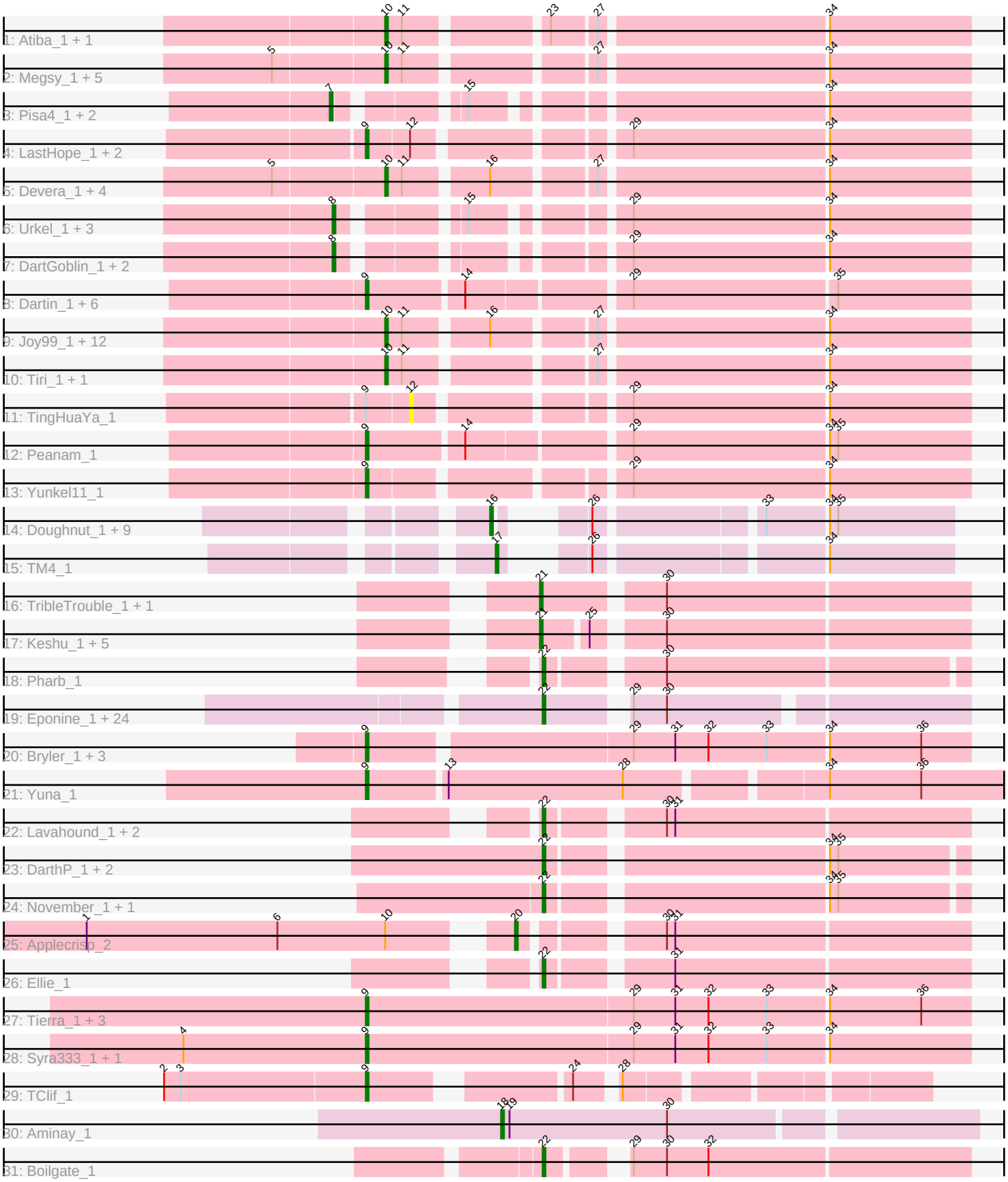
Pham 290980


1: Atiba_1 + 1
2: Megsy_1 + 5
3: Pisa4_1 + 2
4: LastHope_1 + 2
5: Devera_1 + 4
6: Urkel_1 + 3
7: DartGoblin_1 + 2
8: Dartin_1 + 6
9: Joy99_1 + 12
10: Tiri_1 + 1
11: TingHuaYa_1
12: Peanam_1
13: Yunkel11_1
14: Doughnut_1 + 9
15: TM4_1
16: TribleTrouble_1 + 1
17: Keshu_1 + 5
18: Pharb_1
19: Eponine_1 + 24
20: Bryler_1 + 3
21: Yuna_1
22: Lavahound_1 + 2
23: DarthP_1 + 2
24: November_1 + 1
25: Applecrisp_2
26: Ellie_1
27: Tierra_1 + 3
28: Syra333_1 + 1
29: TClif_1
30: Aminay_1
31: Boilgate_1

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 290980 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290980 has 120 members, 15 are drafts.

Phages represented in each track:
• Track 1 : Atiba_1, Tachez_1
• Track 2 : Megsy_1, Murucutumbu_1, Prithvi_1, LindNT_1, TreyKay_1, TaiwanKao_1
• Track 3 : Pisa4_1, Pisa1_1, Bern_1
• Track 4 : LastHope_1, Guanica15_1, Efra2_1
• Track 5 : Devera_1, LaterM_1, Dole_1, Illumine_1, Stinson_1
• Track 6 : Urkel_1, DrHayes_1, Anma_1, SamuelLPlaqson_1
• Track 7 : DartGoblin_1, Bella96_1, TiniBug_1
• Track 8 : Dartin_1, McMater_1, Validus_1, Shaobing_1, Niklas_1, Richo_1, Chavito_1
