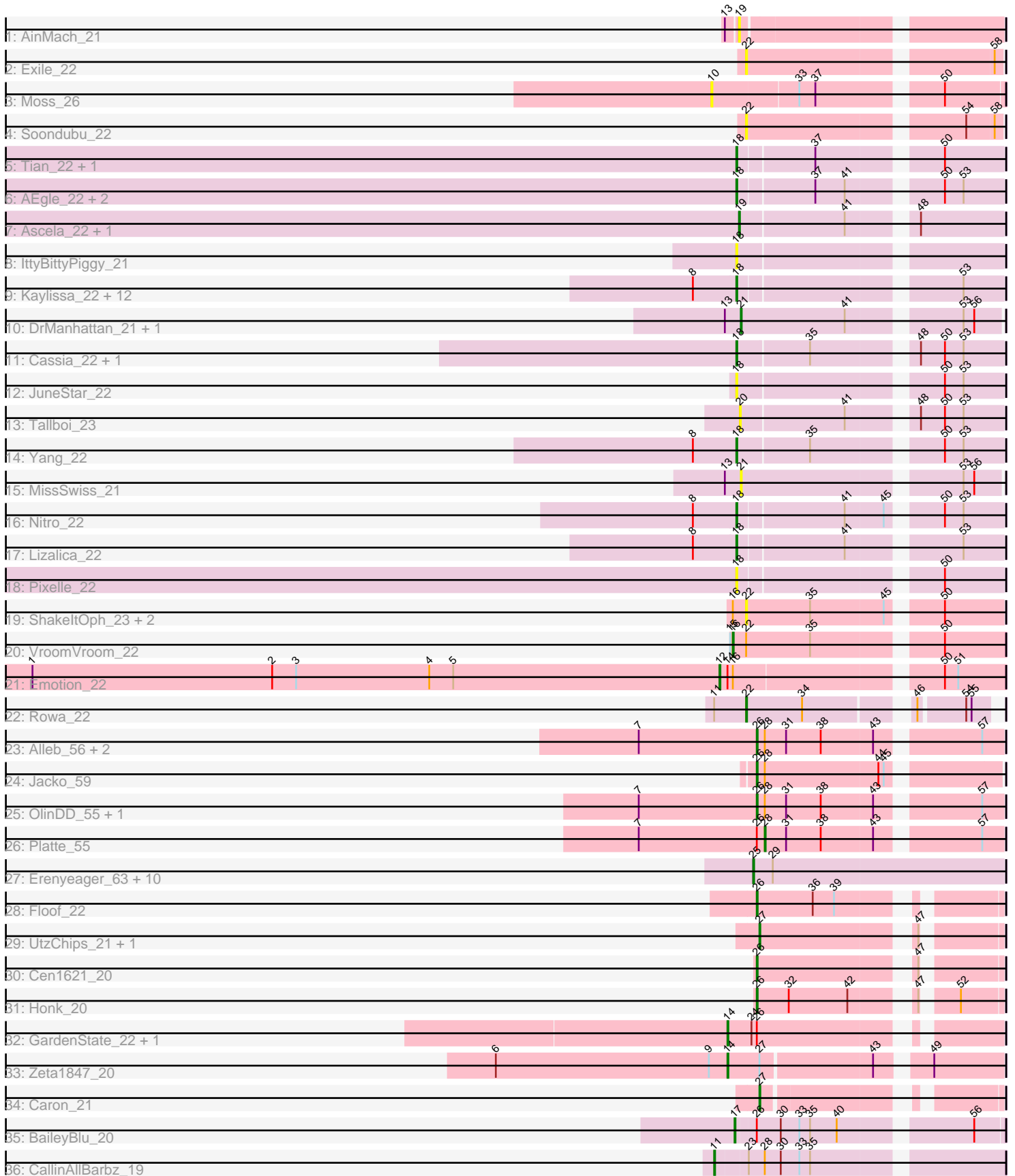


Pham 163574



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 163574 Report

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

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 163574 has 71 members, 24 are drafts.

