Pham 347464


1: Michkear_26
2: Flutur_22
3: Mudpuppy_22 + 12
4: Cassia_22 + 1
5: Turab_22 + 3
6: Ascela_22 + 1
7: Nitro_22
8: Tian_22 + 1
9: MissSwiss_21 + 1
10: Schaffner_22
11: JuneStar_22
12: Yang_22
13: Pixelle_22
14: IttyBittyPiggy_21
15: Lizalica_22
16: DrManhattan_21 + 1
17: Tallboi_22
18: FiveHead_25 + 2
19: ShakeItOph_22 + 2
20: VroomVroom_22
21: Emotion_22
22: AceofSpades_22
23: LadyAstra_22
24: Sabourin_22 + 5
25: Gumpizza_22 + 1
26: Stuu_22
27: Ashes_22 + 3
28: Halsey_22
29: Giorgio_22
30: RockScotty_22
31: Exile_22
32: Soondubu_22
33: AinMach_21
34: Hortus1_55 + 1
35: Alleb_56 + 2
36: Platte_55
37: Jacko_59
38: Casablancas_64 + 16
39: Mistmere_56
40: GrimEater_20 + 1
41: Elfy_19
42: LisoBros_22
43: CallinAllBarbz_19
44: BaileyBlu_20

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 347464 Report

This analysis was run 11/14/26 on database version 672.

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 347464 has 97 members, 14 are drafts.

Phages represented in each track:
- Track 1 : Michkear_26
- Track 2 : Flutur_22
- Track 3 : Mudpuppy_22, Cyan_22, Kaylissa_22, Tutumahutu_22, AGrandiflora_23, Tbone_22, Powerpuff_22, Warda_22, JohnDoe_22, YesChef_22, Lego_22, Joemato_22, Simpson_24
- 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, PandaPo_21
- Track 10 : Schaffner_22
- Track 11 : JuneStar_22
- Track 12 : Yang_22
- Track 13 : Pixelle_22
- Track 14 : IttyBittyPiggy_21
- Track 15 : Lizalica_22
- Track 16 : DrManhattan_21, Adolin_21
- Track 17 : Tallboi_22
- Track 18 : FiveHead_25, Origami_22, JohnThicc_22
- Track 19 : ShakeItOph_22, JasmineDragon_22, MiniMommy_22
- Track 20 : VroomVroom_22
- Track 21 : Emotion_22
- Track 22 : AceofSpades_22
- Track 23 : LadyAstra_22
- Track 24 : Sabourin_22, Sooty_22, Donkey_22, Kalimba_22, Cappuccino_22, Gambol_22
- Track 25 : Gumpizza_22, Mysterium_22
- Track 26 : Stuu_22
- Track 27 : Ashes_22, SpecialK_22, Moss_22, Beaupre_22
- Track 28 : Halsey_22
- Track 29 : Giorgio_22
- Track 30 : RockScotty_22

• Track 31 : Exile_22
• Track 32 : Soondubu_22
• Track 33 : AinMach_21
• Track 34 : Hortus1_55, OlinDD_55
• Track 35 : Alleb_56, Tandem_55, Pioneer3_55
• Track 36 : Platte_55
• Track 37 : Jacko_59
• Track 38 : Casablancas_64, DustyDino_66, HollowPurple_64, Yuma_62, ASegato_62, Erenyeager_63, SteakFry_65, Necrophoxinus_65, RunningBrook_64, Issa7_62, Fork_59, Welcome_64, Deschain_64, Shroomer_67, Lyell_63, StevieWelch_63, Musetta_63
• Track 39 : Mistmere_56
• Track 40 : GrimEater_20, Jankie_20
• Track 41 : Elfy_19
• Track 42 : LisoBros_22
• Track 43 : CallinAllBarbz_19
• Track 44 : BaileyBlu_20