• Track 9 : Joy99_1, Ganymede_1, Clipper_1, CallaLilly_1, Pokerus_1, MacKat_1, CheetoDust_1, QuincyRose_1, YoureAdopted_1, MeaningOfLife_1, BaghaKamala_1, Mynx_1, Zavala_1
• Track 10 : Tiri_1, Adonis_1
• Track 11 : TingHuaYa_1
• Track 12 : Peanam_1
• Track 13 : Yunkel11_1
• Track 14 : Doughnut_1, Strobilo_1, DismalFunk_1, Findley_1, ZoeJ_1, BoostSeason_1, Milly_1, Mufasa_1, DismalStressor_1, Marcoliusprime_1
• Track 15 : TM4_1
• Track 16 : TribleTrouble_1, MacnCheese_1
• Track 17 : Keshu_1, TBond007_1, Hurricane_1, ShedlockHolmes_1, Lea83_1, Pixie_1
• Track 18 : Pharb_1
• Track 19 : Eponine_1, DanSyl44_1, Malthus_1, Cheetobro_1, Chancellor_1, Mitti_1, Y10_01, Kraw_1, Bobquesha_1, Reptar3000_1, Wintermute_1, Patt_1, MissDaisy_1, Fionnbharth_1, Qhanda_1, Lebo14_1, Taquito_1, Y2_01, OmniCritical_1, Juliette_1, Slarp_1, JF1_1, SamScheppers_1, Ruthiejr_1, YasnayaPolyana_1
• Track 20 : Bryler_1, Cain_1, Phrank_1, Sunflower1121_1
• Track 21 : Yuna_1
• Track 22 : Lavahound_1, Fefferhead_1, Amgine_1
• Track 23 : DarthP_1, Amohnition_1, Hammy_1
• Track 24 : November_1, Ekdilam_1
• Track 25 : Applecrisp_2
• Track 26 : Ellie_1
• Track 27 : Tierra_1, Unicorn_1, Shadow1_1, PhelpsODU_1
• Track 28 : Syra333_1, Tigress9_1
• Track 29 : TClif_1