Phages represented in each track:

- Track 1 : AinMach_21
- Track 2 : Exile_22
- Track 3 : Moss_26
- Track 4 : Soondubu_22
- Track 5 : Tian_22, Amyev_22
- Track 6 : AEgle_22, Turab_22, Adumb2043_22
- Track 7 : Ascela_22, Iter_22
- Track 8 : IttyBittyPiggy_21
- Track 9 : Kaylissa_22, Tutumahutu_23, AGrandiflora_23, Powerpuff_22, YesChef_22, Joemato_24, Warda_22, Tbone_22, Mudpuppy_23, Cyan_22, JohnDoe_22, Lego_22, Simpson_24
- Track 10 : DrManhattan_21, Adolin_21
- Track 11 : Cassia_22, Pumpkins_38
- Track 12 : JuneStar_22
- Track 13 : Tallboi_23
- Track 14 : Yang_22
- Track 15 : MissSwiss_21
- Track 16 : Nitro_22
- Track 17 : Lizalica_22
- Track 18 : Pixelle_22
- Track 19 : ShakeltOph_23, JasmineDragon_23, MiniMommy_22
- Track 20 : VroomVroom_22
- Track 21 : Emotion_22
- Track 22 : Rowa_22
- Track 23 : Alleb_56, Pioneer3_55, Tandem_55
- Track 24 : Jacko_59
- Track 25 : OlinDD_55, Hortus1_55
- Track 26 : Platte_55
- Track 27 : Erenyeager_63, Welcome_64, Necrophoxinus_65, DustyDino_66, Lyell_63, RunningBrook_65, StevieWelch_63, Yuma_62, Fork_59, ASegato_62, Musetta_63
- Track 28 : Floof_22
- Track 29 : UtzChips_21, Barnstormer_21

- Track 30 : Cen1621_20
- Track 31 : Honk_20
- Track 32 : GardenState_22, IAmGroot_22
- Track 33 : Zeta1847_20
- Track 34 : Caron_21
- Track 35 : BaileyBlu_20
- Track 36 : 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 18, it was called in 13 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AEgle_22, AGrandiflora_23, Adumb2043_22, Amyev_22, Cassia_22, Cyan_22, IttyBittyPiggy_21, Joemato_24, JohnDoe_22, JuneStar_22, Kaylissa_22, Lego_22, Lizalica_22, Mudpuppy_23, Nitro_22, Pixelle_22, Powerpuff_22, Pumpkins_38, Simpson_24, Tbone_22, Tian_22, Turab_22, Tutumahutu_23, 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, Adolin_21, AinMach_21, Alleb_56, Ascela_22, BaileyBlu_20, Barnstormer_21, CallinAllBarbz_19, Caron_21, Cen1621_20, DrManhattan_21, DustyDino_66, Emotion_22, Erenyeager_63, Exile_22, Floof_22, Fork_59, GardenState_22, Honk_20, Hortus1_55, IAmGroot_22, Iter_22, Jacko_59, JasmineDragon_23, Lyell_63, MiniMommy_22, MissSwiss_21, Moss_26, Musetta_63, Necrophoxinus_65, OlinDD_55, Pioneer3_55, Platte_55, Rowa_22, RunningBrook_65, ShakeltOph_23, Soondubu_22, StevieWelch_63, Tallboi_23, Tandem_55, UtzChips_21, VroomVroom_22, Welcome_64, Yuma_62, Zeta1847_20,

Summary by start number:

Start 10:

- Found in 1 of 71 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Moss_26 (AZ),

Start 11:

- Found in 2 of 71 (2.8%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 50.0% of time when present
- Phage (with cluster) where this start called: CallinAllBarbz_19 (FP),

Start 12:

- Found in 1 of 71 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 47

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Emotion_22 (AZ4),

Start 14:

- Found in 4 of 71 (5.6%) of genes in pham
- Manual Annotations of this start: 3 of 47
- Called 75.0% of time when present
- Phage (with cluster) where this start called: GardenState_22 (EH), IAmGroot_22 (EH), Zeta1847_20 (EH),

Start 16:

- Found in 5 of 71 (7.0%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 20.0% of time when present
- Phage (with cluster) where this start called: VroomVroom_22 (AZ4),

Start 17:

- Found in 1 of 71 (1.4%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaileyBlu_20 (FP),

Start 18:

