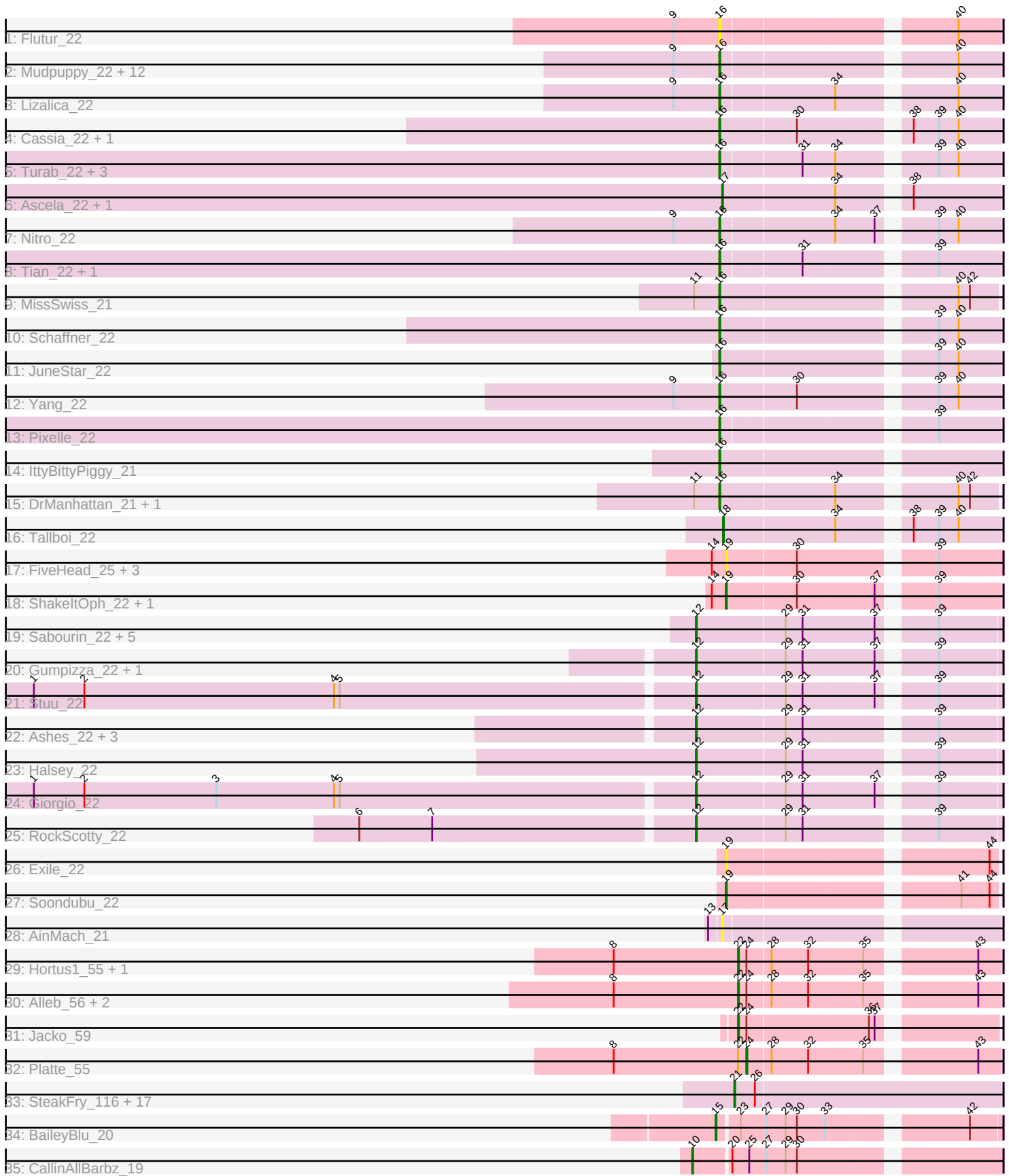


Pham 280323



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 280323 Report

This analysis was run 02/07/26 on database version 634.

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 280323 has 87 members, 20 are drafts.