• Track 30 : Aminay_1
• Track 31 : Boilgate_1

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

The start number called the most often in the published annotations is 22, it was called in 32 of the 105 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Amgine_1, Amohnition_1, Bobquesha_1, Boilgate_1, Chancellor_1, Cheetobro_1, DanSyl44_1, DarthP_1, Ekdilam_1, Ellie_1, Eponine_1, Fefferhead_1, Fionnbharth_1, Hammy_1, JF1_1, Juliette_1, Kraw_1, Lavahound_1, Lebo14_1, Malthus_1, MissDaisy_1, Mitti_1, November_1, OmniCritical_1, Patt_1, Pharb_1, Qhanda_1, Reptar3000_1, Ruthiejr_1, SamScheppers_1, Slarp_1, Taquito_1, Wintermute_1, Y10_01, Y2_01, YasnayaPolyana_1,

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

Genes that do not have the "Most Annotated" start:
• Adonis_1, Aminay_1, Anma_1, Applecrisp_2, Atiba_1, BaghaKamala_1, Bella96_1, Bern_1, BoostSeason_1, Bryler_1, Cain_1, CallaLilly_1, Chavito_1, CheetoDust_1, Clipper_1, DartGoblin_1, Dartin_1, Devera_1, DismalFunk_1, DismalStressor_1, Dole_1, Doughnut_1, DrHayes_1, Efra2_1, Findley_1, Ganymede_1, Guanica15_1, Hurricane_1, Illumine_1, Joy99_1, Keshu_1, LastHope_1, LaterM_1, Lea83_1, LindNT_1, MacKat_1, MacnCheese_1, Marcoliusprime_1, McMater_1, MeaningOfLife_1, Megsy_1, Milly_1, Mufasa_1, Murucutumbu_1, Mynx_1, Niklas_1, Peanam_1, PhelpsODU_1, Phrank_1, Pisa1_1, Pisa4_1, Pixie_1, Pokerus_1, Prithvi_1, QuincyRose_1, Richo_1, SamuelLPlaqson_1, Shadow1_1, Shaobing_1, ShedlockHolmes_1, Stinson_1, Strobilo_1, Sunflower1121_1, Syra333_1, TBond007_1, TClif_1, TM4_1, Tachez_1, TaiwanKao_1, Tierra_1, Tigress9_1, TingHuaYa_1, TiniBug_1, Tiri_1, TreyKay_1, TribleTrouble_1, Unicorn_1, Urkel_1, Validus_1, YoureAdopted_1, Yuna_1, Yunkel11_1, Zavala_1, ZoeJ_1,

Summary by start number:

Start 7:
• Found in 3 of 120 (2.5%) of genes in pham
• Manual Annotations of this start: 1 of 105
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bern_1 (K1), Pisa1_1 (K1), Pisa4_1 (K1),

Start 8:
• Found in 7 of 120 (5.8%) of genes in pham
• Manual Annotations of this start: 5 of 105
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anma_1 (K1), Bella96_1 (K1), DartGoblin_1 (K1), DrHayes_1 (K1), SamuelLPlaqson_1 (K1), TiniBug_1 (K1), Urkel_1 (K1),

Start 9:
• Found in 25 of 120 (20.8%) of genes in pham
• Manual Annotations of this start: 19 of 105
• Called 96.0% of time when present
• Phage (with cluster) where this start called: Bryler_1 (K6), Cain_1 (K6), Chavito_1 (K1), Dartin_1 (K1), Efra2_1 (K1), Guanica15_1 (K1), LastHope_1 (K1), McMater_1 (K1), Niklas_1 (K1), Peanam_1 (K1), PhelpsODU_1 (K6), Phrank_1 (K6), Richo_1 (K1), Shadow1_1 (K6), Shaobing_1 (K1), Sunflower1121_1 (K6), Syra333_1 (K6), TClif_1 (K6), Tierra_1 (K6), Tigress9_1 (K6), Unicorn_1 (K6), Validus_1 (K1), Yuna_1 (K6), Yunkel11_1 (K1),