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

The start number called the most often in the published annotations is 27, it was called in 27 of the 83 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, Michkear_26, MissSwiss_21, Mudpuppy_22, Nitro_22, PandaPo_21, 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, AceofSpades_22, AinMach_21, Alleb_56, Ascela_22, Ashes_22, BaileyBlu_20, Beaupre_22, CallinAllBarbz_19, Cappuccino_22, Casablancas_64, Deschain_64, Donkey_22, DustyDino_66, Elfy_19, Emotion_22, Erenyeager_63, Exile_22, FiveHead_25, Fork_59, Gambol_22, Giorgio_22, GrimEater_20, Gumpizza_22, Halsey_22, HollowPurple_64, Hortus1_55, Issa7_62, Iter_22, Jacko_59, Jankie_20, JasmineDragon_22, JohnThicc_22, Kalimba_22, LadyAstra_22, LisoBros_22, Lyell_63, MiniMommy_22, Mistmere_56, Moss_22, Musetta_63, Mysterium_22, Necrophoxinus_65, OlinDD_55, Origami_22, Pioneer3_55, Platte_55, RockScotty_22, RunningBrook_64, Sabourin_22, ShakeItOph_22, Shroomer_67, Soondubu_22, Sooty_22, SpecialK_22, SteakFry_65, StevieWelch_63, Stuu_22, Tallboi_22, Tandem_55, VroomVroom_22, Welcome_64, Yuma_62,

Summary by start number:

Start 18:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CallinAllBarbz_19 (FP),

Start 19:
• Found in 16 of 97 (16.5%) of genes in pham
• Manual Annotations of this start: 16 of 83
• 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 20:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Emotion_22 (AZ4),

Start 23:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 5 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BaileyBlu_20 (FP), Elfy_19 (FP), GrimEater_20 (FP), Jankie_20 (FP), LisoBros_22 (FP),

Start 26:
• Found in 10 of 97 (10.3%) of genes in pham
• Manual Annotations of this start: 2 of 83
• Called 20.0% of time when present
• Phage (with cluster) where this start called: LadyAstra_22 (AZ4), VroomVroom_22 (AZ4),

Start 27:
• Found in 34 of 97 (35.1%) of genes in pham
• Manual Annotations of this start: 27 of 83
• 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), Michkear_26 (AZ), MissSwiss_21 (AZ1), Mudpuppy_22 (AZ1), Nitro_22 (AZ1), PandaPo_21 (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 28:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 83

• Called 100.0% of time when present
• Phage (with cluster) where this start called: Ascela_22 (AZ1), Iter_22 (AZ1),

Start 29:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tallboi_22 (AZ1),

Start 30:
• Found in 10 of 97 (10.3%) of genes in pham
• Manual Annotations of this start: 5 of 83
• Called 60.0% of time when present
• Phage (with cluster) where this start called: FiveHead_25 (AZ4), JasmineDragon_22 (AZ4), JohnThicc_22 (AZ4), MiniMommy_22 (AZ4), Origami_22 (AZ4), ShakeItOph_22 (AZ4),

Start 31:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Exile_22 (AZ6), Soondubu_22 (AZ6),

Start 32:
• Found in 3 of 97 (3.1%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: AinMach_21 (AZ7),

Start 33:
• Found in 18 of 97 (18.6%) of genes in pham
• Manual Annotations of this start: 15 of 83
• Called 94.4% of time when present
• Phage (with cluster) where this start called: ASegato_62 (ED2), Casablancas_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_67 (ED2), SteakFry_65 (ED2), StevieWelch_63 (ED2), Welcome_64 (ED2), Yuma_62 (ED2),

Start 35:
• Found in 7 of 97 (7.2%) of genes in pham
• Manual Annotations of this start: 6 of 83
• 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 38:
• Found in 8 of 97 (8.2%) of genes in pham
• Manual Annotations of this start: 1 of 83
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Mistmere_56 (ED3), Platte_55 (ED1),

Start 43:

• Found in 16 of 97 (16.5%) of genes in pham
• No Manual Annotations of this start.
• Called 6.2% of time when present
• Phage (with cluster) where this start called: AceofSpades_22 (AZ4),

Summary by clusters:

There are 10 clusters represented in this pham: FP, ED2, ED3, ED1, AZ1, AZ, AZ4, AZ5, AZ6, AZ7,

Info for manual annotations of cluster AZ1:
•Start number 27 was manually annotated 27 times for cluster AZ1.
•Start number 28 was manually annotated 2 times for cluster AZ1.
•Start number 29 was manually annotated 1 time for cluster AZ1.