Phages represented in each track:

- Track 1 : Flutur_22
- Track 2 : Mudpuppy_22, Powerpuff_22, Cyan_22, Kaylissa_22, Tutumahutu_22, AGrandiflora_23, Tbone_22, Warda_22, JohnDoe_22, YesChef_22, Lego_22, Joemato_22, Simpson_24
- Track 3 : Lizalica_22
- Track 4 : Cassia_22, Pumpkins_22
- Track 5 : Turab_22, Amploria_22, Adumb2043_22, AEgle_22
- Track 6 : Ascela_22, Iter_22
- Track 7 : Nitro_22
- Track 8 : Tian_22, Amyev_22
- Track 9 : MissSwiss_21
- Track 10 : Schaffner_22
- Track 11 : JuneStar_22
- Track 12 : Yang_22
- Track 13 : Pixelle_22
- Track 14 : IttyBittyPiggy_21
- Track 15 : DrManhattan_21, Adolin_21
- Track 16 : Tallboi_22
- Track 17 : FiveHead_25, Origami_23, LadyAstra_23, JohnThicc_24
- Track 18 : ShakeltOph_22, JasmineDragon_22
- Track 19 : Sabourin_22, Sooty_22, Cappuccino_22, Donkey_22, Kalimba_22, Gambol_22
- Track 20 : Gumpizza_22, Mysterium_22
- Track 21 : Stuu_22
- Track 22 : Ashes_22, SpecialK_22, Moss_22, Beaupre_22
- Track 23 : Halsey_22
- Track 24 : Giorgio_22
- Track 25 : RockScotty_22
- Track 26 : Exile_22
- Track 27 : Soondubu_22
- Track 28 : AinMach_21
- Track 29 : Hortus1_55, OlinDD_55
- Track 30 : Alleb_56, Tandem_55, Pioneer3_55

- Track 31 : Jacko_59
- Track 32 : Platte_55
- Track 33 : SteakFry_116, Casablanacas_64, DustyDino_66, HollowPurple_64, Yuma_62, ASegato_62, Erenyeager_63, Necrophoxinus_65, RunningBrook_64, SteakFry_62, Issa7_62, Fork_59, Welcome_64, Deschain_64, Shroomer_66, Lyell_63, StevieWelch_63, Musetta_63
- Track 34 : BaileyBlu_20
- Track 35 : CallinAllBarbz_19

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

The start number called the most often in the published annotations is 16, it was called in 25 of the 67 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_22, AGrandiflora_23, Adolin_21, Adumb2043_22, Amploria_22, Amyev_22, Cassia_22, Cyan_22, DrManhattan_21, Flutur_22, IttyBittyPiggy_21, Joemato_22, JohnDoe_22, JuneStar_22, Kaylissa_22, Lego_22, Lizalica_22, MissSwiss_21, Mudpuppy_22, Nitro_22, Pixelle_22, Powerpuff_22, Pumpkins_22, Schaffner_22, Simpson_24, Tbone_22, Tian_22, Turab_22, Tutumahutu_22, Warda_22, Yang_22, YesChef_22,

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

•

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

- ASegato_62, AinMach_21, Alleb_56, Ascela_22, Ashes_22, BaileyBlu_20, Beaupre_22, CallinAllBarbz_19, Cappuccino_22, Casablanacas_64, Deschain_64, Donkey_22, DustyDino_66, Erenyeager_63, Exile_22, FiveHead_25, Fork_59, Gambol_22, Giorgio_22, Gumpizza_22, Halsey_22, HollowPurple_64, Hortus1_55, Issa7_62, Iter_22, Jacko_59, JasmineDragon_22, JohnThicc_24, Kalimba_22, LadyAstra_23, Lyell_63, Moss_22, Musetta_63, Mysterium_22, Necrophoxinus_65, OlinDD_55, Origami_23, Pioneer3_55, Platte_55, RockScotty_22, RunningBrook_64, Sabourin_22, ShakeltOph_22, Shroomer_66, Soondubu_22, Sooty_22, SpecialK_22, SteakFry_116, SteakFry_62, StevieWelch_63, Stuu_22, Tallboi_22, Tandem_55, Welcome_64, Yuma_62,

Summary by start number:

Start 10:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: CallinAllBarbz_19 (FP),

Start 12:

- Found in 16 of 87 (18.4%) of genes in pham
- Manual Annotations of this start: 15 of 67
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Ashes_22 (AZ5), Beaupre_22 (AZ5), Cappuccino_22 (AZ5), Donkey_22 (AZ5), Gambol_22 (AZ5), Giorgio_22 (AZ5), Gumpizza_22 (AZ5), Halsey_22 (AZ5), Kalimba_22 (AZ5), Moss_22 (AZ5), Mysterium_22 (AZ5), RockScotty_22 (AZ5), Sabourin_22 (AZ5), Sooty_22 (AZ5), SpecialK_22 (AZ5), Stuu_22 (AZ5),

Start 15:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_20 (FP),

Start 16:

- Found in 32 of 87 (36.8%) of genes in pham
- Manual Annotations of this start: 25 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_22 (AZ1), AGrandiflora_23 (AZ1), Adolin_21 (AZ1), Adumb2043_22 (AZ1), Amploria_22 (AZ1), Amyev_22 (AZ1), Cassia_22 (AZ1), Cyan_22 (AZ1), DrManhattan_21 (AZ1), Flutur_22 (AZ), IttyBittyPiggy_21 (AZ1), Joemato_22 (AZ1), JohnDoe_22 (AZ1), JuneStar_22 (AZ1), Kaylissa_22 (AZ1), Lego_22 (AZ1), Lizalica_22 (AZ1), MissSwiss_21 (AZ1), Mudpuppy_22 (AZ1), Nitro_22 (AZ1), Pixelle_22 (AZ1), Powerpuff_22 (AZ1), Pumpkins_22 (AZ1), Schaffner_22 (AZ1), Simpson_24 (AZ1), Tbone_22 (AZ1), Tian_22 (AZ1), Turab_22 (AZ1), Tutumahutu_22 (AZ1), Warda_22 (AZ1), Yang_22 (AZ1), YesChef_22 (AZ1),

Start 17:

- Found in 3 of 87 (3.4%) of genes in pham
- Manual Annotations of this start: 2 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AinMach_21 (AZ7), Ascela_22 (AZ1), Iter_22 (AZ1),

Start 18:

- Found in 1 of 87 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tallboi_22 (AZ1),

Start 19:

- Found in 8 of 87 (9.2%) of genes in pham
- Manual Annotations of this start: 3 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Exile_22 (AZ6), FiveHead_25 (AZ4), JasmineDragon_22 (AZ4), JohnThicc_24 (AZ4), LadyAstra_23 (AZ4), Origami_23 (AZ4), ShakeltOph_22 (AZ4), Soondubu_22 (AZ6),

Start 21:

- Found in 18 of 87 (20.7%) of genes in pham
- Manual Annotations of this start: 12 of 67
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ASegato_62 (ED2), Casablanacas_64 (ED2), Deschain_64 (ED2), DustyDino_66 (ED2), Erenyeager_63 (ED2), Fork_59

(ED2), HollowPurple_64 (ED2), Issa7_62 (ED2), Lyell_63 (ED2), Musetta_63 (ED2), Necrophoxinus_65 (ED2), RunningBrook_64 (ED2), Shroomer_66 (ED2), SteakFry_116 (ED2), SteakFry_62 (ED2), StevieWelch_63 (ED2), Welcome_64 (ED2), Yuma_62 (ED2),

Start 22:

- Found in 7 of 87 (8.0%) of genes in pham
- Manual Annotations of this start: 6 of 67
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Alleb_56 (ED1), Hortus1_55 (ED1), Jacko_59 (ED1), OlinDD_55 (ED1), Pioneer3_55 (ED1), Tandem_55 (ED1),

Start 24:

- Found in 7 of 87 (8.0%) of genes in pham
- Manual Annotations of this start: 1 of 67
- Called 14.3% of time when present
- Phage (with cluster) where this start called: Platte_55 (ED1),

Summary by clusters:

There are 9 clusters represented in this pham: FP, ED2, ED1, AZ1, AZ, AZ4, AZ5, AZ6, AZ7,

Info for manual annotations of cluster AZ1:

- Start number 16 was manually annotated 25 times for cluster AZ1.
- Start number 17 was manually annotated 2 times for cluster AZ1.
- Start number 18 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ4:

- Start number 19 was manually annotated 2 times for cluster AZ4.