Start 10:
• Found in 29 of 120 (24.2%) of genes in pham
• Manual Annotations of this start: 27 of 105
• Called 96.6% of time when present
• Phage (with cluster) where this start called: Adonis_1 (K1), Atiba_1 (K1), BaghaKamala_1 (K1), CallaLilly_1 (K1), CheetoDust_1 (K1), Clipper_1 (K1), Devera_1 (K1), Dole_1 (K1), Ganymede_1 (K1), Illumine_1 (K1), Joy99_1 (K1), LaterM_1 (K1), LindNT_1 (K1), MacKat_1 (K1), MeaningOfLife_1 (K1), Megsy_1 (K1), Murucutumbu_1 (K1), Mynx_1 (K1), Pokerus_1 (K1), Prithvi_1 (K1), QuincyRose_1 (K1), Stinson_1 (K1), Tachez_1 (K1), TaiwanKao_1 (K1), Tiri_1 (K1), TreyKay_1 (K1), YoureAdopted_1 (K1), Zavala_1 (K1),

Start 12:
• Found in 4 of 120 (3.3%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present
• Phage (with cluster) where this start called: TingHuaYa_1 (K1),

Start 16:
• Found in 28 of 120 (23.3%) of genes in pham
• Manual Annotations of this start: 10 of 105
• Called 35.7% of time when present
• Phage (with cluster) where this start called: BoostSeason_1 (K2), DismalFunk_1 (K2), DismalStressor_1 (K2), Doughnut_1 (K2), Findley_1 (K2), Marcoliusprime_1 (K2), Milly_1 (K2), Mufasa_1 (K2), Strobilo_1 (K2), ZoeJ_1 (K2),

Start 17:
• Found in 1 of 120 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 105
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TM4_1 (K2),

Start 18:
• Found in 1 of 120 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 105
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aminay_1 (K7),

Start 20:
• Found in 1 of 120 (0.8%) of genes in pham
• Manual Annotations of this start: 1 of 105

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Applecrisp_2 (K6),

Start 21:
• Found in 8 of 120 (6.7%) of genes in pham
• Manual Annotations of this start: 8 of 105
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hurricane_1 (K3), Keshu_1 (K3), Lea83_1 (K3), MacnCheese_1 (K3), Pixie_1 (K3), ShedlockHolmes_1 (K3), TBond007_1 (K3), TribleTrouble_1 (K3),

Start 22:
• Found in 36 of 120 (30.0%) of genes in pham
• Manual Annotations of this start: 32 of 105
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amgine_1 (K6), Amohnition_1 (K6), Bobquesha_1 (K4), Boilgate_1 (K8), Chancellor_1 (K4), Cheetobro_1 (K4), DanSyl44_1 (K4), DarthP_1 (K6), Ekdilam_1 (K6), Ellie_1 (K6), Eponine_1 (K4), Fefferhead_1 (K6), Fionnbharth_1 (K4), Hammy_1 (K6), JF1_1 (K4), Juliette_1 (K4), Kraw_1 (K4), Lavahound_1 (K6), Lebo14_1 (K4), Malthus_1 (K4), MissDaisy_1 (K4), Mitti_1 (K4), November_1 (K6), OmniCritical_1 (K4), Patt_1 (K4), Pharb_1 (K3), Qhanda_1 (K4), Reptar3000_1 (K4), Ruthiejr_1 (K4), SamScheppers_1 (K4), Slarp_1 (K4), Taquito_1 (K4), Wintermute_1 (K4), Y10_01 (K4), Y2_01 (K4), YasnayaPolyana_1 (K4),

Summary by clusters:

There are 7 clusters represented in this pham: K3, K2, K1, K7, K6, K4, K8,

Info for manual annotations of cluster K1:
•Start number 7 was manually annotated 1 time for cluster K1.
•Start number 8 was manually annotated 5 times for cluster K1.
•Start number 9 was manually annotated 8 times for cluster K1.
•Start number 10 was manually annotated 27 times for cluster K1.

