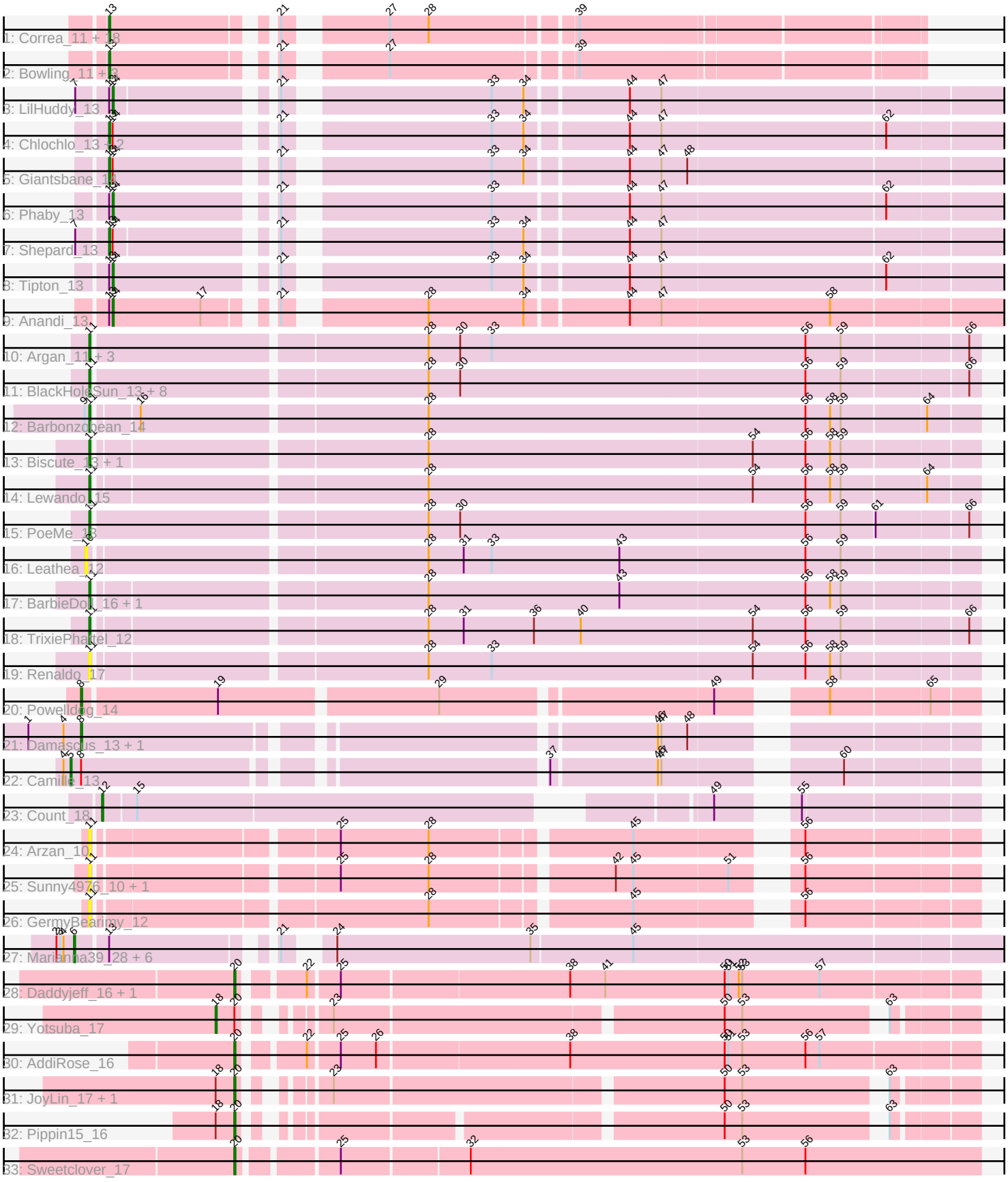
Pham 336672


1: Correa_11 + 18
2: Bowling_11 + 3
3: LilHuddy_13
4: Chlochlo_13 + 2
5: Giantsbane_13
6: Phaby_13
7: Shepard_13
8: Tipton_13
9: Anandi_13
10: Argan_11 + 3
11: BlackHoleSun_13 + 8
12: Barbonzobean_14
13: Biscute_13 + 1
14: Lewando_15
15: PoeMe_13
16: Leathea_12
17: BarbieDoll_16 + 1
18: TrixiePhaltel_12
19: Renaldo_17
20: Powelldog_14
21: Damascus_13 + 1
22: Camille_13
23: Count_18
24: Arzan_10
25: Sunny4976_10 + 1
26: GermyBearimy_12
27: Marianna39_28 + 6
28: Daddyjeff_16 + 1
29: Yotsuba_17
30: AddiRose_16
31: JoyLin_17 + 1
32: Pippin15_16
33: Sweetclover_17

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 336672 Report

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

Pham number 336672 has 79 members, 16 are drafts.

