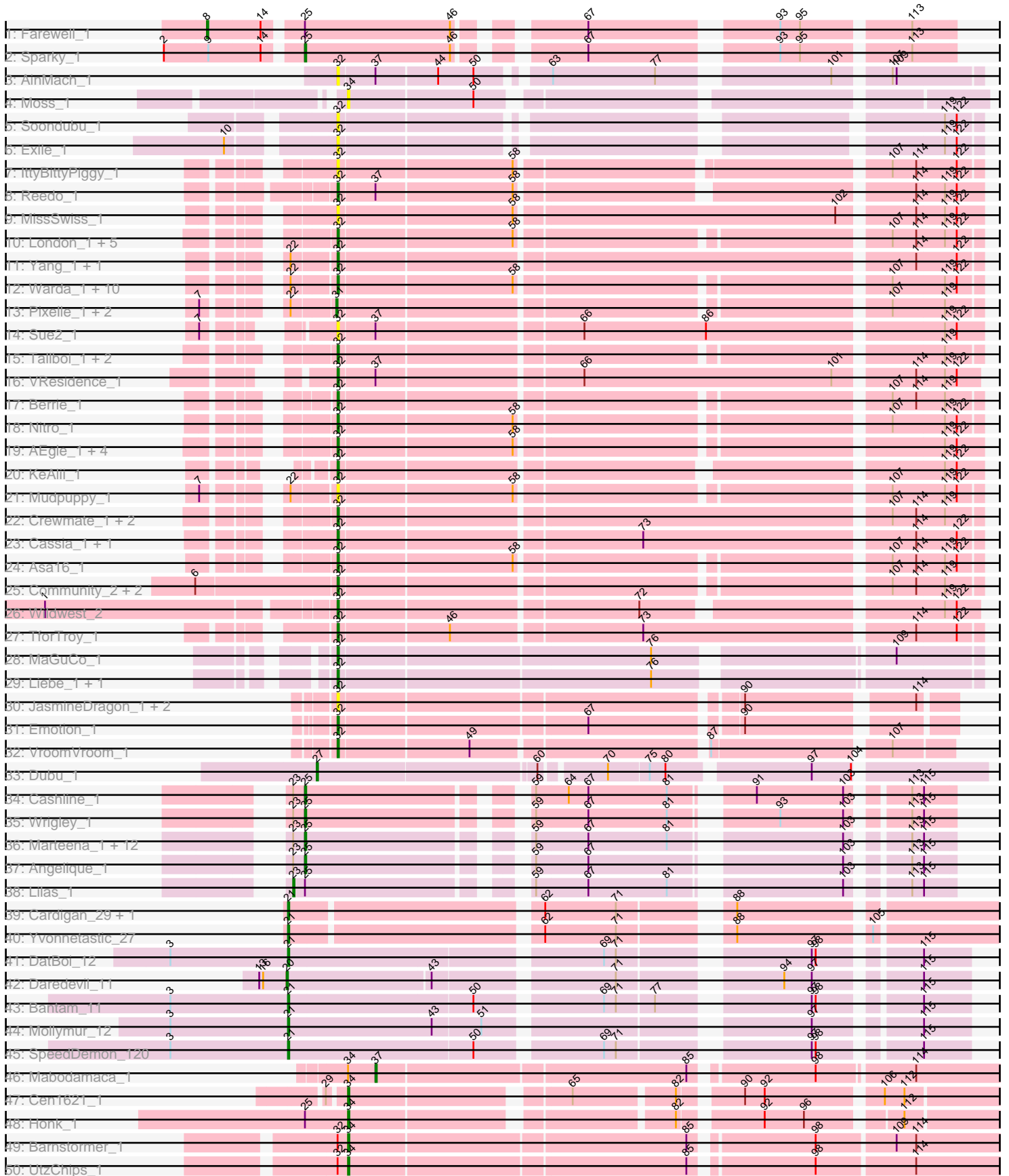
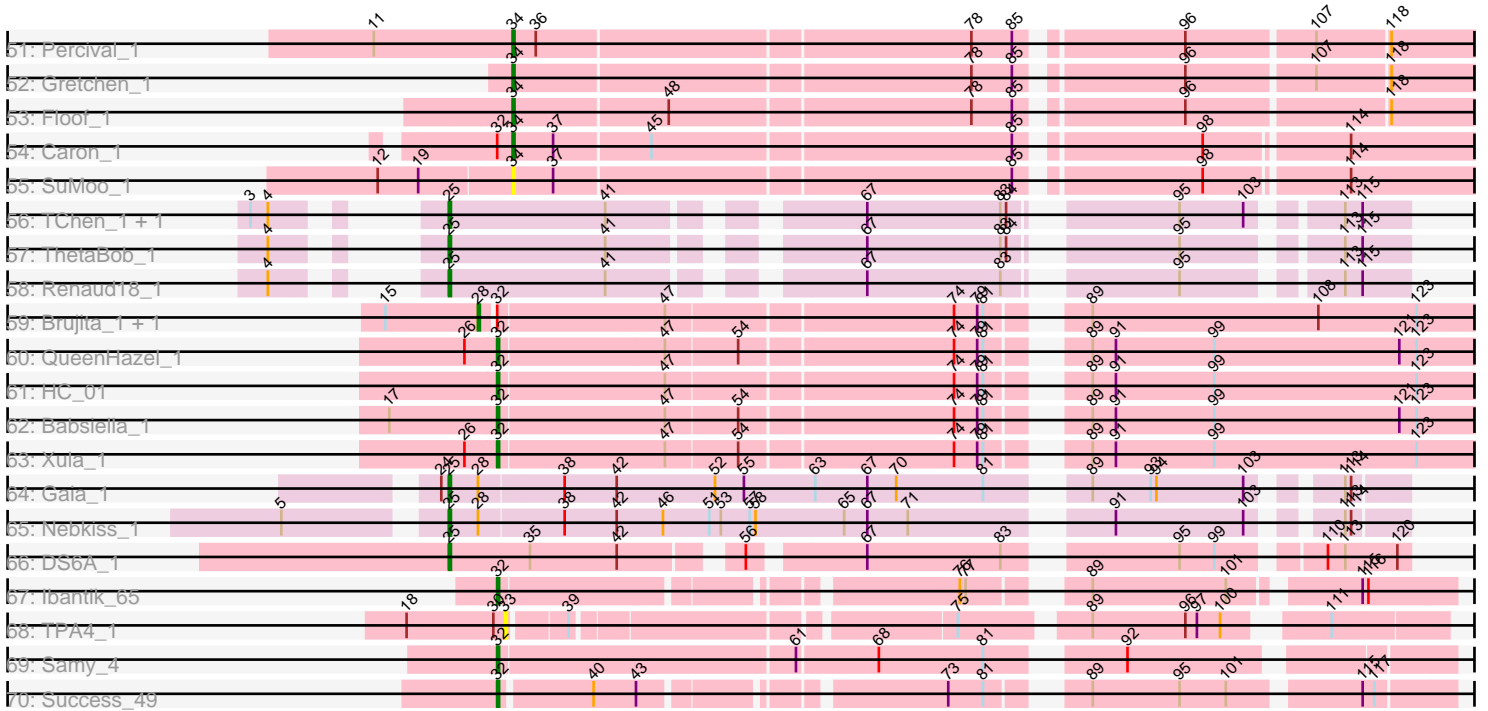