- Found in 26 of 71 (36.6%) of genes in pham
- Manual Annotations of this start: 13 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AEgle_22 (AZ1), AGrandiflora_23 (AZ1), Adumb2043_22 (AZ1), Amyev_22 (AZ1), Cassia_22 (AZ1), Cyan_22 (AZ1), IttyBittyPiggy_21 (AZ1), Joemato_24 (AZ1), JohnDoe_22 (AZ1), JuneStar_22 (AZ1), Kaylissa_22 (AZ1), Lego_22 (AZ1), Lizalica_22 (AZ1), Mudpuppy_23 (AZ1), Nitro_22 (AZ1), Pixelle_22 (AZ1), Powerpuff_22 (AZ1), Pumpkins_38 (AZ1), Simpson_24 (AZ1), Tbone_22 (AZ1), Tian_22 (AZ1), Turab_22 (AZ1), Tutumahutu_23 (AZ1), Warda_22 (AZ1), Yang_22 (AZ1), YesChef_22 (AZ1),

Start 19:

- Found in 3 of 71 (4.2%) of genes in pham
- Manual Annotations of this start: 2 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AinMach_21 (AZ), Ascela_22 (AZ1), Iter_22 (AZ1),

Start 20:

- Found in 1 of 71 (1.4%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Tallboi_23 (AZ1),

Start 21:

- Found in 3 of 71 (4.2%) of genes in pham
- Manual Annotations of this start: 2 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adolin_21 (AZ1), DrManhattan_21 (AZ1), MissSwiss_21 (AZ1),

Start 22:

- Found in 7 of 71 (9.9%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 85.7% of time when present
- Phage (with cluster) where this start called: Exile_22 (AZ), JasmineDragon_23 (AZ4), MiniMommy_22 (AZ4), Rowa_22 (BL), ShakeltOph_23 (AZ4), Soondubu_22 (AZ),

Start 25:

- Found in 11 of 71 (15.5%) of genes in pham
- Manual Annotations of this start: 9 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ASegato_62 (ED2), DustyDino_66 (ED2), Erenyeager_63 (ED2), Fork_59 (ED2), Lyell_63 (ED2), Musetta_63 (ED2), Necrophoxinus_65 (ED2), RunningBrook_65 (ED2), StevieWelch_63 (ED2), Welcome_64 (ED2), Yuma_62 (ED2),

Start 26:

- Found in 13 of 71 (18.3%) of genes in pham
- Manual Annotations of this start: 9 of 47
- Called 69.2% of time when present
- Phage (with cluster) where this start called: Alleb_56 (ED1), Cen1621_20 (EH), Floof_22 (EH), Honk_20 (EH), Hortus1_55 (ED1), Jacko_59 (ED1), OlinDD_55 (ED1), Pioneer3_55 (ED1), Tandem_55 (ED1),

Start 27:

- Found in 4 of 71 (5.6%) of genes in pham
- Manual Annotations of this start: 3 of 47
- Called 75.0% of time when present
- Phage (with cluster) where this start called: Barnstormer_21 (EH), Caron_21 (EH), UtzChips_21 (EH),

Start 28:

- Found in 8 of 71 (11.3%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 12.5% of time when present
- Phage (with cluster) where this start called: Platte_55 (ED1),

Summary by clusters:

There are 8 clusters represented in this pham: FP, EH, BL, ED2, ED1, AZ1, AZ, AZ4,

Info for manual annotations of cluster AZ1:

- Start number 18 was manually annotated 13 times for cluster AZ1.
- Start number 19 was manually annotated 2 times for cluster AZ1.
- Start number 21 was manually annotated 2 times for cluster AZ1.

Info for manual annotations of cluster AZ4:

- Start number 12 was manually annotated 1 time for cluster AZ4.
- Start number 16 was manually annotated 1 time for cluster AZ4.

Info for manual annotations of cluster BL:

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

Info for manual annotations of cluster ED1:

- Start number 26 was manually annotated 6 times for cluster ED1.
- Start number 28 was manually annotated 1 time for cluster ED1.

Info for manual annotations of cluster ED2:

- Start number 25 was manually annotated 9 times for cluster ED2.

Info for manual annotations of cluster EH:

- Start number 14 was manually annotated 3 times for cluster EH.
- Start number 26 was manually annotated 3 times for cluster EH.
- Start number 27 was manually annotated 3 times for cluster EH.