Info for manual annotations of cluster AZ4:
•Start number 20 was manually annotated 1 time for cluster AZ4.
•Start number 26 was manually annotated 2 times for cluster AZ4.
•Start number 30 was manually annotated 5 times for cluster AZ4.

Info for manual annotations of cluster AZ5:
•Start number 19 was manually annotated 16 times for cluster AZ5.

Info for manual annotations of cluster AZ6:
•Start number 31 was manually annotated 1 time for cluster AZ6.

Info for manual annotations of cluster ED1:
•Start number 35 was manually annotated 6 times for cluster ED1.
•Start number 38 was manually annotated 1 time for cluster ED1.

Info for manual annotations of cluster ED2:
•Start number 33 was manually annotated 15 times for cluster ED2.

Info for manual annotations of cluster FP:
•Start number 18 was manually annotated 1 time for cluster FP.
•Start number 23 was manually annotated 5 times for cluster FP.

Gene Information:

Gene: AEgle_22 Start: 19269, Stop: 19538, Start Num: 27
Candidate Starts for AEgle_22:
(Start: 27 @19269 has 27 MA's), (44, 19350), (48, 19383), (57, 19473), (59, 19494),

Gene: AGrandiflora_23 Start: 19367, Stop: 19636, Start Num: 27
Candidate Starts for AGrandiflora_23:
(17, 19325), (Start: 27 @19367 has 27 MA's), (59, 19592),

Gene: ASegato_62 Start: 35643, Stop: 35921, Start Num: 33

Candidate Starts for ASegato_62:
(Start: 33 @35643 has 15 MA's), (39, 35664),

Gene: AceofSpades_22 Start: 18574, Stop: 18771, Start Num: 43
Candidate Starts for AceofSpades_22:
(24, 18484), (Start: 26 @18487 has 2 MA's), (Start: 30 @18502 has 5 MA's), (43, 18574), (55, 18688), (57, 18703), (62, 18742),

Gene: Adolin_21 Start: 17721, Stop: 17990, Start Num: 27
Candidate Starts for Adolin_21:
(21, 17703), (Start: 27 @17721 has 27 MA's), (48, 17838), (59, 17949), (61, 17961),

Gene: Adumb2043_22 Start: 19268, Stop: 19537, Start Num: 27
Candidate Starts for Adumb2043_22:
(Start: 27 @19268 has 27 MA's), (44, 19349), (48, 19382), (57, 19472), (59, 19493),

Gene: AinMach_21 Start: 18975, Stop: 19241, Start Num: 32
Candidate Starts for AinMach_21:
(25, 18963), (32, 18975),

Gene: Alleb_56 Start: 35613, Stop: 35867, Start Num: 35
Candidate Starts for Alleb_56:
(14, 35481), (Start: 35 @35613 has 6 MA's), (Start: 38 @35622 has 1 MA's), (41, 35646), (46, 35685), (51, 35742), (63, 35844),

Gene: Amploria_22 Start: 19268, Stop: 19537, Start Num: 27
Candidate Starts for Amploria_22:
(Start: 27 @19268 has 27 MA's), (44, 19349), (48, 19382), (57, 19472), (59, 19493),

Gene: Amyev_22 Start: 19659, Stop: 19928, Start Num: 27
Candidate Starts for Amyev_22:
(Start: 27 @19659 has 27 MA's), (44, 19740), (57, 19863),

Gene: Ascela_22 Start: 19279, Stop: 19548, Start Num: 28
Candidate Starts for Ascela_22:
(Start: 28 @19279 has 2 MA's), (48, 19393), (54, 19456),

Gene: Ashes_22 Start: 17953, Stop: 18252, Start Num: 19
Candidate Starts for Ashes_22:
(Start: 19 @17953 has 16 MA's), (42, 18046), (44, 18064), (57, 18187),