Pham 163457



Pham 163457



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 163457 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163457 has 117 members, 28 are drafts.

Phages represented in each track:

- Track 1 : Farewell_1
- Track 2 : Sparky_1
- Track 3 : AinMach_1
- Track 4 : Moss_1
- Track 5 : Soondubu_1
- Track 6 : Exile_1
- Track 7 : IttyBittyPiggy_1
- Track 8 : Reedo_1
- Track 9 : MissSwiss_1
- Track 10 : London_1, Eraser_1, Elezi_1, Lizalica_1, Niobe_1, Jstan_1
- Track 11 : Yang_1, JuneStar_1
- Track 12 : Warda_1, Cyan_1, YesChef_1, Tbone_1, JohnDoe_1, Kaylissa_1, Tutumahutu_1, Simpson_1, Joemato_1, Lego_1, Powerpuff_1
- Track 13 : Pixelle_1, Amyev_1, Tian_1
- Track 14 : Sue2_1
- Track 15 : Tallboi_1, ObiToo_1, DrSierra_1
- Track 16 : VResidence_1
- Track 17 : Berrie_1
- Track 18 : Nitro_1
- Track 19 : AEgle_1, DrManhattan_1, Turab_1, Adolin_1, Adumb2043_1
- Track 20 : KeAlii_1
- Track 21 : Mudpuppy_1
- Track 22 : Crewmate_1, Iter_1, Ascela_1
- Track 23 : Cassia_1, Pumpkins_1
- Track 24 : Asa16_1
- Track 25 : Community_2, Phives_2, Tuck_2
- Track 26 : Wildwest_2
- Track 27 : TforTroy_1
- Track 28 : MaGuCo_1
- Track 29 : Liebe_1, Maureen_1
- Track 30 : JasmineDragon_1, ShakeltOph_1, MiniMommy_1
- Track 31 : Emotion_1
- Track 32 : VroomVroom_1
- Track 33 : Dubu_1
- Track 34 : Cashline_1
- Track 35 : Wrigley_1

- Track 36 : Marteena_1, EnalisNailo_1, Jablanski_1, Posh_1, BeeGee_1, Confidence_1, EMSquaredA_1, LonelyBoi_1, Floral_1, Pytheas_1, BritBrat_1, Pollux_1, Bradissa_1
- Track 37 : Angelique_1
- Track 38 : Lilas_1
- Track 39 : Cardigan_29, JonJames_29
- Track 40 : Yvonnetastic_27
- Track 41 : DatBoi_12
- Track 42 : Daredevil_11
- Track 43 : Bantam_11
- Track 44 : Mollymur_12
- Track 45 : SpeedDemon_120
- Track 46 : Mabodamaca_1
- Track 47 : Cen1621_1
- Track 48 : Honk_1
- Track 49 : Barnstormer_1
- Track 50 : UtzChips_1
- Track 51 : Percival_1
- Track 52 : Gretchen_1
- Track 53 : Floof_1
- Track 54 : Caron_1
- Track 55 : SuMoo_1
- Track 56 : TChen_1, LunaStella_1
- Track 57 : ThetaBob_1
- Track 58 : Renaud18_1
- Track 59 : Brujita_1, Island3_1
- Track 60 : QueenHazel_1
- Track 61 : HC_01
- Track 62 : Babsiella_1
- Track 63 : Xula_1
- Track 64 : Gaia_1
- Track 65 : Nebkiss_1
- Track 66 : DS6A_1
- Track 67 : Ibantik_65
- Track 68 : TPA4_1
- Track 69 : Sammy_4
- Track 70 : Success_49