Info for manual annotations of cluster FP:

- Start number 11 was manually annotated 1 time for cluster FP.
- Start number 17 was manually annotated 1 time for cluster FP.

Gene Information:

Gene: AEgle_22 Start: 19269, Stop: 19538, Start Num: 18

Candidate Starts for AEgle_22:

(Start: 18 @19269 has 13 MA's), (37, 19350), (41, 19383), (50, 19473), (53, 19494),

Gene: AGrandiflora_23 Start: 19367, Stop: 19636, Start Num: 18

Candidate Starts for AGrandiflora_23:

(8, 19325), (Start: 18 @19367 has 13 MA's), (53, 19592),

Gene: ASegato_62 Start: 35643, Stop: 35921, Start Num: 25

Candidate Starts for ASegato_62:

(Start: 25 @35643 has 9 MA's), (29, 35664),

Gene: Adolin_21 Start: 17721, Stop: 17990, Start Num: 21

Candidate Starts for Adolin_21:

(13, 17703), (Start: 21 @17721 has 2 MA's), (41, 17838), (53, 17949), (56, 17961),

Gene: Adumb2043_22 Start: 19268, Stop: 19537, Start Num: 18

Candidate Starts for Adumb2043_22:

(Start: 18 @19268 has 13 MA's), (37, 19349), (41, 19382), (50, 19472), (53, 19493),

Gene: AinMach_21 Start: 18975, Stop: 19241, Start Num: 19

Candidate Starts for AinMach_21:

(13, 18963), (Start: 19 @18975 has 2 MA's),

Gene: Alleb_56 Start: 35613, Stop: 35867, Start Num: 26

Candidate Starts for Alleb_56:

(7, 35481), (Start: 26 @35613 has 9 MA's), (Start: 28 @35622 has 1 MA's), (31, 35646), (38, 35685), (43, 35742), (57, 35844),

Gene: Amyev_22 Start: 19659, Stop: 19928, Start Num: 18

Candidate Starts for Amyev_22:
(Start: 18 @19659 has 13 MA's), (37, 19740), (50, 19863),

Gene: Ascela_22 Start: 19279, Stop: 19548, Start Num: 19
Candidate Starts for Ascela_22:
(Start: 19 @19279 has 2 MA's), (41, 19393), (48, 19456),

Gene: BaileyBlu_20 Start: 17646, Stop: 17921, Start Num: 17
Candidate Starts for BaileyBlu_20:
(Start: 17 @17646 has 1 MA's), (Start: 26 @17667 has 9 MA's), (30, 17694), (33, 17715), (35, 17727),
(40, 17757), (56, 17889),

Gene: Barnstormer_21 Start: 18602, Stop: 18829, Start Num: 27
Candidate Starts for Barnstormer_21:
(Start: 27 @18602 has 3 MA's), (47, 18755),

Gene: CallinAllBarbz_19 Start: 17627, Stop: 17926, Start Num: 11
Candidate Starts for CallinAllBarbz_19:
(Start: 11 @17627 has 1 MA's), (23, 17660), (Start: 28 @17678 has 1 MA's), (30, 17696), (33, 17717),
(35, 17729),

Gene: Caron_21 Start: 17996, Stop: 18214, Start Num: 27
Candidate Starts for Caron_21:
(Start: 27 @17996 has 3 MA's),

Gene: Cassia_22 Start: 19707, Stop: 19979, Start Num: 18
Candidate Starts for Cassia_22:
(Start: 18 @19707 has 13 MA's), (35, 19785), (48, 19887), (50, 19914), (53, 19935),

Gene: Cen1621_20 Start: 17053, Stop: 17283, Start Num: 26
Candidate Starts for Cen1621_20:
(Start: 26 @17053 has 9 MA's), (47, 17209),

Gene: Cyan_22 Start: 19415, Stop: 19684, Start Num: 18
Candidate Starts for Cyan_22:
(8, 19373), (Start: 18 @19415 has 13 MA's), (53, 19640),

Gene: DrManhattan_21 Start: 17711, Stop: 17980, Start Num: 21
Candidate Starts for DrManhattan_21:
(13, 17693), (Start: 21 @17711 has 2 MA's), (41, 17828), (53, 17939), (56, 17951),