Gene: BaileyBlu_20 Start: 17646, Stop: 17921, Start Num: 23
Candidate Starts for BaileyBlu_20:
(Start: 23 @17646 has 5 MA's), (34, 17667), (40, 17694), (42, 17715), (43, 17727), (47, 17757), (61, 17889),

Gene: Beaupre_22 Start: 17954, Stop: 18253, Start Num: 19
Candidate Starts for Beaupre_22:
(Start: 19 @17954 has 16 MA's), (42, 18047), (44, 18065), (57, 18188),

Gene: CallinAllBarbz_19 Start: 17627, Stop: 17926, Start Num: 18
Candidate Starts for CallinAllBarbz_19:

(Start: 18 @17627 has 1 MA's), (Start: 30 @17660 has 5 MA's), (37, 17678), (40, 17696), (42, 17717), (43, 17729),

Gene: Cappuccino_22 Start: 17864, Stop: 18163, Start Num: 19
Candidate Starts for Cappuccino_22:
(Start: 19 @17864 has 16 MA's), (42, 17957), (44, 17975), (53, 18050), (57, 18098),

Gene: Casablancas_64 Start: 35383, Stop: 35661, Start Num: 33
Candidate Starts for Casablancas_64:
(Start: 33 @35383 has 15 MA's), (39, 35404),

Gene: Cassia_22 Start: 19707, Stop: 19979, Start Num: 27
Candidate Starts for Cassia_22:
(Start: 27 @19707 has 27 MA's), (43, 19785), (54, 19887), (57, 19914), (59, 19935),

Gene: Cyan_22 Start: 19415, Stop: 19684, Start Num: 27
Candidate Starts for Cyan_22:
(17, 19373), (Start: 27 @19415 has 27 MA's), (59, 19640),

Gene: Deschain_64 Start: 36047, Stop: 36325, Start Num: 33
Candidate Starts for Deschain_64:
(Start: 33 @36047 has 15 MA's), (39, 36068),

Gene: Donkey_22 Start: 17864, Stop: 18163, Start Num: 19
Candidate Starts for Donkey_22:
(Start: 19 @17864 has 16 MA's), (42, 17957), (44, 17975), (53, 18050), (57, 18098),

Gene: DrManhattan_21 Start: 17711, Stop: 17980, Start Num: 27
Candidate Starts for DrManhattan_21:
(21, 17693), (Start: 27 @17711 has 27 MA's), (48, 17828), (59, 17939), (61, 17951),

Gene: DustyDino_66 Start: 36241, Stop: 36519, Start Num: 33
Candidate Starts for DustyDino_66:
(Start: 33 @36241 has 15 MA's), (39, 36262),

Gene: Elfy_19 Start: 17633, Stop: 17914, Start Num: 23
Candidate Starts for Elfy_19:
(13, 17498), (15, 17567), (Start: 23 @17633 has 5 MA's), (36, 17669), (42, 17714), (44, 17732), (45, 17735),

Gene: Emotion_22 Start: 19071, Stop: 19367, Start Num: 20
Candidate Starts for Emotion_22:
(1, 18297), (5, 18567), (6, 18594), (10, 18744), (11, 18771), (Start: 20 @19071 has 1 MA's), (22, 19080), (Start: 26 @19086 has 2 MA's), (57, 19299), (58, 19314),

Gene: Erenyeager_63 Start: 35633, Stop: 35911, Start Num: 33
Candidate Starts for Erenyeager_63:
(Start: 33 @35633 has 15 MA's), (39, 35654),

Gene: Exile_22 Start: 21578, Stop: 21841, Start Num: 31
Candidate Starts for Exile_22:
(Start: 31 @21578 has 1 MA's), (64, 21833),

Gene: FiveHead_25 Start: 18510, Stop: 18779, Start Num: 30
Candidate Starts for FiveHead_25:
(Start: 26 @18495 has 2 MA's), (Start: 30 @18510 has 5 MA's), (43, 18582), (57, 18711),

Gene: Flutur_22 Start: 19647, Stop: 19916, Start Num: 27
Candidate Starts for Flutur_22:
(17, 19605), (Start: 27 @19647 has 27 MA's), (59, 19872),

