96, 39701), (103, 39662), (110, 39641), (111, 39638),

Gene: BlueFeather_19 Start: 14096, Stop: 13785, Start Num: 45

Candidate Starts for BlueFeather_19:

(Start: 45 @14096 has 2 MA's), (56, 14048), (61, 14036), (67, 14006), (70, 13994), (71, 13988), (83, 13925), (84, 13922), (85, 13913), (94, 13874),

Gene: Bobburn_21 Start: 15474, Stop: 15130, Start Num: 41

Candidate Starts for Bobburn_21:

(Start: 41 @15474 has 35 MA's), (44, 15468), (64, 15393), (65, 15387), (71, 15360), (94, 15246), (105, 15174),

Gene: Bowser_40 Start: 32553, Stop: 32140, Start Num: 31

Candidate Starts for Bowser_40:

(22, 32598), (24, 32583), (Start: 31 @32553 has 2 MA's), (Start: 34 @32544 has 1 MA's), (Start: 36 @32538 has 1 MA's), (42, 32526), (49, 32508), (56, 32478), (63, 32457), (90, 32316), (92, 32310), (93, 32307), (101, 32220), (102, 32214), (104, 32211), (120, 32154),

Gene: BruceB_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for BruceB_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: CarefulCloud_18 Start: 12700, Stop: 12353, Start Num: 41

Candidate Starts for CarefulCloud_18:

(Start: 41 @12700 has 35 MA's), (Start: 48 @12682 has 2 MA's), (62, 12625), (71, 12583),

Gene: Chance64_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Chance64_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Cherrybomb426_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Cherrybomb426_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Coeur_20 Start: 14347, Stop: 13994, Start Num: 39

Candidate Starts for Coeur_20:

(Start: 35 @14356 has 2 MA's), (37, 14353), (Start: 39 @14347 has 2 MA's), (43, 14338), (51, 14311), (52, 14305), (Start: 55 @14293 has 1 MA's), (69, 14236), (79, 14185), (83, 14164), (87, 14149), (98, 14074), (100, 14071), (105, 14029), (111, 14008), (113, 14005),

Gene: Cracklewink_51 Start: 39958, Stop: 39569, Start Num: 41

Candidate Starts for Cracklewink_51:

(Start: 41 @39958 has 35 MA's), (70, 39850), (71, 39844), (72, 39832), (73, 39829), (76, 39808), (80, 39790), (85, 39769), (88, 39757), (96, 39694), (103, 39655), (110, 39634), (111, 39631),

Gene: CyranoPS_18 Start: 12709, Stop: 12362, Start Num: 41

Candidate Starts for CyranoPS_18:

(25, 12760), (29, 12745), (Start: 41 @12709 has 35 MA's), (64, 12625), (73, 12577),

Gene: Dirtfootball_21 Start: 14352, Stop: 13966, Start Num: 30

Candidate Starts for Dirtfootball_21:

(28, 14358), (30, 14352), (Start: 33 @14340 has 2 MA's), (Start: 39 @14322 has 2 MA's), (Start: 55 @14271 has 1 MA's), (57, 14262), (64, 14238), (67, 14223), (69, 14214), (73, 14190), (78, 14166), (84, 14139), (89, 14112), (97, 14055), (102, 14016), (111, 13998),

Gene: Emperor_20 Start: 14847, Stop: 14473, Start Num: 41

Candidate Starts for Emperor_20:

(Start: 41 @14847 has 35 MA's), (Start: 45 @14838 has 2 MA's), (52, 14811), (57, 14790), (73, 14718), (83, 14670), (85, 14658), (97, 14583), (102, 14544), (117, 14499), (119, 14484),

Gene: EpicDab_19 Start: 14735, Stop: 14277, Start Num: 45

Candidate Starts for EpicDab_19:

(21, 14819), (Start: 31 @14771 has 2 MA's), (Start: 45 @14735 has 2 MA's), (46, 14732), (47, 14729), (49, 14717), (58, 14681), (59, 14678), (63, 14666), (65, 14654), (71, 14627), (81, 14570), (82, 14564), (93, 14516), (95, 14471), (99, 14462), (105, 14420), (122, 14351), (124, 14330), (126, 14300),

Gene: Eyes_38 Start: 32329, Stop: 31913, Start Num: 31

Candidate Starts for Eyes_38:

(22, 32374), (24, 32359), (Start: 31 @32329 has 2 MA's), (Start: 34 @32320 has 1 MA's), (Start: 36 @32314 has 1 MA's), (42, 32302), (49, 32284), (56, 32254), (63, 32233), (90, 32092), (92, 32086), (93, 32083), (101, 31996), (102, 31990), (104, 31987), (115, 31960),

Gene: Faiyaz_54 Start: 41165, Stop: 40785, Start Num: 41

Candidate Starts for Faiyaz_54:

(Start: 33 @41186 has 2 MA's), (Start: 41 @41165 has 35 MA's), (56, 41111), (70, 41057), (76, 41015), (85, 40976), (88, 40964), (100, 40889), (109, 40835), (110, 40829),

Gene: Flashwig_19 Start: 13296, Stop: 12949, Start Num: 41

Candidate Starts for Flashwig_19:

(25, 13347), (29, 13332), (37, 13305), (Start: 41 @13296 has 35 MA's), (64, 13212),

Gene: GRU3_18 Start: 14485, Stop: 14162, Start Num: 45

Candidate Starts for GRU3_18:

(Start: 39 @14497 has 2 MA's), (Start: 45 @14485 has 2 MA's), (49, 14467), (56, 14440), (62, 14422), (84, 14314), (106, 14188),

Gene: Grizzly_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Grizzly_33:

(17, 29489), (18, 29453), (19, 29447), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (82, 29153), (100, 29048), (111, 28985), (114, 28979), (118, 28955),

Gene: Halo_33 Start: 29319, Stop: 28909, Start Num: 41

Candidate Starts for Halo_33:

(17, 29484), (18, 29448), (19, 29442), (21, 29394), (Start: 41 @29319 has 35 MA's), (Start: 48 @29301 has 2 MA's), (64, 29238), (70, 29211), (73, 29190), (100, 29043), (111, 28980), (114, 28974),

Gene: Hilltopfarm_53 Start: 40885, Stop: 40484, Start Num: 33

Candidate Starts for Hilltopfarm_53:

(Start: 33 @40885 has 2 MA's), (Start: 41 @40864 has 35 MA's), (56, 40810), (70, 40756), (76, 40714), (85, 40675), (88, 40663), (100, 40588), (109, 40534), (110, 40528),

Gene: Hope_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Hope_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: HorseRider_18 Start: 12756, Stop: 12409, Start Num: 41

Candidate Starts for HorseRider_18:

(29, 12792), (Start: 41 @12756 has 35 MA's), (62, 12681), (64, 12672), (73, 12624),

Gene: Hotshotbaby7_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Hotshotbaby7_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Jalloh_18 Start: 12552, Stop: 12205, Start Num: 41

Candidate Starts for Jalloh_18:

(25, 12603), (29, 12588), (37, 12561), (Start: 41 @12552 has 35 MA's), (64, 12468),

Gene: Jane_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Jane_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Jeanie_19 Start: 13938, Stop: 13588, Start Num: 32

Candidate Starts for Jeanie_19:

(23, 13974), (Start: 32 @13938 has 2 MA's), (40, 13917), (69, 13812), (83, 13740), (85, 13728), (88, 13716), (107, 13611),

Gene: Jonghyun_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Jonghyun_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: JorRay_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for JorRay_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Kasen3_33 Start: 29325, Stop: 28915, Start Num: 41

Candidate Starts for Kasen3_33:

(17, 29490), (18, 29454), (19, 29448), (Start: 41 @29325 has 35 MA's), (Start: 48 @29307 has 2 MA's), (64, 29244), (70, 29217), (82, 29154), (100, 29049), (111, 28986), (114, 28980), (118, 28956),

Gene: Liefie_33 Start: 29304, Stop: 28912, Start Num: 48

Candidate Starts for Liefie_33:

(17, 29487), (18, 29451), (19, 29445), (21, 29397), (Start: 41 @29322 has 35 MA's), (Start: 48 @29304 has 2 MA's), (64, 29241), (70, 29214), (73, 29193), (100, 29046), (111, 28983), (114, 28977),

Gene: LouisV14_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for LouisV14_33:

(1, 30914), (2, 30821), (3, 30602), (4, 30569), (5, 30500), (6, 30452), (7, 30383), (8, 30134), (9, 30122), (10, 29981), (11, 29978), (12, 29885), (13, 29813), (14, 29696), (15, 29588), (17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: MagicMan_40 Start: 32861, Stop: 32460, Start Num: 36

Candidate Starts for MagicMan_40:

(22, 32921), (24, 32906), (Start: 31 @32876 has 2 MA's), (Start: 34 @32867 has 1 MA's), (Start: 36 @32861 has 1 MA's), (42, 32849), (49, 32831), (56, 32801), (63, 32780), (90, 32639), (92, 32633), (93, 32630), (101, 32543), (102, 32537), (104, 32534), (115, 32507),

Gene: Marmie_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Marmie_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: McGonagall_19 Start: 13938, Stop: 13588, Start Num: 32

Candidate Starts for McGonagall_19:

(23, 13974), (Start: 32 @13938 has 2 MA's), (40, 13917), (69, 13812), (83, 13740), (85, 13728), (88, 13716), (107, 13611),

Gene: MillySue_42 Start: 30310, Stop: 29900, Start Num: 38

Candidate Starts for MillySue_42:

(20, 30412), (27, 30346), (Start: 38 @30310 has 1 MA's), (54, 30256), (62, 30226), (71, 30184), (85, 30103), (94, 30064), (101, 29995), (112, 29959), (117, 29941),

Gene: Mowgli_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Mowgli_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Olga_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Olga_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Paito_33 Start: 29505, Stop: 29047, Start Num: 41

Candidate Starts for Paito_33:

(Start: 41 @29505 has 35 MA's), (Start: 48 @29487 has 2 MA's), (57, 29448), (64, 29424), (70, 29397), (82, 29334), (100, 29229), (125, 29088),

Gene: PatriciaStar_38 Start: 32187, Stop: 31864, Start Num: 51

Candidate Starts for PatriciaStar_38:

(Start: 41 @32220 has 35 MA's), (51, 32187), (56, 32166), (69, 32115), (73, 32091), (83, 32043), (85, 32031), (108, 31887), (111, 31878),

Gene: Periodt_33 Start: 29315, Stop: 28905, Start Num: 41

Candidate Starts for Periodt_33:

(17, 29480), (18, 29444), (19, 29438), (21, 29390), (Start: 41 @29315 has 35 MA's), (Start: 48 @29297 has 2 MA's), (64, 29234), (70, 29207), (73, 29186), (100, 29039), (111, 28976), (114, 28970),

Gene: Phreak_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for Phreak_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: PhrostedPhlake_44 Start: 32850, Stop: 32413, Start Num: 34

Candidate Starts for PhrostedPhlake_44:

(Start: 31 @32859 has 2 MA's), (Start: 34 @32850 has 1 MA's), (Start: 39 @32838 has 2 MA's), (Start: 41 @32835 has 35 MA's), (42, 32832), (53, 32796), (60, 32772), (71, 32724), (74, 32697), (86, 32646), (121, 32457),

Gene: Pipp_38 Start: 31416, Stop: 30997, Start Num: 50

Candidate Starts for Pipp_38:

(16, 31644), (Start: 50 @31416 has 1 MA's), (66, 31350), (77, 31287), (85, 31239), (91, 31215),

Gene: Plagueis_33 Start: 29159, Stop: 28749, Start Num: 41

Candidate Starts for Plagueis_33:

(17, 29324), (18, 29288), (19, 29282), (Start: 41 @29159 has 35 MA's), (Start: 48 @29141 has 2 MA's), (64, 29078), (70, 29051), (100, 28883), (111, 28820), (114, 28814),

Gene: Rabbs_33 Start: 29407, Stop: 28997, Start Num: 41

Candidate Starts for Rabbs_33:

(17, 29572), (18, 29536), (19, 29530), (Start: 35 @29419 has 2 MA's), (Start: 41 @29407 has 35 MA's), (Start: 48 @29389 has 2 MA's), (70, 29299), (73, 29278), (100, 29131), (114, 29062), (118, 29038),

Gene: Rahul_20 Start: 14354, Stop: 14019, Start Num: 39

Candidate Starts for Rahul_20:

(Start: 39 @14354 has 2 MA's), (49, 14327), (54, 14309), (Start: 55 @14303 has 1 MA's), (56, 14297), (67, 14255), (71, 14237), (79, 14195), (100, 14090),

Gene: SallySpecial_18 Start: 14300, Stop: 13995, Start Num: 55

Candidate Starts for SallySpecial_18:

(28, 14387), (30, 14381), (Start: 33 @14369 has 2 MA's), (Start: 39 @14351 has 2 MA's), (Start: 55 @14300 has 1 MA's), (57, 14291), (64, 14267), (67, 14252), (69, 14243), (73, 14219), (78, 14195), (84, 14168), (85, 14159), (89, 14141), (97, 14084), (102, 14045), (111, 14027), (116, 14009),

Gene: Schnabeltier_40 Start: 32529, Stop: 32092, Start Num: 26

Candidate Starts for Schnabeltier_40:

(Start: 26 @32529 has 1 MA's), (Start: 36 @32493 has 1 MA's), (42, 32481), (49, 32463), (56, 32433), (63, 32412), (68, 32385), (75, 32343), (90, 32271), (92, 32265), (93, 32262), (101, 32175), (102, 32169), (104, 32166), (115, 32139),

Gene: ShaboiShabazz_33 Start: 29324, Stop: 28914, Start Num: 41

Candidate Starts for ShaboiShabazz_33:

(17, 29489), (18, 29453), (19, 29447), (21, 29399), (Start: 41 @29324 has 35 MA's), (Start: 48 @29306 has 2 MA's), (64, 29243), (70, 29216), (73, 29195), (100, 29048), (111, 28985), (114, 28979),

Gene: Sizemore_33 Start: 29325, Stop: 28915, Start Num: 41

Candidate Starts for Sizemore_33:

(17, 29490), (18, 29454), (19, 29448), (Start: 41 @29325 has 35 MA's), (Start: 48 @29307 has 2 MA's), (64, 29244), (70, 29217), (82, 29154), (100, 29049), (111, 28986), (114, 28980), (118, 28956),

Gene: Sweets_33 Start: 29319, Stop: 28909, Start Num: 41

Candidate Starts for Sweets_33:

(17, 29484), (18, 29448), (19, 29442), (21, 29394), (Start: 41 @29319 has 35 MA's), (Start: 48 @29301 has 2 MA's), (64, 29238), (70, 29211), (73, 29190), (100, 29043), (111, 28980), (114, 28974),

Gene: Taheera_33 Start: 29454, Stop: 29032, Start Num: 35

Candidate Starts for Taheera_33:

(17, 29607), (18, 29571), (19, 29565), (Start: 35 @29454 has 2 MA's), (Start: 41 @29442 has 35 MA's), (Start: 48 @29424 has 2 MA's), (64, 29361), (70, 29334), (73, 29313), (100, 29166), (114, 29097), (118, 29073), (123, 29052),

Gene: TailX7_18 Start: 12830, Stop: 12501, Start Num: 48

Candidate Starts for TailX7_18:

(Start: 41 @12848 has 35 MA's), (Start: 48 @12830 has 2 MA's), (62, 12773), (71, 12731),

Gene: Terror_33 Start: 29454, Stop: 29032, Start Num: 35

Candidate Starts for Terror_33:

(17, 29607), (18, 29571), (19, 29565), (Start: 35 @29454 has 2 MA's), (Start: 41 @29442 has 35 MA's), (Start: 48 @29424 has 2 MA's), (64, 29361), (70, 29334), (73, 29313), (100, 29166), (114, 29097), (118, 29073), (123, 29052),

Gene: TomBrady_33 Start: 29325, Stop: 28915, Start Num: 41

Candidate Starts for TomBrady_33:

(17, 29490), (18, 29454), (19, 29448), (21, 29400), (Start: 41 @29325 has 35 MA's), (Start: 48 @29307 has 2 MA's), (64, 29244), (70, 29217), (73, 29196), (100, 29049), (111, 28986), (114, 28980),

Gene: Typha_53 Start: 41198, Stop: 40797, Start Num: 33

Candidate Starts for Typha_53:

(Start: 33 @41198 has 2 MA's), (Start: 41 @41177 has 35 MA's), (56, 41123), (70, 41069), (76, 41027), (85, 40988), (88, 40976), (100, 40901), (109, 40847), (110, 40841),