Info for manual annotations of cluster K2:
•Start number 16 was manually annotated 10 times for cluster K2.
•Start number 17 was manually annotated 1 time for cluster K2.

Info for manual annotations of cluster K3:
•Start number 21 was manually annotated 8 times for cluster K3.
•Start number 22 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster K4:
•Start number 22 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K6:
•Start number 9 was manually annotated 11 times for cluster K6.
•Start number 20 was manually annotated 1 time for cluster K6.
•Start number 22 was manually annotated 8 times for cluster K6.

Info for manual annotations of cluster K7:
•Start number 18 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:
•Start number 22 was manually annotated 1 time for cluster K8.

Gene Information:

Gene: Adonis_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Adonis_1:
(Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Amgine_1 Start: 52, Stop: 195, Start Num: 22
Candidate Starts for Amgine_1:
(Start: 22 @52 has 32 MA's), (30, 88), (31, 91),

Gene: Aminay_1 Start: 67, Stop: 231, Start Num: 18
Candidate Starts for Aminay_1:
(Start: 18 @67 has 1 MA's), (19, 70), (30, 127),

Gene: Amohnition_1 Start: 70, Stop: 210, Start Num: 22
Candidate Starts for Amohnition_1:
(Start: 22 @70 has 32 MA's), (34, 163), (35, 166),

Gene: Anma_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for Anma_1:
(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Applecrisp_2 Start: 376, Stop: 525, Start Num: 20
Candidate Starts for Applecrisp_2:
(1, 235), (6, 304), (Start: 10 @343 has 27 MA's), (Start: 20 @376 has 1 MA's), (30, 418), (31, 421),

Gene: Atiba_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Atiba_1:
(Start: 10 @79 has 27 MA's), (11, 85), (23, 130), (27, 145), (34, 223),

Gene: BaghaKamala_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for BaghaKamala_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Bella96_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for Bella96_1:
(Start: 8 @61 has 5 MA's), (29, 142), (34, 211),

Gene: Bern_1 Start: 60, Stop: 260, Start Num: 7
Candidate Starts for Bern_1:
(Start: 7 @60 has 1 MA's), (15, 96), (34, 210),

Gene: Bobquesha_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Bobquesha_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Boilgate_1 Start: 62, Stop: 202, Start Num: 22

Candidate Starts for Boilgate_1:
(Start: 22 @62 has 32 MA's), (29, 83), (30, 95), (32, 110),

Gene: BoostSeason_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for BoostSeason_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Bryler_1 Start: 114, Stop: 323, Start Num: 9
Candidate Starts for Bryler_1:
(Start: 9 @114 has 19 MA's), (29, 204), (31, 219), (32, 231), (33, 252), (34, 273), (36, 306),

Gene: Cain_1 Start: 114, Stop: 323, Start Num: 9
Candidate Starts for Cain_1:
(Start: 9 @114 has 19 MA's), (29, 204), (31, 219), (32, 231), (33, 252), (34, 273), (36, 306),

Gene: CallaLilly_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for CallaLilly_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Chancellor_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Chancellor_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Chavito_1 Start: 71, Stop: 280, Start Num: 9
Candidate Starts for Chavito_1:
(Start: 9 @71 has 19 MA's), (14, 104), (29, 158), (35, 230),

Gene: CheetoDust_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for CheetoDust_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Cheetobro_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Cheetobro_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Clipper_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Clipper_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: DanSyl44_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for DanSyl44_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: DartGoblin_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for DartGoblin_1:
(Start: 8 @61 has 5 MA's), (29, 142), (34, 211),