Gene: Fork_59 Start: 35293, Stop: 35571, Start Num: 33
Candidate Starts for Fork_59:
(Start: 33 @35293 has 15 MA's), (39, 35314),

Gene: Gambol_22 Start: 17864, Stop: 18163, Start Num: 19
Candidate Starts for Gambol_22:
(Start: 19 @17864 has 16 MA's), (42, 17957), (44, 17975), (53, 18050), (57, 18098),

Gene: Giorgio_22 Start: 17961, Stop: 18260, Start Num: 19
Candidate Starts for Giorgio_22:
(2, 17265), (3, 17319), (4, 17460), (7, 17586), (8, 17592), (Start: 19 @17961 has 16 MA's), (42, 18054), (44, 18072), (53, 18147), (57, 18195),

Gene: GrimEater_20 Start: 17871, Stop: 18206, Start Num: 23
Candidate Starts for GrimEater_20:
(Start: 23 @17871 has 5 MA's), (40, 17925), (42, 17946), (43, 17958),

Gene: Gumpizza_22 Start: 17954, Stop: 18253, Start Num: 19
Candidate Starts for Gumpizza_22:
(Start: 19 @17954 has 16 MA's), (42, 18047), (44, 18065), (53, 18140), (57, 18188),

Gene: Halsey_22 Start: 17958, Stop: 18257, Start Num: 19
Candidate Starts for Halsey_22:
(Start: 19 @17958 has 16 MA's), (42, 18051), (44, 18069), (57, 18192),

Gene: HollowPurple_64 Start: 35849, Stop: 36127, Start Num: 33
Candidate Starts for HollowPurple_64:
(Start: 33 @35849 has 15 MA's), (39, 35870),

Gene: Hortus1_55 Start: 35603, Stop: 35857, Start Num: 35
Candidate Starts for Hortus1_55:
(14, 35471), (Start: 35 @35603 has 6 MA's), (Start: 38 @35612 has 1 MA's), (41, 35636), (46, 35675), (51, 35732), (63, 35834),

Gene: Issa7_62 Start: 35297, Stop: 35575, Start Num: 33
Candidate Starts for Issa7_62:
(Start: 33 @35297 has 15 MA's), (39, 35318),

Gene: Iter_22 Start: 19279, Stop: 19548, Start Num: 28
Candidate Starts for Iter_22:
(Start: 28 @19279 has 2 MA's), (48, 19393), (54, 19456),

Gene: IttyBittyPiggy_21 Start: 17803, Stop: 18075, Start Num: 27
Candidate Starts for IttyBittyPiggy_21:
(Start: 27 @17803 has 27 MA's),

Gene: Jacko_59 Start: 34558, Stop: 34809, Start Num: 35
Candidate Starts for Jacko_59:
(Start: 35 @34558 has 6 MA's), (Start: 38 @34567 has 1 MA's), (52, 34693), (53, 34699),

Gene: Jankie_20 Start: 17870, Stop: 18205, Start Num: 23
Candidate Starts for Jankie_20:
(Start: 23 @17870 has 5 MA's), (40, 17924), (42, 17945), (43, 17957),

Gene: JasmineDragon_22 Start: 18506, Stop: 18772, Start Num: 30
Candidate Starts for JasmineDragon_22:
(Start: 26 @18491 has 2 MA's), (Start: 30 @18506 has 5 MA's), (43, 18578), (53, 18659), (57, 18707),

Gene: Joemato_22 Start: 19415, Stop: 19684, Start Num: 27
Candidate Starts for Joemato_22:
(17, 19373), (Start: 27 @19415 has 27 MA's), (59, 19640),

Gene: JohnDoe_22 Start: 19410, Stop: 19679, Start Num: 27
Candidate Starts for JohnDoe_22:
(17, 19368), (Start: 27 @19410 has 27 MA's), (59, 19635),

Gene: JohnThicc_22 Start: 18510, Stop: 18779, Start Num: 30
Candidate Starts for JohnThicc_22:
(Start: 26 @18495 has 2 MA's), (Start: 30 @18510 has 5 MA's), (43, 18582), (57, 18711),