Phages represented in each track:
• Track 1 : Correa_11, Kardesai_10, Benllo_10, Mooshroom_11, Circum_11, Cheesy_11, Dynamite_11, Nason_11, Tribby_11, Mudcat_11, JEGGS_11, Heisenberger_11, KeaneyLin_10, Xenomorph_10, GoCrazy_10, Arcadia_11, YoshiYama_10, NapoleonB_11, Elsa_11
• Track 2 : Bowling_11, Hankly_10, BenitoAntonio_11, Stardom_10
• Track 3 : LilHuddy_13
• Track 4 : Chlochlo_13, Tokki_13, Bouchard_13
• Track 5 : Giantsbane_14
• Track 6 : Phaby_13
• Track 7 : Shepard_13
• Track 8 : Tipton_13
• Track 9 : Anandi_13
• Track 10 : Argan_11, Altjira_11, Tenney120_12, Uzumaki_12
• Track 11 : BlackHoleSun_13, Zeina_12, Stardrop_12, Navi1117_12, Mardi_13, KevinMinion_11, Phaila_11, Remlit_13, GantcherGoblin_11
• Track 12 : Barbonzobean_14
• Track 13 : Biscute_13, Muglass_14
• Track 14 : Lewando_15
• Track 15 : PoeMe_13
• Track 16 : Leathea_12
• Track 17 : BarbieDoll_16, Kinny_14
• Track 18 : TrixiePhattel_12
• Track 19 : Renaldo_17
• Track 20 : Powelldog_14
• Track 21 : Damascus_13, DizzyRudy_13
• Track 22 : Camille_13
• Track 23 : Count_18
• Track 24 : Arzan_10
• Track 25 : Sunny4976_10, Jazzy4900_11
• Track 26 : GermyBearimy_12
• Track 27 : Marianna39_28, Kureo_28, Elver_27, Gandionco_27, JeNeSaisPas_26, Qui_27, Paella_27
• Track 28 : Daddyjeff_16, Serenabean_16
• Track 29 : Yotsuba_17
• Track 30 : AddiRose_16
• Track 31 : JoyLin_17, Eevee_17
• Track 32 : Pippin15_16

• Track 33 : Sweetclover_17

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

The start number called the most often in the published annotations is 13, it was called in 26 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Arcadia_11, BenitoAntonio_11, Benllo_10, Bouchard_13, Bowling_11, Cheesy_11, Chlochlo_13, Circum_11, Correa_11, Dynamite_11, Elsa_11, Giantsbane_14, GoCrazy_10, Hankly_10, Heisenberger_11, JEGGS_11, Kardesai_10, KeaneyLin_10, Mooshroom_11, Mudcat_11, NapoleonB_11, Nason_11, Shepard_13, Stardom_10, Tokki_13, Tribby_11, Xenomorph_10, YoshiYama_10,

Genes that have the "Most Annotated" start but do not call it:
• Anandi_13, Elver_27, Gandionco_27, JeNeSaisPas_26, Kureo_28, LilHuddy_13, Marianna39_28, Paella_27, Phaby_13, Qui_27, Tipton_13,

Genes that do not have the "Most Annotated" start:
• AddiRose_16, Altjira_11, Argan_11, Arzan_10, BarbieDoll_16, Barbonzobean_14, Biscute_13, BlackHoleSun_13, Camille_13, Count_18, Daddyjeff_16, Damascus_13, DizzyRudy_13, Eevee_17, GantcherGoblin_11, GermyBearimy_12, Jazzy4900_11, JoyLin_17, KevinMinion_11, Kinny_14, Leathea_12, Lewando_15, Mardi_13, Muglass_14, Navi1117_12, Phaila_11, Pippin15_16, PoeMe_13, Powelldog_14, Remlit_13, Renaldo_17, Serenabean_16, Stardrop_12, Sunny4976_10, Sweetclover_17, Tenney120_12, TrixiePhattel_12, Uzumaki_12, Yotsuba_17, Zeina_12,

Summary by start number:

Start 5:
• Found in 1 of 79 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Camille_13 (EL),

Start 6:
• Found in 7 of 79 (8.9%) of genes in pham
• Manual Annotations of this start: 4 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elver_27 (FK), Gandionco_27 (FK), JeNeSaisPas_26 (FK), Kureo_28 (FK), Marianna39_28 (FK), Paella_27 (FK), Qui_27 (FK),

Start 8:
• Found in 4 of 79 (5.1%) of genes in pham
• Manual Annotations of this start: 3 of 63
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Damascus_13 (EL), DizzyRudy_13 (EL), Powelldog_14 (AW),

Start 10:
• Found in 1 of 79 (1.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Leathea_12 (AU6),