Gene: DarthP_1 Start: 70, Stop: 210, Start Num: 22
Candidate Starts for DarthP_1:
(Start: 22 @70 has 32 MA's), (34, 163), (35, 166),

Gene: Dartin_1 Start: 72, Stop: 278, Start Num: 9
Candidate Starts for Dartin_1:

(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: Devera_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Devera_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: DismalFunk_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for DismalFunk_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: DismalStressor_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for DismalStressor_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Dole_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Dole_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Doughnut_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for Doughnut_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: DrHayes_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for DrHayes_1:
(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Efra2_1 Start: 72, Stop: 272, Start Num: 9
Candidate Starts for Efra2_1:
(Start: 9 @72 has 19 MA's), (12, 87), (29, 153), (34, 222),

Gene: Ekdilam_1 Start: 69, Stop: 209, Start Num: 22
Candidate Starts for Ekdilam_1:
(Start: 22 @69 has 32 MA's), (34, 162), (35, 165),

Gene: Ellie_1 Start: 52, Stop: 195, Start Num: 22
Candidate Starts for Ellie_1:
(Start: 22 @52 has 32 MA's), (31, 91),

Gene: Eponine_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Eponine_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Fefferhead_1 Start: 52, Stop: 195, Start Num: 22
Candidate Starts for Fefferhead_1:
(Start: 22 @52 has 32 MA's), (30, 88), (31, 91),

Gene: Findley_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for Findley_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Fionnbharth_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Fionnbharth_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Ganymede_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Ganymede_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Guanica15_1 Start: 72, Stop: 272, Start Num: 9
Candidate Starts for Guanica15_1:
(Start: 9 @72 has 19 MA's), (12, 87), (29, 153), (34, 222),

Gene: Hammy_1 Start: 70, Stop: 210, Start Num: 22
Candidate Starts for Hammy_1:
(Start: 22 @70 has 32 MA's), (34, 163), (35, 166),

Gene: Hurricane_1 Start: 51, Stop: 194, Start Num: 21
Candidate Starts for Hurricane_1:
(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Illumine_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Illumine_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: JF1_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for JF1_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Joy99_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Joy99_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Juliette_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Juliette_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Keshu_1 Start: 51, Stop: 194, Start Num: 21
Candidate Starts for Keshu_1:
(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Kraw_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Kraw_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: LastHope_1 Start: 71, Stop: 271, Start Num: 9
Candidate Starts for LastHope_1:
(Start: 9 @71 has 19 MA's), (12, 86), (29, 152), (34, 221),

Gene: LaterM_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for LaterM_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Lavahound_1 Start: 52, Stop: 195, Start Num: 22
Candidate Starts for Lavahound_1:
(Start: 22 @52 has 32 MA's), (30, 88), (31, 91),

Gene: Lea83_1 Start: 51, Stop: 194, Start Num: 21
Candidate Starts for Lea83_1:
(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Lebo14_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Lebo14_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: LindNT_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for LindNT_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: MacKat_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for MacKat_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: MacnCheese_1 Start: 51, Stop: 197, Start Num: 21
Candidate Starts for MacnCheese_1:
(Start: 21 @51 has 8 MA's), (30, 90),

Gene: Malthus_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Malthus_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Marcoliusprime_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for Marcoliusprime_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: McMater_1 Start: 72, Stop: 278, Start Num: 9
Candidate Starts for McMater_1:
(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: MeaningOfLife_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for MeaningOfLife_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Megsy_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Megsy_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Milly_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for Milly_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: MissDaisy_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for MissDaisy_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Mitti_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Mitti_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Mufasa_1 Start: 88, Stop: 222, Start Num: 16