Gene: JuneStar_22 Start: 20113, Stop: 20385, Start Num: 27
Candidate Starts for JuneStar_22:
(Start: 27 @20113 has 27 MA's), (57, 20320), (59, 20341),

Gene: Kalimba_22 Start: 17865, Stop: 18164, Start Num: 19
Candidate Starts for Kalimba_22:
(Start: 19 @17865 has 16 MA's), (42, 17958), (44, 17976), (53, 18051), (57, 18099),

Gene: Kaylissa_22 Start: 19416, Stop: 19685, Start Num: 27
Candidate Starts for Kaylissa_22:
(17, 19374), (Start: 27 @19416 has 27 MA's), (59, 19641),

Gene: LadyAstra_22 Start: 18495, Stop: 18779, Start Num: 26
Candidate Starts for LadyAstra_22:
(Start: 26 @18495 has 2 MA's), (Start: 30 @18510 has 5 MA's), (43, 18582), (57, 18711),

Gene: Lego_22 Start: 19370, Stop: 19639, Start Num: 27
Candidate Starts for Lego_22:
(17, 19328), (Start: 27 @19370 has 27 MA's), (59, 19595),

Gene: LisoBros_22 Start: 19925, Stop: 20212, Start Num: 23
Candidate Starts for LisoBros_22:
(Start: 23 @19925 has 5 MA's), (40, 19982), (42, 20003), (49, 20057), (53, 20096), (57, 20144), (59, 20165),

Gene: Lizalica_22 Start: 19400, Stop: 19669, Start Num: 27
Candidate Starts for Lizalica_22:
(17, 19358), (Start: 27 @19400 has 27 MA's), (48, 19514), (59, 19625),

Gene: Lyell_63 Start: 35552, Stop: 35830, Start Num: 33
Candidate Starts for Lyell_63:
(Start: 33 @35552 has 15 MA's), (39, 35573),

Gene: Michkear_26 Start: 21224, Stop: 21493, Start Num: 27
Candidate Starts for Michkear_26:
(Start: 27 @21224 has 27 MA's), (32, 21233), (50, 21356), (54, 21404), (64, 21485),

Gene: MiniMommy_22 Start: 18507, Stop: 18773, Start Num: 30
Candidate Starts for MiniMommy_22:
(Start: 26 @18492 has 2 MA's), (Start: 30 @18507 has 5 MA's), (43, 18579), (53, 18660), (57, 18708),

Gene: MissSwiss_21 Start: 17769, Stop: 18038, Start Num: 27
Candidate Starts for MissSwiss_21:
(21, 17751), (Start: 27 @17769 has 27 MA's), (59, 17997), (61, 18009),

Gene: Mistmere_56 Start: 34447, Stop: 34713, Start Num: 38
Candidate Starts for Mistmere_56:
(16, 34363), (32, 34432), (Start: 33 @34435 has 15 MA's), (Start: 38 @34447 has 1 MA's), (56, 34636),

Gene: Moss_22 Start: 17953, Stop: 18252, Start Num: 19
Candidate Starts for Moss_22:
(Start: 19 @17953 has 16 MA's), (42, 18046), (44, 18064), (57, 18187),

Gene: Mudpuppy_22 Start: 19413, Stop: 19682, Start Num: 27
Candidate Starts for Mudpuppy_22:
(17, 19371), (Start: 27 @19413 has 27 MA's), (59, 19638),

Gene: Musetta_63 Start: 36013, Stop: 36291, Start Num: 33
Candidate Starts for Musetta_63:
(Start: 33 @36013 has 15 MA's), (39, 36034),

Gene: Mysterium_22 Start: 17954, Stop: 18253, Start Num: 19
Candidate Starts for Mysterium_22:
(Start: 19 @17954 has 16 MA's), (42, 18047), (44, 18065), (53, 18140), (57, 18188),

Gene: Necrophoxinus_65 Start: 36247, Stop: 36525, Start Num: 33
Candidate Starts for Necrophoxinus_65:
(Start: 33 @36247 has 15 MA's), (39, 36268),