Info for manual annotations of cluster AZ5:

- Start number 12 was manually annotated 15 times for cluster AZ5.

Info for manual annotations of cluster AZ6:

- Start number 19 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster ED1:

- Start number 22 was manually annotated 6 times for cluster ED1.
- Start number 24 was manually annotated 1 time for cluster ED1.

Info for manual annotations of cluster ED2:

- Start number 21 was manually annotated 12 times for cluster ED2.

Info for manual annotations of cluster FP:

- Start number 10 was manually annotated 1 time for cluster FP.
- Start number 15 was manually annotated 1 time for cluster FP.

Gene Information:

Gene: AEgle_22 Start: 19269, Stop: 19538, Start Num: 16
Candidate Starts for AEgle_22:
(Start: 16 @19269 has 25 MA's), (31, 19350), (34, 19383), (39, 19473), (40, 19494),

Gene: AGrandiflora_23 Start: 19367, Stop: 19636, Start Num: 16
Candidate Starts for AGrandiflora_23:
(9, 19325), (Start: 16 @19367 has 25 MA's), (40, 19592),

Gene: ASegato_62 Start: 35643, Stop: 35921, Start Num: 21
Candidate Starts for ASegato_62:
(Start: 21 @35643 has 12 MA's), (26, 35664),

Gene: Adolin_21 Start: 17721, Stop: 17990, Start Num: 16
Candidate Starts for Adolin_21:
(11, 17703), (Start: 16 @17721 has 25 MA's), (34, 17838), (40, 17949), (42, 17961),

Gene: Adumb2043_22 Start: 19268, Stop: 19537, Start Num: 16
Candidate Starts for Adumb2043_22:
(Start: 16 @19268 has 25 MA's), (31, 19349), (34, 19382), (39, 19472), (40, 19493),

Gene: AinMach_21 Start: 18975, Stop: 19241, Start Num: 17
Candidate Starts for AinMach_21:
(13, 18963), (Start: 17 @18975 has 2 MA's),

Gene: Alleb_56 Start: 35613, Stop: 35867, Start Num: 22
Candidate Starts for Alleb_56:
(8, 35481), (Start: 22 @35613 has 6 MA's), (Start: 24 @35622 has 1 MA's), (28, 35646), (32, 35685),
(35, 35742), (43, 35844),

Gene: Amploria_22 Start: 19268, Stop: 19537, Start Num: 16
Candidate Starts for Amploria_22:
(Start: 16 @19268 has 25 MA's), (31, 19349), (34, 19382), (39, 19472), (40, 19493),

Gene: Amyev_22 Start: 19659, Stop: 19928, Start Num: 16
Candidate Starts for Amyev_22:
(Start: 16 @19659 has 25 MA's), (31, 19740), (39, 19863),

Gene: Ascela_22 Start: 19279, Stop: 19548, Start Num: 17
Candidate Starts for Ascela_22:
(Start: 17 @19279 has 2 MA's), (34, 19393), (38, 19456),

Gene: Ashes_22 Start: 17953, Stop: 18252, Start Num: 12
Candidate Starts for Ashes_22:
(Start: 12 @17953 has 15 MA's), (29, 18046), (31, 18064), (39, 18187),

Gene: BaileyBlu_20 Start: 17646, Stop: 17921, Start Num: 15
Candidate Starts for BaileyBlu_20:
(Start: 15 @17646 has 1 MA's), (23, 17667), (27, 17694), (29, 17715), (30, 17727), (33, 17757), (42, 17889),

Gene: Beaupre_22 Start: 17954, Stop: 18253, Start Num: 12
Candidate Starts for Beaupre_22:
(Start: 12 @17954 has 15 MA's), (29, 18047), (31, 18065), (39, 18188),

Gene: CallinAllBarbz_19 Start: 17627, Stop: 17926, Start Num: 10
Candidate Starts for CallinAllBarbz_19:
(Start: 10 @17627 has 1 MA's), (20, 17660), (25, 17678), (27, 17696), (29, 17717), (30, 17729),

Gene: Cappuccino_22 Start: 17864, Stop: 18163, Start Num: 12
Candidate Starts for Cappuccino_22:
(Start: 12 @17864 has 15 MA's), (29, 17957), (31, 17975), (37, 18050), (39, 18098),