Gene: DustyDino_66 Start: 36241, Stop: 36519, Start Num: 25
Candidate Starts for DustyDino_66:
(Start: 25 @36241 has 9 MA's), (29, 36262),

Gene: Emotion_22 Start: 19071, Stop: 19367, Start Num: 12
Candidate Starts for Emotion_22:
(1, 18297), (2, 18567), (3, 18594), (4, 18744), (5, 18771), (Start: 12 @19071 has 1 MA's), (Start: 14
@19080 has 3 MA's), (Start: 16 @19086 has 1 MA's), (50, 19299), (51, 19314),

Gene: Erenyeager_63 Start: 35633, Stop: 35911, Start Num: 25
Candidate Starts for Erenyeager_63:
(Start: 25 @35633 has 9 MA's), (29, 35654),

Gene: Exile_22 Start: 21578, Stop: 21841, Start Num: 22

Candidate Starts for Exile_22:

(Start: 22 @21578 has 1 MA's), (58, 21833),

Gene: Floof_22 Start: 18710, Stop: 18940, Start Num: 26

Candidate Starts for Floof_22:

(Start: 26 @18710 has 9 MA's), (36, 18773), (39, 18797),

Gene: Fork_59 Start: 35293, Stop: 35571, Start Num: 25

Candidate Starts for Fork_59:

(Start: 25 @35293 has 9 MA's), (29, 35314),

Gene: GardenState_22 Start: 19038, Stop: 19304, Start Num: 14

Candidate Starts for GardenState_22:

(Start: 14 @19038 has 3 MA's), (24, 19065), (Start: 26 @19071 has 9 MA's),

Gene: Honk_20 Start: 16911, Stop: 17141, Start Num: 26

Candidate Starts for Honk_20:

(Start: 26 @16911 has 9 MA's), (32, 16947), (42, 17013), (47, 17067), (52, 17097),

Gene: Hortus1_55 Start: 35603, Stop: 35857, Start Num: 26

Candidate Starts for Hortus1_55:

(7, 35471), (Start: 26 @35603 has 9 MA's), (Start: 28 @35612 has 1 MA's), (31, 35636), (38, 35675), (43, 35732), (57, 35834),

Gene: IAmGroot_22 Start: 19699, Stop: 19965, Start Num: 14

Candidate Starts for IAmGroot_22:

(Start: 14 @19699 has 3 MA's), (24, 19726), (Start: 26 @19732 has 9 MA's),

Gene: Iter_22 Start: 19279, Stop: 19548, Start Num: 19

Candidate Starts for Iter_22:

(Start: 19 @19279 has 2 MA's), (41, 19393), (48, 19456),

Gene: IttyBittyPiggy_21 Start: 17803, Stop: 18075, Start Num: 18

Candidate Starts for IttyBittyPiggy_21:

(Start: 18 @17803 has 13 MA's),

Gene: Jacko_59 Start: 34558, Stop: 34809, Start Num: 26

Candidate Starts for Jacko_59:

(Start: 26 @34558 has 9 MA's), (Start: 28 @34567 has 1 MA's), (44, 34693), (45, 34699),

Gene: JasmineDragon_23 Start: 18506, Stop: 18772, Start Num: 22

Candidate Starts for JasmineDragon_23:

(Start: 16 @18491 has 1 MA's), (Start: 22 @18506 has 1 MA's), (35, 18578), (45, 18659), (50, 18707),

Gene: Joemato_24 Start: 19415, Stop: 19684, Start Num: 18

Candidate Starts for Joemato_24:

(8, 19373), (Start: 18 @19415 has 13 MA's), (53, 19640),

Gene: JohnDoe_22 Start: 19410, Stop: 19679, Start Num: 18

Candidate Starts for JohnDoe_22:

(8, 19368), (Start: 18 @19410 has 13 MA's), (53, 19635),

Gene: JuneStar_22 Start: 20113, Stop: 20385, Start Num: 18
Candidate Starts for JuneStar_22:
(Start: 18 @20113 has 13 MA's), (50, 20320), (53, 20341),

Gene: Kaylissa_22 Start: 19416, Stop: 19685, Start Num: 18
Candidate Starts for Kaylissa_22:
(8, 19374), (Start: 18 @19416 has 13 MA's), (53, 19641),