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

The start number called the most often in the published annotations is 32, it was called in 44 of the 89 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_1, Adolin_1, Adumb2043_1, AinMach_1, Asa16_1, Ascela_1, Babsiella_1, Berrie_1, Cassia_1, Community_2, Crewmate_1, Cyan_1, DrManhattan_1, DrSierra_1, Elezi_1, Emotion_1, Eraser_1, Exile_1, HC_01, Ibantik_65, Iter_1, IttyBittyPiggy_1, JasmineDragon_1, Joemato_1, JohnDoe_1, Jstan_1, JuneStar_1, Kaylissa_1, KeAlii_1, Lego_1, Liebe_1, Lizalica_1, London_1, MaGuCo_1, Maureen_1, MiniMommy_1, MissSwiss_1, Mudpuppy_1, Niobe_1, Nitro_1,

ObiToo_1, Phives_2, Powerpuff_1, Pumpkins_1, QueenHazel_1, Reedo_1, Samy_4, ShakeltOph_1, Simpson_1, Soondubu_1, Success_49, Sue2_1, Tallboi_1, Tbone_1, TforTroy_1, Tuck_2, Turab_1, Tutumahutu_1, VResidence_1, VroomVroom_1, Warda_1, Wildwest_2, Xula_1, Yang_1, YesChef_1,

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

- Barnstormer_1, Brujita_1, Caron_1, Island3_1, UtzChips_1,

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

- Amyev_1, Angelique_1, Bantam_11, BeeGee_1, Bradissa_1, BritBrat_1, Cardigan_29, Cashline_1, Cen1621_1, Confidence_1, DS6A_1, Daredevil_11, DatBoi_12, Dubu_1, EMSquaredA_1, EnalisNailo_1, Farewell_1, Floof_1, Floral_1, Gaia_1, Gretchen_1, Honk_1, Jablanski_1, JonJames_29, Lilas_1, LonelyBoi_1, LunaStella_1, Mabodamaca_1, Marteena_1, Mollymur_12, Moss_1, Nebkiss_1, Percival_1, Pixelle_1, Pollux_1, Posh_1, Pytheas_1, Renaud18_1, Sparky_1, SpeedDemon_120, SuMoo_1, TChen_1, TPA4_1, ThetaBob_1, Tian_1, Wrigley_1, Yvonnestic_27,

Summary by start number:

Start 8:

- Found in 1 of 117 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Farewell_1 (AF),

Start 20:

- Found in 1 of 117 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Daredevil_11 (DL),

Start 21:

- Found in 7 of 117 (6.0%) of genes in pham
- Manual Annotations of this start: 6 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bantam_11 (DL), Cardigan_29 (DD), DatBoi_12 (DL), JonJames_29 (DD), Mollymur_12 (DL), SpeedDemon_120 (DL), Yvonnestic_27 (DD),

Start 23:

- Found in 17 of 117 (14.5%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 5.9% of time when present
- Phage (with cluster) where this start called: Lilas_1 (CY1),

Start 25:

- Found in 27 of 117 (23.1%) of genes in pham
- Manual Annotations of this start: 23 of 89
- Called 88.9% of time when present
- Phage (with cluster) where this start called: Angelique_1 (CY1), BeeGee_1 (CY), Bradissa_1 (CY1), BritBrat_1 (CY2), Cashline_1 (CY), Confidence_1 (CY1), DS6A_1 (singleton), EMSquaredA_1 (CY1), EnalisNailo_1 (CY1), Floral_1 (CY1), Gaia_1 (X),

Jablanski_1 (CY), LonelyBoi_1 (CY), LunaStella_1 (F4), Marteena_1 (CY1), Nebkiss_1 (X), Pollux_1 (CY1), Posh_1 (CY), Pytheas_1 (CY), Renaud18_1 (F4), Sparky_1 (AF), TChen_1 (F4), ThetaBob_1 (F4), Wrigley_1 (CY),

Start 27:

- Found in 1 of 117 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dubu_1 (BJ),

Start 28:

- Found in 4 of 117 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 89
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Brujita_1 (I1), Island3_1 (I1),

Start 31:

- Found in 3 of 117 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amyev_1 (AZ1), Pixelle_1 (AZ1), Tian_1 (AZ1),

Start 32:

- Found in 70 of 117 (59.8%) of genes in pham
- Manual Annotations of this start: 44 of 89
- Called 92.9% of time when present
- Phage (with cluster) where this start called: AEgle_1 (AZ1), Adolin_1 (AZ1), Adumb2043_1 (AZ1), AinMach_1 (AZ), Asa16_1 (AZ1), Ascela_1 (AZ1), Babsiella_1 (I1), Berrie_1 (AZ1), Cassia_1 (AZ1), Community_2 (AZ1), Crewmate_1 (AZ1), Cyan_1 (AZ1), DrManhattan_1 (AZ1), DrSierra_1 (AZ1), Elezi_1 (AZ1), Emotion_1 (AZ4), Eraser_1 (AZ1), Exile_1 (AZ), HC_01 (I1), Ibantik_65 (singleton), Iter_1 (AZ1), IttyBittyPiggy_1 (AZ1), JasmineDragon_1 (AZ4), Joemato_1 (AZ1), JohnDoe_1 (AZ1), Jstan_1 (AZ1), JuneStar_1 (AZ1), Kaylissa_1 (AZ1), KeAlii_1 (AZ1), Lego_1 (AZ1), Liebe_1 (AZ2), Lizalica_1 (AZ1), London_1 (AZ1), MaGuCo_1 (AZ2), Maureen_1 (AZ2), MiniMommy_1 (AZ4), MissSwiss_1 (AZ1), Mudpuppy_1 (AZ1), Niobe_1 (AZ1), Nitro_1 (AZ1), ObiToo_1 (AZ1), Phives_2 (AZ1), Powerpuff_1 (AZ1), Pumpkins_1 (AZ1), QueenHazel_1 (I1), Reedo_1 (AZ1), Samy_4 (singleton), ShakeltOph_1 (AZ4), Simpson_1 (AZ1), Soondubu_1 (AZ), Success_49 (singleton), Sue2_1 (AZ1), Tallboi_1 (AZ1), Tbone_1 (AZ1), TforTroy_1 (AZ1), Tuck_2 (AZ1), Turab_1 (AZ1), Tutumahutu_1 (AZ1), VResidence_1 (AZ1), VroomVroom_1 (AZ4), Warda_1 (AZ1), Wildwest_2 (AZ1), Xula_1 (I1), Yang_1 (AZ1), YesChef_1 (AZ1),