Gene: Casablanacas_64 Start: 35383, Stop: 35661, Start Num: 21
Candidate Starts for Casablanacas_64:
(Start: 21 @35383 has 12 MA's), (26, 35404),

Gene: Cassia_22 Start: 19707, Stop: 19979, Start Num: 16
Candidate Starts for Cassia_22:
(Start: 16 @19707 has 25 MA's), (30, 19785), (38, 19887), (39, 19914), (40, 19935),

Gene: Cyan_22 Start: 19415, Stop: 19684, Start Num: 16
Candidate Starts for Cyan_22:
(9, 19373), (Start: 16 @19415 has 25 MA's), (40, 19640),

Gene: Deschain_64 Start: 36047, Stop: 36325, Start Num: 21
Candidate Starts for Deschain_64:
(Start: 21 @36047 has 12 MA's), (26, 36068),

Gene: Donkey_22 Start: 17864, Stop: 18163, Start Num: 12
Candidate Starts for Donkey_22:
(Start: 12 @17864 has 15 MA's), (29, 17957), (31, 17975), (37, 18050), (39, 18098),

Gene: DrManhattan_21 Start: 17711, Stop: 17980, Start Num: 16
Candidate Starts for DrManhattan_21:
(11, 17693), (Start: 16 @17711 has 25 MA's), (34, 17828), (40, 17939), (42, 17951),

Gene: DustyDino_66 Start: 36241, Stop: 36519, Start Num: 21
Candidate Starts for DustyDino_66:
(Start: 21 @36241 has 12 MA's), (26, 36262),

Gene: Erenyeager_63 Start: 35633, Stop: 35911, Start Num: 21
Candidate Starts for Erenyeager_63:
(Start: 21 @35633 has 12 MA's), (26, 35654),

Gene: Exile_22 Start: 21578, Stop: 21841, Start Num: 19
Candidate Starts for Exile_22:
(Start: 19 @21578 has 3 MA's), (44, 21833),

Gene: FiveHead_25 Start: 18510, Stop: 18779, Start Num: 19
Candidate Starts for FiveHead_25:
(14, 18495), (Start: 19 @18510 has 3 MA's), (30, 18582), (39, 18711),

Gene: Flutur_22 Start: 19647, Stop: 19916, Start Num: 16
Candidate Starts for Flutur_22:
(9, 19605), (Start: 16 @19647 has 25 MA's), (40, 19872),

Gene: Fork_59 Start: 35293, Stop: 35571, Start Num: 21

Candidate Starts for Fork_59:

(Start: 21 @35293 has 12 MA's), (26, 35314),

Gene: Gambol_22 Start: 17864, Stop: 18163, Start Num: 12

Candidate Starts for Gambol_22:

(Start: 12 @17864 has 15 MA's), (29, 17957), (31, 17975), (37, 18050), (39, 18098),

Gene: Giorgio_22 Start: 17961, Stop: 18260, Start Num: 12

Candidate Starts for Giorgio_22:

(1, 17265), (2, 17319), (3, 17460), (4, 17586), (5, 17592), (Start: 12 @17961 has 15 MA's), (29, 18054), (31, 18072), (37, 18147), (39, 18195),

Gene: Gumpizza_22 Start: 17954, Stop: 18253, Start Num: 12

Candidate Starts for Gumpizza_22:

(Start: 12 @17954 has 15 MA's), (29, 18047), (31, 18065), (37, 18140), (39, 18188),

Gene: Halsey_22 Start: 17958, Stop: 18257, Start Num: 12

Candidate Starts for Halsey_22:

(Start: 12 @17958 has 15 MA's), (29, 18051), (31, 18069), (39, 18192),

Gene: HollowPurple_64 Start: 35849, Stop: 36127, Start Num: 21

Candidate Starts for HollowPurple_64:

(Start: 21 @35849 has 12 MA's), (26, 35870),

Gene: Hortus1_55 Start: 35603, Stop: 35857, Start Num: 22

Candidate Starts for Hortus1_55:

(8, 35471), (Start: 22 @35603 has 6 MA's), (Start: 24 @35612 has 1 MA's), (28, 35636), (32, 35675), (35, 35732), (43, 35834),