Gene: Nitro_22 Start: 19269, Stop: 19538, Start Num: 27
Candidate Starts for Nitro_22:
(17, 19227), (Start: 27 @19269 has 27 MA's), (48, 19383), (53, 19425), (57, 19473), (59, 19494),

Gene: OlinDD_55 Start: 35602, Stop: 35856, Start Num: 35
Candidate Starts for OlinDD_55:
(14, 35470), (Start: 35 @35602 has 6 MA's), (Start: 38 @35611 has 1 MA's), (41, 35635), (46, 35674), (51, 35731), (63, 35833),

Gene: Origami_22 Start: 18510, Stop: 18779, Start Num: 30
Candidate Starts for Origami_22:
(Start: 26 @18495 has 2 MA's), (Start: 30 @18510 has 5 MA's), (43, 18582), (57, 18711),

Gene: PandaPo_21 Start: 17769, Stop: 18038, Start Num: 27
Candidate Starts for PandaPo_21:
(21, 17751), (Start: 27 @17769 has 27 MA's), (59, 17997), (61, 18009),

Gene: Pioneer3_55 Start: 35610, Stop: 35864, Start Num: 35
Candidate Starts for Pioneer3_55:
(14, 35478), (Start: 35 @35610 has 6 MA's), (Start: 38 @35619 has 1 MA's), (41, 35643), (46, 35682), (51, 35739), (63, 35841),

Gene: Pixelle_22 Start: 19662, Stop: 19931, Start Num: 27
Candidate Starts for Pixelle_22:
(Start: 27 @19662 has 27 MA's), (57, 19866),

Gene: Platte_55 Start: 35404, Stop: 35649, Start Num: 38
Candidate Starts for Platte_55:
(14, 35263), (Start: 35 @35395 has 6 MA's), (Start: 38 @35404 has 1 MA's), (41, 35428), (46, 35467), (51, 35524), (63, 35626),

Gene: Powerpuff_22 Start: 19421, Stop: 19690, Start Num: 27
Candidate Starts for Powerpuff_22:
(17, 19379), (Start: 27 @19421 has 27 MA's), (59, 19646),

Gene: Pumpkins_22 Start: 20140, Stop: 20412, Start Num: 27
Candidate Starts for Pumpkins_22:
(Start: 27 @20140 has 27 MA's), (43, 20218), (54, 20320), (57, 20347), (59, 20368),

Gene: RockScotty_22 Start: 17930, Stop: 18229, Start Num: 19
Candidate Starts for RockScotty_22:
(9, 17582), (12, 17660), (Start: 19 @17930 has 16 MA's), (42, 18023), (44, 18041), (57, 18164),

Gene: RunningBrook_64 Start: 36241, Stop: 36519, Start Num: 33
Candidate Starts for RunningBrook_64:
(Start: 33 @36241 has 15 MA's), (39, 36262),

Gene: Sabourin_22 Start: 17863, Stop: 18162, Start Num: 19
Candidate Starts for Sabourin_22:
(Start: 19 @17863 has 16 MA's), (42, 17956), (44, 17974), (53, 18049), (57, 18097),

Gene: Schaffner_22 Start: 20112, Stop: 20384, Start Num: 27
Candidate Starts for Schaffner_22:
(Start: 27 @20112 has 27 MA's), (57, 20319), (59, 20340),

Gene: ShakeItOph_22 Start: 18506, Stop: 18772, Start Num: 30
Candidate Starts for ShakeItOph_22:
(Start: 26 @18491 has 2 MA's), (Start: 30 @18506 has 5 MA's), (43, 18578), (53, 18659), (57, 18707),

Gene: Shroomer_67 Start: 35783, Stop: 36061, Start Num: 33
Candidate Starts for Shroomer_67:
(Start: 33 @35783 has 15 MA's), (39, 35804),

Gene: Simpson_24 Start: 19415, Stop: 19684, Start Num: 27
Candidate Starts for Simpson_24:

(17, 19373), (Start: 27 @19415 has 27 MA's), (59, 19640),

Gene: Soondubu_22 Start: 21582, Stop: 21845, Start Num: 31
Candidate Starts for Soondubu_22:
(Start: 31 @21582 has 1 MA's), (60, 21807), (64, 21837),