Start 33:

- Found in 1 of 117 (0.9%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA4_1 (singleton),

Start 34:

- Found in 11 of 117 (9.4%) of genes in pham
- Manual Annotations of this start: 8 of 89
- Called 90.9% of time when present

- Phage (with cluster) where this start called: Barnstormer_1 (EH), Caron_1 (EH), Cen1621_1 (EH), Floof_1 (EH), Gretchen_1 (EH), Honk_1 (EH), Moss_1 (AZ), Percival_1 (EH), SuMoo_1 (EH), UtzChips_1 (EH),

Start 37:

- Found in 7 of 117 (6.0%) of genes in pham
- Manual Annotations of this start: 1 of 89
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Mabodamaca_1 (EH),

Summary by clusters:

There are 16 clusters represented in this pham: CY2, DL, F4, EH, AF, I1, DD, CY1, BJ, singleton, CY, X, AZ1, AZ2, AZ, AZ4,

Info for manual annotations of cluster AF:

- Start number 8 was manually annotated 1 time for cluster AF.
- Start number 25 was manually annotated 1 time for cluster AF.

Info for manual annotations of cluster AZ1:

- Start number 31 was manually annotated 1 time for cluster AZ1.
- Start number 32 was manually annotated 32 times for cluster AZ1.

Info for manual annotations of cluster AZ2:

- Start number 32 was manually annotated 3 times for cluster AZ2.

Info for manual annotations of cluster AZ4:

- Start number 32 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster BJ:

- Start number 27 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster CY:

- Start number 25 was manually annotated 7 times for cluster CY.

Info for manual annotations of cluster CY1:

- Start number 23 was manually annotated 1 time for cluster CY1.
- Start number 25 was manually annotated 8 times for cluster CY1.

Info for manual annotations of cluster CY2:

- Start number 25 was manually annotated 1 time for cluster CY2.

Info for manual annotations of cluster DD:

- Start number 21 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:

- Start number 20 was manually annotated 1 time for cluster DL.
- Start number 21 was manually annotated 4 times for cluster DL.

Info for manual annotations of cluster EH:

- Start number 34 was manually annotated 8 times for cluster EH.
- Start number 37 was manually annotated 1 time for cluster EH.

Info for manual annotations of cluster F4:

- Start number 25 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster I1:

- Start number 28 was manually annotated 2 times for cluster I1.
- Start number 32 was manually annotated 4 times for cluster I1.

Info for manual annotations of cluster X:

- Start number 25 was manually annotated 2 times for cluster X.

Gene Information:

Gene: AEgle_1 Start: 85, Stop: 540, Start Num: 32

Candidate Starts for AEgle_1:

(Start: 32 @85 has 44 MA's), (58, 214), (119, 511), (122, 520),

Gene: Adolin_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Adolin_1:

(Start: 32 @85 has 44 MA's), (58, 214), (119, 508), (122, 517),

Gene: Adumb2043_1 Start: 85, Stop: 540, Start Num: 32

Candidate Starts for Adumb2043_1:

(Start: 32 @85 has 44 MA's), (58, 214), (119, 511), (122, 520),

Gene: AinMach_1 Start: 140, Stop: 574, Start Num: 32

Candidate Starts for AinMach_1:

(Start: 32 @140 has 44 MA's), (Start: 37 @167 has 1 MA's), (44, 212), (50, 239), (63, 281), (77, 359), (101, 473), (107, 509), (109, 512),

Gene: Amyev_1 Start: 84, Stop: 536, Start Num: 31

Candidate Starts for Amyev_1:

(7, 12), (22, 54), (Start: 31 @84 has 1 MA's), (107, 471), (119, 510),

Gene: Angelique_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Angelique_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (103, 436), (113, 472), (115, 481),

Gene: Asa16_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Asa16_1:

(Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (114, 489), (119, 510), (122, 519),

Gene: Ascela_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Ascela_1:

(Start: 32 @85 has 44 MA's), (107, 472), (114, 490), (119, 511),

Gene: Babsiella_1 Start: 67, Stop: 540, Start Num: 32

Candidate Starts for Babsiella_1:

(17, 16), (Start: 32 @67 has 44 MA's), (47, 151), (54, 187), (74, 292), (79, 304), (81, 307), (89, 340), (91, 352), (99, 403), (121, 499), (123, 508),

Gene: Bantam_11 Start: 5625, Stop: 6089, Start Num: 21

Candidate Starts for Bantam_11:

(3, 5535), (Start: 21 @5625 has 6 MA's), (50, 5763), (69, 5850), (71, 5859), (77, 5886), (97, 5985), (98, 5988), (115, 6054),