Candidate Starts for Mufasa_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Murucutumbu_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Murucutumbu_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Mynx_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Mynx_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Niklas_1 Start: 72, Stop: 278, Start Num: 9
Candidate Starts for Niklas_1:
(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: November_1 Start: 69, Stop: 209, Start Num: 22
Candidate Starts for November_1:
(Start: 22 @69 has 32 MA's), (34, 162), (35, 165),

Gene: OmniCritical_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for OmniCritical_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Patt_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Patt_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Peanam_1 Start: 72, Stop: 278, Start Num: 9
Candidate Starts for Peanam_1:
(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (34, 228), (35, 231),

Gene: Pharb_1 Start: 51, Stop: 191, Start Num: 22
Candidate Starts for Pharb_1:
(Start: 22 @51 has 32 MA's), (30, 87),

Gene: PhelpsODU_1 Start: 115, Stop: 324, Start Num: 9
Candidate Starts for PhelpsODU_1:
(Start: 9 @115 has 19 MA's), (29, 205), (31, 220), (32, 232), (33, 253), (34, 274), (36, 307),

Gene: Phrank_1 Start: 114, Stop: 329, Start Num: 9
Candidate Starts for Phrank_1:
(Start: 9 @114 has 19 MA's), (29, 210), (31, 225), (32, 237), (33, 258), (34, 279), (36, 312),

Gene: Pisa1_1 Start: 60, Stop: 260, Start Num: 7
Candidate Starts for Pisa1_1:
(Start: 7 @60 has 1 MA's), (15, 96), (34, 210),

Gene: Pisa4_1 Start: 60, Stop: 260, Start Num: 7
Candidate Starts for Pisa4_1:
(Start: 7 @60 has 1 MA's), (15, 96), (34, 210),

Gene: Pixie_1 Start: 51, Stop: 194, Start Num: 21
Candidate Starts for Pixie_1:

(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Pokerus_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Pokerus_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Prithvi_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Prithvi_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Qhanda_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Qhanda_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: QuincyRose_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for QuincyRose_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Reptar3000_1 Start: 116, Stop: 253, Start Num: 22
Candidate Starts for Reptar3000_1:
(Start: 22 @116 has 32 MA's), (29, 140), (30, 152),

Gene: Richo_1 Start: 72, Stop: 278, Start Num: 9
Candidate Starts for Richo_1:
(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: Ruthiejr_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Ruthiejr_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: SamScheppers_1 Start: 116, Stop: 253, Start Num: 22
Candidate Starts for SamScheppers_1:
(Start: 22 @116 has 32 MA's), (29, 140), (30, 152),

Gene: SamuelLPlaqson_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for SamuelLPlaqson_1:
(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Shadow1_1 Start: 115, Stop: 330, Start Num: 9
Candidate Starts for Shadow1_1:
(Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280), (36, 313),

Gene: Shaobing_1 Start: 72, Stop: 278, Start Num: 9
Candidate Starts for Shaobing_1:
(Start: 9 @72 has 19 MA's), (14, 105), (29, 159), (35, 231),

Gene: ShedlockHolmes_1 Start: 51, Stop: 194, Start Num: 21
Candidate Starts for ShedlockHolmes_1:
(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: Slarp_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Slarp_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Stinson_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Stinson_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Strobilo_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for Strobilo_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),

Gene: Sunflower1121_1 Start: 114, Stop: 329, Start Num: 9
Candidate Starts for Sunflower1121_1:
(Start: 9 @114 has 19 MA's), (29, 210), (31, 225), (32, 237), (33, 258), (34, 279), (36, 312),

Gene: Syra333_1 Start: 115, Stop: 330, Start Num: 9
Candidate Starts for Syra333_1:
(4, 49), (Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280),

Gene: TBond007_1 Start: 51, Stop: 194, Start Num: 21
Candidate Starts for TBond007_1:
(Start: 21 @51 has 8 MA's), (25, 66), (30, 87),

Gene: TClif_1 Start: 73, Stop: 243, Start Num: 9
Candidate Starts for TClif_1:
(2, 1), (3, 7), (Start: 9 @73 has 19 MA's), (24, 133), (28, 145),