Gene: Sooty_22 Start: 17866, Stop: 18165, Start Num: 19
Candidate Starts for Sooty_22:
(Start: 19 @17866 has 16 MA's), (42, 17959), (44, 17977), (53, 18052), (57, 18100),

Gene: SpecialK_22 Start: 17860, Stop: 18159, Start Num: 19
Candidate Starts for SpecialK_22:
(Start: 19 @17860 has 16 MA's), (42, 17953), (44, 17971), (57, 18094),

Gene: SteakFry_65 Start: 35849, Stop: 36127, Start Num: 33
Candidate Starts for SteakFry_65:
(Start: 33 @35849 has 15 MA's), (39, 35870),

Gene: StevieWelch_63 Start: 35633, Stop: 35911, Start Num: 33
Candidate Starts for StevieWelch_63:
(Start: 33 @35633 has 15 MA's), (39, 35654),

Gene: Stuu_22 Start: 17953, Stop: 18252, Start Num: 19
Candidate Starts for Stuu_22:
(2, 17257), (3, 17311), (7, 17578), (8, 17584), (Start: 19 @17953 has 16 MA's), (42, 18046), (44, 18064), (53, 18139), (57, 18187),

Gene: Tallboi_22 Start: 19248, Stop: 19517, Start Num: 29
Candidate Starts for Tallboi_22:
(Start: 29 @19248 has 1 MA's), (48, 19362), (54, 19425), (57, 19452), (59, 19473),

Gene: Tandem_55 Start: 35549, Stop: 35803, Start Num: 35
Candidate Starts for Tandem_55:
(14, 35417), (Start: 35 @35549 has 6 MA's), (Start: 38 @35558 has 1 MA's), (41, 35582), (46, 35621), (51, 35678), (63, 35780),

Gene: Tbone_22 Start: 19420, Stop: 19689, Start Num: 27
Candidate Starts for Tbone_22:
(17, 19378), (Start: 27 @19420 has 27 MA's), (59, 19645),

Gene: Tian_22 Start: 19659, Stop: 19928, Start Num: 27
Candidate Starts for Tian_22:
(Start: 27 @19659 has 27 MA's), (44, 19740), (57, 19863),

Gene: Turab_22 Start: 19268, Stop: 19537, Start Num: 27
Candidate Starts for Turab_22:
(Start: 27 @19268 has 27 MA's), (44, 19349), (48, 19382), (57, 19472), (59, 19493),

Gene: Tutumahutu_22 Start: 19421, Stop: 19690, Start Num: 27
Candidate Starts for Tutumahutu_22:
(17, 19379), (Start: 27 @19421 has 27 MA's), (59, 19646),

Gene: VroomVroom_22 Start: 18499, Stop: 18783, Start Num: 26

Candidate Starts for VroomVroom_22:
(24, 18496), (Start: 26 @18499 has 2 MA's), (Start: 30 @18514 has 5 MA's), (43, 18586), (57, 18715),

Gene: Warda_22 Start: 19412, Stop: 19681, Start Num: 27
Candidate Starts for Warda_22:
(17, 19370), (Start: 27 @19412 has 27 MA's), (59, 19637),

Gene: Welcome_64 Start: 35998, Stop: 36276, Start Num: 33
Candidate Starts for Welcome_64:
(Start: 33 @35998 has 15 MA's), (39, 36019),

Gene: Yang_22 Start: 19406, Stop: 19678, Start Num: 27
Candidate Starts for Yang_22:
(17, 19364), (Start: 27 @19406 has 27 MA's), (43, 19484), (57, 19613), (59, 19634),

Gene: YesChef_22 Start: 19421, Stop: 19690, Start Num: 27
Candidate Starts for YesChef_22:
(17, 19379), (Start: 27 @19421 has 27 MA's), (59, 19646),

Gene: Yuma_62 Start: 35567, Stop: 35845, Start Num: 33
Candidate Starts for Yuma_62:
(Start: 33 @35567 has 15 MA's), (39, 35588),