Gene: Lego_22 Start: 19370, Stop: 19639, Start Num: 18
Candidate Starts for Lego_22:
(8, 19328), (Start: 18 @19370 has 13 MA's), (53, 19595),

Gene: Lizalica_22 Start: 19400, Stop: 19669, Start Num: 18
Candidate Starts for Lizalica_22:
(8, 19358), (Start: 18 @19400 has 13 MA's), (41, 19514), (53, 19625),

Gene: Lyell_63 Start: 35552, Stop: 35830, Start Num: 25
Candidate Starts for Lyell_63:
(Start: 25 @35552 has 9 MA's), (29, 35573),

Gene: MiniMommy_22 Start: 18507, Stop: 18773, Start Num: 22
Candidate Starts for MiniMommy_22:
(Start: 16 @18492 has 1 MA's), (Start: 22 @18507 has 1 MA's), (35, 18579), (45, 18660), (50, 18708),

Gene: MissSwiss_21 Start: 17769, Stop: 18038, Start Num: 21
Candidate Starts for MissSwiss_21:
(13, 17751), (Start: 21 @17769 has 2 MA's), (53, 17997), (56, 18009),

Gene: Moss_26 Start: 17953, Stop: 18252, Start Num: 10
Candidate Starts for Moss_26:
(10, 17953), (33, 18046), (37, 18064), (50, 18187),

Gene: Mudpuppy_23 Start: 19413, Stop: 19682, Start Num: 18
Candidate Starts for Mudpuppy_23:
(8, 19371), (Start: 18 @19413 has 13 MA's), (53, 19638),

Gene: Musetta_63 Start: 36013, Stop: 36291, Start Num: 25
Candidate Starts for Musetta_63:
(Start: 25 @36013 has 9 MA's), (29, 36034),

Gene: Necrophoxinus_65 Start: 36247, Stop: 36525, Start Num: 25
Candidate Starts for Necrophoxinus_65:
(Start: 25 @36247 has 9 MA's), (29, 36268),

Gene: Nitro_22 Start: 19269, Stop: 19538, Start Num: 18
Candidate Starts for Nitro_22:
(8, 19227), (Start: 18 @19269 has 13 MA's), (41, 19383), (45, 19425), (50, 19473), (53, 19494),

Gene: OlinDD_55 Start: 35602, Stop: 35856, Start Num: 26
Candidate Starts for OlinDD_55:
(7, 35470), (Start: 26 @35602 has 9 MA's), (Start: 28 @35611 has 1 MA's), (31, 35635), (38, 35674),
(43, 35731), (57, 35833),

Gene: Pioneer3_55 Start: 35610, Stop: 35864, Start Num: 26

Candidate Starts for Pioneer3_55:

(7, 35478), (Start: 26 @35610 has 9 MA's), (Start: 28 @35619 has 1 MA's), (31, 35643), (38, 35682), (43, 35739), (57, 35841),

Gene: Pixelle_22 Start: 19662, Stop: 19931, Start Num: 18

Candidate Starts for Pixelle_22:

(Start: 18 @19662 has 13 MA's), (50, 19866),

Gene: Platte_55 Start: 35404, Stop: 35649, Start Num: 28

Candidate Starts for Platte_55:

(7, 35263), (Start: 26 @35395 has 9 MA's), (Start: 28 @35404 has 1 MA's), (31, 35428), (38, 35467), (43, 35524), (57, 35626),

Gene: Powerpuff_22 Start: 19421, Stop: 19690, Start Num: 18

Candidate Starts for Powerpuff_22:

(8, 19379), (Start: 18 @19421 has 13 MA's), (53, 19646),

Gene: Pumpkins_38 Start: 20140, Stop: 20412, Start Num: 18

Candidate Starts for Pumpkins_38:

(Start: 18 @20140 has 13 MA's), (35, 20218), (48, 20320), (50, 20347), (53, 20368),

Gene: Rowa_22 Start: 18255, Stop: 18494, Start Num: 22

Candidate Starts for Rowa_22:

(Start: 11 @18219 has 1 MA's), (Start: 22 @18255 has 1 MA's), (34, 18318), (46, 18420), (54, 18468), (55, 18474),

Gene: RunningBrook_65 Start: 36241, Stop: 36519, Start Num: 25

Candidate Starts for RunningBrook_65:

(Start: 25 @36241 has 9 MA's), (29, 36262),

Gene: ShakeltOph_23 Start: 18506, Stop: 18772, Start Num: 22

Candidate Starts for ShakeltOph_23:

(Start: 16 @18491 has 1 MA's), (Start: 22 @18506 has 1 MA's), (35, 18578), (45, 18659), (50, 18707),

Gene: Simpson_24 Start: 19415, Stop: 19684, Start Num: 18

Candidate Starts for Simpson_24:

(8, 19373), (Start: 18 @19415 has 13 MA's), (53, 19640),

Gene: Soondubu_22 Start: 21582, Stop: 21845, Start Num: 22

Candidate Starts for Soondubu_22:

(Start: 22 @21582 has 1 MA's), (54, 21807), (58, 21837),

Gene: StevieWelch_63 Start: 35633, Stop: 35911, Start Num: 25

Candidate Starts for StevieWelch_63:

(Start: 25 @35633 has 9 MA's), (29, 35654),

Gene: Tallboi_23 Start: 19248, Stop: 19517, Start Num: 20

Candidate Starts for Tallboi_23:

(20, 19248), (41, 19362), (48, 19425), (50, 19452), (53, 19473),

Gene: Tandem_55 Start: 35549, Stop: 35803, Start Num: 26

Candidate Starts for Tandem_55:

(7, 35417), (Start: 26 @35549 has 9 MA's), (Start: 28 @35558 has 1 MA's), (31, 35582), (38, 35621), (43, 35678), (57, 35780),

Gene: Tbone_22 Start: 19420, Stop: 19689, Start Num: 18

Candidate Starts for Tbone_22:

(8, 19378), (Start: 18 @19420 has 13 MA's), (53, 19645),

Gene: Tian_22 Start: 19659, Stop: 19928, Start Num: 18

Candidate Starts for Tian_22:

(Start: 18 @19659 has 13 MA's), (37, 19740), (50, 19863),

Gene: Turab_22 Start: 19268, Stop: 19537, Start Num: 18

Candidate Starts for Turab_22:

(Start: 18 @19268 has 13 MA's), (37, 19349), (41, 19382), (50, 19472), (53, 19493),

Gene: Tutumahutu_23 Start: 19421, Stop: 19690, Start Num: 18

Candidate Starts for Tutumahutu_23:

(8, 19379), (Start: 18 @19421 has 13 MA's), (53, 19646),

Gene: UtzChips_21 Start: 18590, Stop: 18817, Start Num: 27

Candidate Starts for UtzChips_21:

(Start: 27 @18590 has 3 MA's), (47, 18743),

Gene: VroomVroom_22 Start: 18499, Stop: 18783, Start Num: 16

Candidate Starts for VroomVroom_22:

(15, 18496), (Start: 16 @18499 has 1 MA's), (Start: 22 @18514 has 1 MA's), (35, 18586), (50, 18715),

Gene: Warda_22 Start: 19412, Stop: 19681, Start Num: 18

Candidate Starts for Warda_22:

(8, 19370), (Start: 18 @19412 has 13 MA's), (53, 19637),

Gene: Welcome_64 Start: 35998, Stop: 36276, Start Num: 25

Candidate Starts for Welcome_64:

(Start: 25 @35998 has 9 MA's), (29, 36019),

Gene: Yang_22 Start: 19406, Stop: 19678, Start Num: 18

Candidate Starts for Yang_22:

(8, 19364), (Start: 18 @19406 has 13 MA's), (35, 19484), (50, 19613), (53, 19634),

Gene: YesChef_22 Start: 19421, Stop: 19690, Start Num: 18

Candidate Starts for YesChef_22:

(8, 19379), (Start: 18 @19421 has 13 MA's), (53, 19646),

Gene: Yuma_62 Start: 35567, Stop: 35845, Start Num: 25

Candidate Starts for Yuma_62:

(Start: 25 @35567 has 9 MA's), (29, 35588),

Gene: Zeta1847_20 Start: 18641, Stop: 18922, Start Num: 14

Candidate Starts for Zeta1847_20:

(6, 18380), (9, 18620), (Start: 14 @18641 has 3 MA's), (Start: 27 @18677 has 3 MA's), (43, 18797), (49, 18845),