Gene: TM4_1 Start: 100, Stop: 234, Start Num: 17
Candidate Starts for TM4_1:
(Start: 17 @100 has 1 MA's), (26, 115), (34, 190),

Gene: Tachez_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Tachez_1:
(Start: 10 @79 has 27 MA's), (11, 85), (23, 130), (27, 145), (34, 223),

Gene: TaiwanKao_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for TaiwanKao_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: Taquito_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Taquito_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Tierra_1 Start: 115, Stop: 330, Start Num: 9
Candidate Starts for Tierra_1:
(Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280), (36, 313),

Gene: Tigress9_1 Start: 115, Stop: 330, Start Num: 9
Candidate Starts for Tigress9_1:
(4, 49), (Start: 9 @115 has 19 MA's), (29, 211), (31, 226), (32, 238), (33, 259), (34, 280),

Gene: TingHuaYa_1 Start: 86, Stop: 271, Start Num: 12
Candidate Starts for TingHuaYa_1:
(Start: 9 @71 has 19 MA's), (12, 86), (29, 152), (34, 221),

Gene: TiniBug_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for TiniBug_1:
(Start: 8 @61 has 5 MA's), (29, 142), (34, 211),

Gene: Tiri_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Tiri_1:
(Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: TreyKay_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for TreyKay_1:
(5, 40), (Start: 10 @79 has 27 MA's), (11, 85), (27, 145), (34, 223),

Gene: TribleTrouble_1 Start: 51, Stop: 197, Start Num: 21
Candidate Starts for TribleTrouble_1:
(Start: 21 @51 has 8 MA's), (30, 90),

Gene: Unicorn_1 Start: 115, Stop: 324, Start Num: 9
Candidate Starts for Unicorn_1:
(Start: 9 @115 has 19 MA's), (29, 205), (31, 220), (32, 232), (33, 253), (34, 274), (36, 307),

Gene: Urkel_1 Start: 61, Stop: 261, Start Num: 8
Candidate Starts for Urkel_1:
(Start: 8 @61 has 5 MA's), (15, 97), (29, 142), (34, 211),

Gene: Validus_1 Start: 71, Stop: 280, Start Num: 9
Candidate Starts for Validus_1:
(Start: 9 @71 has 19 MA's), (14, 104), (29, 158), (35, 230),

Gene: Wintermute_1 Start: 116, Stop: 253, Start Num: 22
Candidate Starts for Wintermute_1:
(Start: 22 @116 has 32 MA's), (29, 140), (30, 152),

Gene: Y10_01 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Y10_01:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: Y2_01 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for Y2_01:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: YasnayaPolyana_1 Start: 117, Stop: 254, Start Num: 22
Candidate Starts for YasnayaPolyana_1:
(Start: 22 @117 has 32 MA's), (29, 141), (30, 153),

Gene: YoureAdopted_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for YoureAdopted_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: Yuna_1 Start: 74, Stop: 316, Start Num: 9
Candidate Starts for Yuna_1:
(Start: 9 @74 has 19 MA's), (13, 101), (28, 164), (34, 230), (36, 263),

Gene: Yunkel11_1 Start: 72, Stop: 272, Start Num: 9

Candidate Starts for Yunkel11_1:
(Start: 9 @72 has 19 MA's), (29, 153), (34, 222),

Gene: Zavala_1 Start: 79, Stop: 273, Start Num: 10
Candidate Starts for Zavala_1:
(Start: 10 @79 has 27 MA's), (11, 85), (Start: 16 @112 has 10 MA's), (27, 145), (34, 223),

Gene: ZoeJ_1 Start: 88, Stop: 222, Start Num: 16
Candidate Starts for ZoeJ_1:
(Start: 16 @88 has 10 MA's), (26, 103), (33, 157), (34, 178), (35, 181),