Gene: Issa7_62 Start: 35297, Stop: 35575, Start Num: 21

Candidate Starts for Issa7_62:

(Start: 21 @35297 has 12 MA's), (26, 35318),

Gene: Iter_22 Start: 19279, Stop: 19548, Start Num: 17

Candidate Starts for Iter_22:

(Start: 17 @19279 has 2 MA's), (34, 19393), (38, 19456),

Gene: IttyBittyPiggy_21 Start: 17803, Stop: 18075, Start Num: 16

Candidate Starts for IttyBittyPiggy_21:

(Start: 16 @17803 has 25 MA's),

Gene: Jacko_59 Start: 34558, Stop: 34809, Start Num: 22

Candidate Starts for Jacko_59:

(Start: 22 @34558 has 6 MA's), (Start: 24 @34567 has 1 MA's), (36, 34693), (37, 34699),

Gene: JasmineDragon_22 Start: 18506, Stop: 18772, Start Num: 19

Candidate Starts for JasmineDragon_22:

(14, 18491), (Start: 19 @18506 has 3 MA's), (30, 18578), (37, 18659), (39, 18707),

Gene: Joemato_22 Start: 19415, Stop: 19684, Start Num: 16

Candidate Starts for Joemato_22:

(9, 19373), (Start: 16 @19415 has 25 MA's), (40, 19640),

Gene: JohnDoe_22 Start: 19410, Stop: 19679, Start Num: 16

Candidate Starts for JohnDoe_22:

(9, 19368), (Start: 16 @19410 has 25 MA's), (40, 19635),

Gene: JohnThicc_24 Start: 18510, Stop: 18779, Start Num: 19

Candidate Starts for JohnThicc_24:

(14, 18495), (Start: 19 @18510 has 3 MA's), (30, 18582), (39, 18711),

Gene: JuneStar_22 Start: 20113, Stop: 20385, Start Num: 16

Candidate Starts for JuneStar_22:

(Start: 16 @20113 has 25 MA's), (39, 20320), (40, 20341),

Gene: Kalimba_22 Start: 17865, Stop: 18164, Start Num: 12

Candidate Starts for Kalimba_22:

(Start: 12 @17865 has 15 MA's), (29, 17958), (31, 17976), (37, 18051), (39, 18099),

Gene: Kaylissa_22 Start: 19416, Stop: 19685, Start Num: 16

Candidate Starts for Kaylissa_22:

(9, 19374), (Start: 16 @19416 has 25 MA's), (40, 19641),

Gene: LadyAstra_23 Start: 18510, Stop: 18779, Start Num: 19

Candidate Starts for LadyAstra_23:

(14, 18495), (Start: 19 @18510 has 3 MA's), (30, 18582), (39, 18711),

Gene: Lego_22 Start: 19370, Stop: 19639, Start Num: 16

Candidate Starts for Lego_22:

(9, 19328), (Start: 16 @19370 has 25 MA's), (40, 19595),

Gene: Lizalica_22 Start: 19400, Stop: 19669, Start Num: 16

Candidate Starts for Lizalica_22:

(9, 19358), (Start: 16 @19400 has 25 MA's), (34, 19514), (40, 19625),

Gene: Lyell_63 Start: 35552, Stop: 35830, Start Num: 21

Candidate Starts for Lyell_63:

(Start: 21 @35552 has 12 MA's), (26, 35573),

Gene: MissSwiss_21 Start: 17769, Stop: 18038, Start Num: 16

Candidate Starts for MissSwiss_21:

(11, 17751), (Start: 16 @17769 has 25 MA's), (40, 17997), (42, 18009),

Gene: Moss_22 Start: 17953, Stop: 18252, Start Num: 12

Candidate Starts for Moss_22:

(Start: 12 @17953 has 15 MA's), (29, 18046), (31, 18064), (39, 18187),

Gene: Mudpuppy_22 Start: 19413, Stop: 19682, Start Num: 16

Candidate Starts for Mudpuppy_22:

(9, 19371), (Start: 16 @19413 has 25 MA's), (40, 19638),

Gene: Musetta_63 Start: 36013, Stop: 36291, Start Num: 21

Candidate Starts for Musetta_63:

(Start: 21 @36013 has 12 MA's), (26, 36034),

Gene: Mysterium_22 Start: 17954, Stop: 18253, Start Num: 12

Candidate Starts for Mysterium_22:

(Start: 12 @17954 has 15 MA's), (29, 18047), (31, 18065), (37, 18140), (39, 18188),

Gene: Necrophoxinus_65 Start: 36247, Stop: 36525, Start Num: 21

Candidate Starts for Necrophoxinus_65:

(Start: 21 @36247 has 12 MA's), (26, 36268),

Gene: Nitro_22 Start: 19269, Stop: 19538, Start Num: 16

Candidate Starts for Nitro_22:

(9, 19227), (Start: 16 @19269 has 25 MA's), (34, 19383), (37, 19425), (39, 19473), (40, 19494),

Gene: OlinDD_55 Start: 35602, Stop: 35856, Start Num: 22

Candidate Starts for OlinDD_55:

(8, 35470), (Start: 22 @35602 has 6 MA's), (Start: 24 @35611 has 1 MA's), (28, 35635), (32, 35674), (35, 35731), (43, 35833),

Gene: Origami_23 Start: 18510, Stop: 18779, Start Num: 19

Candidate Starts for Origami_23:

(14, 18495), (Start: 19 @18510 has 3 MA's), (30, 18582), (39, 18711),

Gene: Pioneer3_55 Start: 35610, Stop: 35864, Start Num: 22

Candidate Starts for Pioneer3_55:

(8, 35478), (Start: 22 @35610 has 6 MA's), (Start: 24 @35619 has 1 MA's), (28, 35643), (32, 35682), (35, 35739), (43, 35841),

Gene: Pixelle_22 Start: 19662, Stop: 19931, Start Num: 16

Candidate Starts for Pixelle_22:

(Start: 16 @19662 has 25 MA's), (39, 19866),

Gene: Platte_55 Start: 35404, Stop: 35649, Start Num: 24

Candidate Starts for Platte_55:

(8, 35263), (Start: 22 @35395 has 6 MA's), (Start: 24 @35404 has 1 MA's), (28, 35428), (32, 35467), (35, 35524), (43, 35626),

Gene: Powerpuff_22 Start: 19421, Stop: 19690, Start Num: 16

Candidate Starts for Powerpuff_22:

(9, 19379), (Start: 16 @19421 has 25 MA's), (40, 19646),

Gene: Pumpkins_22 Start: 20140, Stop: 20412, Start Num: 16

Candidate Starts for Pumpkins_22:

(Start: 16 @20140 has 25 MA's), (30, 20218), (38, 20320), (39, 20347), (40, 20368),

Gene: RockScotty_22 Start: 17930, Stop: 18229, Start Num: 12

Candidate Starts for RockScotty_22:

(6, 17582), (7, 17660), (Start: 12 @17930 has 15 MA's), (29, 18023), (31, 18041), (39, 18164),

Gene: RunningBrook_64 Start: 36241, Stop: 36519, Start Num: 21

Candidate Starts for RunningBrook_64:

(Start: 21 @36241 has 12 MA's), (26, 36262),

Gene: Sabourin_22 Start: 17863, Stop: 18162, Start Num: 12

Candidate Starts for Sabourin_22:

(Start: 12 @17863 has 15 MA's), (29, 17956), (31, 17974), (37, 18049), (39, 18097),

Gene: Schaffner_22 Start: 20112, Stop: 20384, Start Num: 16

Candidate Starts for Schaffner_22:

(Start: 16 @20112 has 25 MA's), (39, 20319), (40, 20340),

Gene: ShakeltOph_22 Start: 18506, Stop: 18772, Start Num: 19

Candidate Starts for ShakeltOph_22:

(14, 18491), (Start: 19 @18506 has 3 MA's), (30, 18578), (37, 18659), (39, 18707),

Gene: Shroomer_66 Start: 35783, Stop: 36061, Start Num: 21

Candidate Starts for Shroomer_66:

(Start: 21 @35783 has 12 MA's), (26, 35804),

Gene: Simpson_24 Start: 19415, Stop: 19684, Start Num: 16

Candidate Starts for Simpson_24:

(9, 19373), (Start: 16 @19415 has 25 MA's), (40, 19640),

Gene: Soondubu_22 Start: 21582, Stop: 21845, Start Num: 19

Candidate Starts for Soondubu_22:

(Start: 19 @21582 has 3 MA's), (41, 21807), (44, 21837),

Gene: Sooty_22 Start: 17866, Stop: 18165, Start Num: 12

Candidate Starts for Sooty_22:

(Start: 12 @17866 has 15 MA's), (29, 17959), (31, 17977), (37, 18052), (39, 18100),

Gene: SpecialK_22 Start: 17860, Stop: 18159, Start Num: 12

Candidate Starts for SpecialK_22:

(Start: 12 @17860 has 15 MA's), (29, 17953), (31, 17971), (39, 18094),

Gene: SteakFry_116 Start: 61045, Stop: 61323, Start Num: 21

Candidate Starts for SteakFry_116:

(Start: 21 @61045 has 12 MA's), (26, 61066),

Gene: SteakFry_62 Start: 35849, Stop: 36127, Start Num: 21

Candidate Starts for SteakFry_62:

(Start: 21 @35849 has 12 MA's), (26, 35870),

Gene: StevieWelch_63 Start: 35633, Stop: 35911, Start Num: 21

Candidate Starts for StevieWelch_63:

(Start: 21 @35633 has 12 MA's), (26, 35654),

Gene: Stuu_22 Start: 17953, Stop: 18252, Start Num: 12

Candidate Starts for Stuu_22:

(1, 17257), (2, 17311), (4, 17578), (5, 17584), (Start: 12 @17953 has 15 MA's), (29, 18046), (31, 18064), (37, 18139), (39, 18187),

Gene: Tallboi_22 Start: 19248, Stop: 19517, Start Num: 18

Candidate Starts for Tallboi_22:

(Start: 18 @19248 has 1 MA's), (34, 19362), (38, 19425), (39, 19452), (40, 19473),

Gene: Tandem_55 Start: 35549, Stop: 35803, Start Num: 22

Candidate Starts for Tandem_55:

(8, 35417), (Start: 22 @35549 has 6 MA's), (Start: 24 @35558 has 1 MA's), (28, 35582), (32, 35621), (35, 35678), (43, 35780),

Gene: Tbone_22 Start: 19420, Stop: 19689, Start Num: 16

Candidate Starts for Tbone_22:

(9, 19378), (Start: 16 @19420 has 25 MA's), (40, 19645),

Gene: Tian_22 Start: 19659, Stop: 19928, Start Num: 16

Candidate Starts for Tian_22:

(Start: 16 @19659 has 25 MA's), (31, 19740), (39, 19863),

Gene: Turab_22 Start: 19268, Stop: 19537, Start Num: 16

Candidate Starts for Turab_22:

(Start: 16 @19268 has 25 MA's), (31, 19349), (34, 19382), (39, 19472), (40, 19493),

Gene: Tutumahutu_22 Start: 19421, Stop: 19690, Start Num: 16

Candidate Starts for Tutumahutu_22:

(9, 19379), (Start: 16 @19421 has 25 MA's), (40, 19646),

Gene: Warda_22 Start: 19412, Stop: 19681, Start Num: 16

Candidate Starts for Warda_22:

(9, 19370), (Start: 16 @19412 has 25 MA's), (40, 19637),

Gene: Welcome_64 Start: 35998, Stop: 36276, Start Num: 21

Candidate Starts for Welcome_64:

(Start: 21 @35998 has 12 MA's), (26, 36019),

Gene: Yang_22 Start: 19406, Stop: 19678, Start Num: 16

Candidate Starts for Yang_22:

(9, 19364), (Start: 16 @19406 has 25 MA's), (30, 19484), (39, 19613), (40, 19634),

Gene: YesChef_22 Start: 19421, Stop: 19690, Start Num: 16

Candidate Starts for YesChef_22:

(9, 19379), (Start: 16 @19421 has 25 MA's), (40, 19646),

Gene: Yuma_62 Start: 35567, Stop: 35845, Start Num: 21

Candidate Starts for Yuma_62:

(Start: 21 @35567 has 12 MA's), (26, 35588),