Gene: Barnstormer_1 Start: 114, Stop: 596, Start Num: 34

Candidate Starts for Barnstormer_1:

(Start: 32 @108 has 44 MA's), (Start: 34 @114 has 8 MA's), (85, 363), (98, 447), (109, 504), (114, 519),

Gene: BeeGee_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for BeeGee_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Berrie_1 Start: 83, Stop: 535, Start Num: 32

Candidate Starts for Berrie_1:

(Start: 32 @83 has 44 MA's), (107, 470), (114, 488), (119, 509),

Gene: Bradissa_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Bradissa_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: BritBrat_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for BritBrat_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Brujita_1 Start: 62, Stop: 541, Start Num: 28

Candidate Starts for Brujita_1:

(15, 14), (Start: 28 @62 has 2 MA's), (Start: 32 @68 has 44 MA's), (47, 152), (74, 293), (79, 305), (81, 308), (89, 341), (108, 458), (123, 509),

Gene: Cardigan_29 Start: 10212, Stop: 10694, Start Num: 21

Candidate Starts for Cardigan_29:

(Start: 21 @10212 has 6 MA's), (62, 10389), (71, 10443), (88, 10512),

Gene: Caron_1 Start: 114, Stop: 593, Start Num: 34

Candidate Starts for Caron_1:

(Start: 32 @108 has 44 MA's), (Start: 34 @114 has 8 MA's), (Start: 37 @135 has 1 MA's), (45, 183), (85, 363), (98, 447), (114, 516),

Gene: Cashline_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Cashline_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (64, 250), (67, 265), (81, 325), (91, 370), (103, 436), (113, 472), (115, 481),

Gene: Cassia_1 Start: 86, Stop: 550, Start Num: 32

Candidate Starts for Cassia_1:

(Start: 32 @86 has 44 MA's), (73, 305), (114, 503), (122, 533),

Gene: Cen1621_1 Start: 100, Stop: 576, Start Num: 34
Candidate Starts for Cen1621_1:
(29, 88), (Start: 34 @100 has 8 MA's), (65, 250), (82, 322), (90, 361), (92, 376), (106, 457), (112, 472),

Gene: Community_2 Start: 1157, Stop: 1609, Start Num: 32
Candidate Starts for Community_2:
(6, 1052), (Start: 32 @1157 has 44 MA's), (107, 1544), (114, 1562), (119, 1583),

Gene: Confidence_1 Start: 82, Stop: 504, Start Num: 25
Candidate Starts for Confidence_1:
(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436),
(113, 472), (115, 481),

Gene: Crewmate_1 Start: 85, Stop: 549, Start Num: 32
Candidate Starts for Crewmate_1:
(Start: 32 @85 has 44 MA's), (107, 484), (114, 502), (119, 523),

Gene: Cyan_1 Start: 84, Stop: 536, Start Num: 32
Candidate Starts for Cyan_1:
(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: DS6A_1 Start: 246, Stop: 680, Start Num: 25
Candidate Starts for DS6A_1:
(Start: 25 @246 has 23 MA's), (35, 288), (42, 333), (56, 384), (67, 435), (83, 504), (95, 576), (99, 594),
(110, 639), (113, 648), (120, 675),

Gene: Daredevil_11 Start: 4538, Stop: 4999, Start Num: 20
Candidate Starts for Daredevil_11:
(13, 4517), (16, 4520), (Start: 20 @4538 has 1 MA's), (43, 4643), (71, 4769), (94, 4874), (97, 4895),
(115, 4964),

Gene: DatBoi_12 Start: 6450, Stop: 6914, Start Num: 21
Candidate Starts for DatBoi_12:
(3, 6360), (Start: 21 @6450 has 6 MA's), (69, 6675), (71, 6684), (97, 6810), (98, 6813), (115, 6879),

Gene: DrManhattan_1 Start: 85, Stop: 537, Start Num: 32
Candidate Starts for DrManhattan_1:
(Start: 32 @85 has 44 MA's), (58, 214), (119, 508), (122, 517),

Gene: DrSierra_1 Start: 87, Stop: 551, Start Num: 32
Candidate Starts for DrSierra_1:
(Start: 32 @87 has 44 MA's), (119, 525),

Gene: Dubu_1 Start: 90, Stop: 557, Start Num: 27
Candidate Starts for Dubu_1:
(Start: 27 @90 has 1 MA's), (60, 252), (70, 294), (75, 324), (80, 336), (97, 435), (104, 465),

Gene: EMSquaredA_1 Start: 82, Stop: 504, Start Num: 25
Candidate Starts for EMSquaredA_1:
(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436),
(113, 472), (115, 481),

Gene: Elezi_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Elezi_1:

(Start: 32 @85 has 44 MA's), (58, 214), (107, 472), (114, 490), (119, 511), (122, 520),

Gene: Emotion_1 Start: 130, Stop: 558, Start Num: 32

Candidate Starts for Emotion_1:

(Start: 32 @130 has 44 MA's), (67, 310), (90, 415),

Gene: EnalisNailo_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for EnalisNailo_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Eraser_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Eraser_1:

(Start: 32 @85 has 44 MA's), (58, 214), (107, 472), (114, 490), (119, 511), (122, 520),

Gene: Exile_1 Start: 140, Stop: 571, Start Num: 32

Candidate Starts for Exile_1:

(10, 71), (Start: 32 @140 has 44 MA's), (119, 545), (122, 554),

Gene: Farewell_1 Start: 34, Stop: 528, Start Num: 8

Candidate Starts for Farewell_1:

(Start: 8 @34 has 1 MA's), (14, 73), (Start: 25 @97 has 23 MA's), (46, 208), (67, 280), (93, 406), (95, 421), (113, 496),

Gene: Floof_1 Start: 122, Stop: 601, Start Num: 34

Candidate Starts for Floof_1:

(Start: 34 @122 has 8 MA's), (48, 200), (78, 350), (85, 371), (96, 446), (118, 545),

Gene: Floral_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Floral_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Gaia_1 Start: 129, Stop: 578, Start Num: 25

Candidate Starts for Gaia_1:

(24, 126), (Start: 25 @129 has 23 MA's), (Start: 28 @144 has 2 MA's), (38, 186), (42, 213), (52, 264), (55, 279), (63, 315), (67, 342), (70, 357), (81, 402), (89, 438), (93, 468), (94, 471), (103, 516), (113, 549), (114, 552),

Gene: Gretchen_1 Start: 128, Stop: 607, Start Num: 34

Candidate Starts for Gretchen_1:

(Start: 34 @128 has 8 MA's), (78, 356), (85, 377), (96, 452), (107, 515), (118, 551),

Gene: HC_01 Start: 67, Stop: 540, Start Num: 32

Candidate Starts for HC_01:

(Start: 32 @67 has 44 MA's), (47, 151), (74, 292), (79, 304), (81, 307), (89, 340), (91, 352), (99, 403), (123, 508),

Gene: Honk_1 Start: 161, Stop: 634, Start Num: 34

Candidate Starts for Honk_1:

(Start: 25 @128 has 23 MA's), (Start: 34 @161 has 8 MA's), (82, 383), (92, 437), (96, 467), (112, 530),

Gene: lbantik_65 Start: 27614, Stop: 28042, Start Num: 32

Candidate Starts for lbantik_65:

(Start: 32 @27614 has 44 MA's), (76, 27824), (77, 27827), (89, 27869), (101, 27938), (115, 27995), (116, 27998),

Gene: Island3_1 Start: 62, Stop: 541, Start Num: 28

Candidate Starts for Island3_1:

(15, 14), (Start: 28 @62 has 2 MA's), (Start: 32 @68 has 44 MA's), (47, 152), (74, 293), (79, 305), (81, 308), (89, 341), (108, 458), (123, 509),

Gene: lter_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for lter_1:

(Start: 32 @85 has 44 MA's), (107, 472), (114, 490), (119, 511),

Gene: IttyBittyPiggy_1 Start: 86, Stop: 538, Start Num: 32

Candidate Starts for IttyBittyPiggy_1:

(Start: 32 @86 has 44 MA's), (58, 215), (107, 473), (114, 491), (122, 521),

Gene: Jablanski_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Jablanski_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: JasmineDragon_1 Start: 132, Stop: 560, Start Num: 32

Candidate Starts for JasmineDragon_1:

(Start: 32 @132 has 44 MA's), (90, 417), (114, 534),

Gene: Joemato_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Joemato_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: JohnDoe_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for JohnDoe_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: JonJames_29 Start: 11407, Stop: 11889, Start Num: 21

Candidate Starts for JonJames_29:

(Start: 21 @11407 has 6 MA's), (62, 11584), (71, 11638), (88, 11707),

Gene: Jstan_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Jstan_1:

(Start: 32 @85 has 44 MA's), (58, 214), (107, 472), (114, 490), (119, 511), (122, 520),

Gene: JuneStar_1 Start: 84, Stop: 548, Start Num: 32

Candidate Starts for JuneStar_1:

(22, 54), (Start: 32 @84 has 44 MA's), (114, 501), (122, 531),

Gene: Kaylissa_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Kaylissa_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: KeAlii_1 Start: 69, Stop: 521, Start Num: 32

Candidate Starts for KeAlii_1:

(Start: 32 @69 has 44 MA's), (119, 492), (122, 501),

Gene: Lego_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Lego_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: Liebe_1 Start: 80, Stop: 535, Start Num: 32

Candidate Starts for Liebe_1:

(Start: 32 @80 has 44 MA's), (76, 311),

Gene: Lilas_1 Start: 73, Stop: 504, Start Num: 23

Candidate Starts for Lilas_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Lizalica_1 Start: 85, Stop: 534, Start Num: 32

Candidate Starts for Lizalica_1:

(Start: 32 @85 has 44 MA's), (58, 214), (107, 469), (114, 487), (119, 508), (122, 517),

Gene: London_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for London_1:

(Start: 32 @85 has 44 MA's), (58, 214), (107, 472), (114, 490), (119, 511), (122, 520),

Gene: LonelyBoi_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for LonelyBoi_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: LunaStella_1 Start: 55, Stop: 477, Start Num: 25

Candidate Starts for LunaStella_1:

(3, 7), (4, 16), (Start: 25 @55 has 23 MA's), (41, 136), (67, 238), (83, 307), (84, 310), (95, 376), (103, 409), (113, 445), (115, 454),

Gene: MaGuCo_1 Start: 80, Stop: 535, Start Num: 32

Candidate Starts for MaGuCo_1:

(Start: 32 @80 has 44 MA's), (76, 311), (109, 473),

Gene: Mabodamaca_1 Start: 146, Stop: 604, Start Num: 37

Candidate Starts for Mabodamaca_1:

(Start: 34 @125 has 8 MA's), (Start: 37 @146 has 1 MA's), (85, 374), (98, 458), (114, 527),

Gene: Marteena_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Marteena_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Maureen_1 Start: 80, Stop: 535, Start Num: 32

Candidate Starts for Maureen_1:

(Start: 32 @80 has 44 MA's), (76, 311),

Gene: MiniMommy_1 Start: 132, Stop: 560, Start Num: 32

Candidate Starts for MiniMommy_1:

(Start: 32 @132 has 44 MA's), (90, 417), (114, 534),

Gene: MissSwiss_1 Start: 87, Stop: 554, Start Num: 32

Candidate Starts for MissSwiss_1:

(Start: 32 @87 has 44 MA's), (58, 216), (102, 453), (114, 504), (119, 525), (122, 534),

Gene: Mollymur_12 Start: 6532, Stop: 6996, Start Num: 21

Candidate Starts for Mollymur_12:

(3, 6442), (Start: 21 @6532 has 6 MA's), (43, 6640), (51, 6676), (97, 6892), (115, 6961),

Gene: Moss_1 Start: 139, Stop: 579, Start Num: 34

Candidate Starts for Moss_1:

(Start: 34 @139 has 8 MA's), (50, 232),

Gene: Mudpuppy_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Mudpuppy_1:

(7, 12), (22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: Nebkiss_1 Start: 130, Stop: 579, Start Num: 25

Candidate Starts for Nebkiss_1:

(5, 58), (Start: 25 @130 has 23 MA's), (Start: 28 @145 has 2 MA's), (38, 187), (42, 214), (46, 238), (51, 262), (53, 268), (57, 283), (58, 286), (65, 331), (67, 343), (71, 364), (91, 451), (103, 517), (113, 550), (114, 553),

Gene: Niobe_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Niobe_1:

(Start: 32 @85 has 44 MA's), (58, 214), (107, 472), (114, 490), (119, 511), (122, 520),

Gene: Nitro_1 Start: 86, Stop: 538, Start Num: 32

Candidate Starts for Nitro_1:

(Start: 32 @86 has 44 MA's), (58, 215), (107, 473), (119, 512), (122, 521),

Gene: ObiToo_1 Start: 85, Stop: 549, Start Num: 32

Candidate Starts for ObiToo_1:

(Start: 32 @85 has 44 MA's), (119, 523),

Gene: Percival_1 Start: 128, Stop: 607, Start Num: 34

Candidate Starts for Percival_1:

(11, 56), (Start: 34 @128 has 8 MA's), (36, 140), (78, 356), (85, 377), (96, 452), (107, 515), (118, 551),

Gene: Phives_2 Start: 1157, Stop: 1609, Start Num: 32

Candidate Starts for Phives_2:

(6, 1052), (Start: 32 @1157 has 44 MA's), (107, 1544), (114, 1562), (119, 1583),

Gene: Pixelle_1 Start: 84, Stop: 536, Start Num: 31

Candidate Starts for Pixelle_1:

(7, 12), (22, 54), (Start: 31 @84 has 1 MA's), (107, 471), (119, 510),

Gene: Pollux_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Pollux_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Posh_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Posh_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: Powerpuff_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Powerpuff_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: Pumpkins_1 Start: 86, Stop: 550, Start Num: 32

Candidate Starts for Pumpkins_1:

(Start: 32 @86 has 44 MA's), (73, 305), (114, 503), (122, 533),

Gene: Pytheas_1 Start: 82, Stop: 504, Start Num: 25

Candidate Starts for Pytheas_1:

(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (103, 436), (113, 472), (115, 481),

Gene: QueenHazel_1 Start: 67, Stop: 540, Start Num: 32

Candidate Starts for QueenHazel_1:

(26, 55), (Start: 32 @67 has 44 MA's), (47, 151), (54, 187), (74, 292), (79, 304), (81, 307), (89, 340), (91, 352), (99, 403), (121, 499), (123, 508),

Gene: Reedo_1 Start: 95, Stop: 547, Start Num: 32

Candidate Starts for Reedo_1:

(Start: 32 @95 has 44 MA's), (Start: 37 @122 has 1 MA's), (58, 224), (114, 497), (119, 518), (122, 527),

Gene: Renaud18_1 Start: 55, Stop: 477, Start Num: 25

Candidate Starts for Renaud18_1:

(4, 16), (Start: 25 @55 has 23 MA's), (41, 136), (67, 238), (83, 307), (95, 376), (113, 445), (115, 454),

Gene: Samy_4 Start: 1334, Stop: 1780, Start Num: 32

Candidate Starts for Samy_4:

(Start: 32 @1334 has 44 MA's), (61, 1484), (68, 1523), (81, 1577), (92, 1631),

Gene: ShakeltOph_1 Start: 132, Stop: 560, Start Num: 32

Candidate Starts for ShakeltOph_1:

(Start: 32 @132 has 44 MA's), (90, 417), (114, 534),

Gene: Simpson_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Simpson_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: Soondubu_1 Start: 140, Stop: 571, Start Num: 32

Candidate Starts for Soondubu_1:

(Start: 32 @140 has 44 MA's), (119, 545), (122, 554),

Gene: Sparky_1 Start: 98, Stop: 529, Start Num: 25

Candidate Starts for Sparky_1:

(2, 2), (9, 35), (14, 74), (Start: 25 @98 has 23 MA's), (46, 209), (67, 281), (93, 407), (95, 422), (113, 497),

Gene: SpeedDemon_120 Start: 5931, Stop: 6395, Start Num: 21

Candidate Starts for SpeedDemon_120:

(3, 5841), (Start: 21 @5931 has 6 MA's), (50, 6069), (69, 6156), (71, 6165), (97, 6291), (98, 6294), (115, 6360),

Gene: SuMoo_1 Start: 124, Stop: 603, Start Num: 34

Candidate Starts for SuMoo_1:

(12, 58), (19, 79), (Start: 34 @124 has 8 MA's), (Start: 37 @145 has 1 MA's), (85, 373), (98, 457), (114, 526),

Gene: Success_49 Start: 25367, Stop: 25792, Start Num: 32

Candidate Starts for Success_49:

(Start: 32 @25367 has 44 MA's), (40, 25412), (43, 25433), (73, 25568), (81, 25586), (89, 25619), (95, 25664), (101, 25688), (115, 25748), (117, 25754),

Gene: Sue2_1 Start: 75, Stop: 542, Start Num: 32

Candidate Starts for Sue2_1:

(7, 12), (Start: 32 @75 has 44 MA's), (Start: 37 @102 has 1 MA's), (66, 249), (86, 342), (119, 513), (122, 522),

Gene: TChen_1 Start: 55, Stop: 477, Start Num: 25

Candidate Starts for TChen_1:

(3, 7), (4, 16), (Start: 25 @55 has 23 MA's), (41, 136), (67, 238), (83, 307), (84, 310), (95, 376), (103, 409), (113, 445), (115, 454),

Gene: TPA4_1 Start: 75, Stop: 497, Start Num: 33

Candidate Starts for TPA4_1:

(18, 24), (30, 69), (33, 75), (39, 102), (75, 279), (89, 336), (96, 384), (97, 390), (100, 402), (111, 441),

Gene: Tallboi_1 Start: 85, Stop: 537, Start Num: 32

Candidate Starts for Tallboi_1:

(Start: 32 @85 has 44 MA's), (119, 511),

Gene: Tbone_1 Start: 84, Stop: 536, Start Num: 32

Candidate Starts for Tbone_1:

(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: TforTroy_1 Start: 86, Stop: 550, Start Num: 32

Candidate Starts for TforTroy_1:

(Start: 32 @86 has 44 MA's), (46, 167), (73, 305), (114, 503), (122, 533),

Gene: ThetaBob_1 Start: 55, Stop: 477, Start Num: 25

Candidate Starts for ThetaBob_1:

(4, 16), (Start: 25 @55 has 23 MA's), (41, 136), (67, 238), (83, 307), (84, 310), (95, 376), (113, 445), (115, 454),

Gene: Tian_1 Start: 84, Stop: 536, Start Num: 31

Candidate Starts for Tian_1:

(7, 12), (22, 54), (Start: 31 @84 has 1 MA's), (107, 471), (119, 510),

Gene: Tuck_2 Start: 1145, Stop: 1597, Start Num: 32

Candidate Starts for Tuck_2:

(6, 1040), (Start: 32 @1145 has 44 MA's), (107, 1532), (114, 1550), (119, 1571),

Gene: Turab_1 Start: 85, Stop: 540, Start Num: 32
Candidate Starts for Turab_1:
(Start: 32 @85 has 44 MA's), (58, 214), (119, 511), (122, 520),

Gene: Tutumahutu_1 Start: 84, Stop: 536, Start Num: 32
Candidate Starts for Tutumahutu_1:
(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: UtzChips_1 Start: 114, Stop: 596, Start Num: 34
Candidate Starts for UtzChips_1:
(Start: 32 @108 has 44 MA's), (Start: 34 @114 has 8 MA's), (85, 363), (98, 447), (114, 519),

Gene: VResidence_1 Start: 140, Stop: 604, Start Num: 32
Candidate Starts for VResidence_1:
(Start: 32 @140 has 44 MA's), (Start: 37 @167 has 1 MA's), (66, 314), (101, 503), (114, 557), (119, 578), (122, 587),

Gene: VroomVroom_1 Start: 132, Stop: 563, Start Num: 32
Candidate Starts for VroomVroom_1:
(Start: 32 @132 has 44 MA's), (49, 228), (87, 393), (107, 519),

Gene: Warda_1 Start: 84, Stop: 536, Start Num: 32
Candidate Starts for Warda_1:
(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: Wildwest_2 Start: 1032, Stop: 1481, Start Num: 32
Candidate Starts for Wildwest_2:
(1, 825), (Start: 32 @1032 has 44 MA's), (72, 1248), (119, 1455), (122, 1464),

Gene: Wrigley_1 Start: 82, Stop: 504, Start Num: 25
Candidate Starts for Wrigley_1:
(Start: 23 @73 has 1 MA's), (Start: 25 @82 has 23 MA's), (59, 226), (67, 265), (81, 325), (93, 388), (103, 436), (113, 472), (115, 481),

Gene: Xula_1 Start: 67, Stop: 540, Start Num: 32
Candidate Starts for Xula_1:
(26, 55), (Start: 32 @67 has 44 MA's), (47, 151), (54, 187), (74, 292), (79, 304), (81, 307), (89, 340), (91, 352), (99, 403), (123, 508),

Gene: Yang_1 Start: 84, Stop: 548, Start Num: 32
Candidate Starts for Yang_1:
(22, 54), (Start: 32 @84 has 44 MA's), (114, 501), (122, 531),

Gene: YesChef_1 Start: 84, Stop: 536, Start Num: 32
Candidate Starts for YesChef_1:
(22, 54), (Start: 32 @84 has 44 MA's), (58, 213), (107, 471), (119, 510), (122, 519),

Gene: Yvonnetastic_27 Start: 9976, Stop: 10458, Start Num: 21
Candidate Starts for Yvonnetastic_27:
(Start: 21 @9976 has 6 MA's), (62, 10153), (71, 10207), (88, 10276), (105, 10369),