Start 11:
• Found in 26 of 79 (32.9%) of genes in pham
• Manual Annotations of this start: 16 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Altjira_11 (AU6), Argan_11 (AU6), Arzan_10 (FI), BarbieDoll_16 (AU6), Barbonzobean_14 (AU6), Biscute_13 (AU6), BlackHoleSun_13 (AU6), GantcherGoblin_11 (AU6), GermyBearimy_12 (FI), Jazzy4900_11 (FI), KevinMinion_11 (AU6), Kinny_14 (AU6), Lewando_15 (AU6), Mardi_13 (AU6), Muglass_14 (AU6), Navi1117_12 (AU6), Phaila_11 (AU6), PoeMe_13 (AU6), Remlit_13 (AU6), Renaldo_17 (AU6), Stardrop_12 (AU6), Sunny4976_10 (FI), Tenney120_12 (AU6), TrixiePhattel_12 (AU6), Uzumaki_12 (AU6), Zeina_12 (AU6),

Start 12:
• Found in 1 of 79 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Count_18 (EL),

Start 13:
• Found in 39 of 79 (49.4%) of genes in pham
• Manual Annotations of this start: 26 of 63
• Called 71.8% of time when present
• Phage (with cluster) where this start called: Arcadia_11 (AM), BenitoAntonio_11 (AM), Benllo_10 (AM), Bouchard_13 (AU2), Bowling_11 (AM), Cheesy_11 (AM), Chlochlo_13 (AU2), Circum_11 (AM), Correa_11 (AM), Dynamite_11 (AM), Elsa_11 (AM), Giantsbane_14 (AU2), GoCrazy_10 (AM), Hankly_10 (AM), Heisenberger_11 (AM), JEGGS_11 (AM), Kardesai_10 (AM), KeaneyLin_10 (AM), Mooshroom_11 (AM), Mudcat_11 (AM), NapoleonB_11 (AM), Nason_11 (AM), Shepard_13 (AU2), Stardom_10 (AM), Tokki_13 (AU2), Tribby_11 (AM), Xenomorph_10 (AM), YoshiYama_10 (AM),

Start 14:
• Found in 9 of 79 (11.4%) of genes in pham
• Manual Annotations of this start: 4 of 63
• Called 44.4% of time when present
• Phage (with cluster) where this start called: Anandi_13 (AU4), LilHuddy_13 (AU2), Phaby_13 (AU2), Tipton_13 (AU2),

Start 18:
• Found in 4 of 79 (5.1%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Yotsuba_17 (JA),

Start 20:

• Found in 8 of 79 (10.1%) of genes in pham
• Manual Annotations of this start: 7 of 63
• Called 87.5% of time when present
• Phage (with cluster) where this start called: AddiRose_16 (JA), Daddyjeff_16 (JA), Eevee_17 (JA), JoyLin_17 (JA), Pippin15_16 (JA), Serenabean_16 (JA), Sweetclover_17 (JA),

Summary by clusters:

There are 9 clusters represented in this pham: EL, AM, AU2, AU4, AW, AU6, FI, FK, JA,

Info for manual annotations of cluster AM:
•Start number 13 was manually annotated 21 times for cluster AM.

Info for manual annotations of cluster AU2:
•Start number 13 was manually annotated 5 times for cluster AU2.
•Start number 14 was manually annotated 3 times for cluster AU2.

Info for manual annotations of cluster AU4:
•Start number 14 was manually annotated 1 time for cluster AU4.

Info for manual annotations of cluster AU6:
•Start number 11 was manually annotated 16 times for cluster AU6.

Info for manual annotations of cluster AW:
•Start number 8 was manually annotated 1 time for cluster AW.

Info for manual annotations of cluster EL:
•Start number 5 was manually annotated 1 time for cluster EL.
•Start number 8 was manually annotated 2 times for cluster EL.
•Start number 12 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster FK:
•Start number 6 was manually annotated 4 times for cluster FK.

Info for manual annotations of cluster JA:
•Start number 18 was manually annotated 1 time for cluster JA.
•Start number 20 was manually annotated 7 times for cluster JA.

Gene Information:

Gene: AddiRose_16 Start: 11861, Stop: 12460, Start Num: 20
Candidate Starts for AddiRose_16:
(Start: 20 @11861 has 7 MA's), (22, 11906), (25, 11930), (26, 11960), (38, 12119), (50, 12251), (51, 12254), (53, 12266), (56, 12320), (57, 12332),

Gene: Altjira_11 Start: 8177, Stop: 8908, Start Num: 11
Candidate Starts for Altjira_11:
(Start: 11 @8177 has 16 MA's), (28, 8450), (30, 8477), (33, 8504), (56, 8768), (59, 8798), (66, 8900),

Gene: Anandi_13 Start: 8811, Stop: 9578, Start Num: 14
Candidate Starts for Anandi_13:
(Start: 13 @8808 has 26 MA's), (Start: 14 @8811 has 4 MA's), (17, 8886), (21, 8928), (28, 9030), (34, 9111), (44, 9192), (47, 9219), (58, 9360),

Gene: Arcadia_11 Start: 7831, Stop: 8442, Start Num: 13
Candidate Starts for Arcadia_11:
(Start: 13 @7831 has 26 MA's), (21, 7951), (27, 8020), (28, 8053), (39, 8167),

Gene: Argan_11 Start: 7698, Stop: 8429, Start Num: 11
Candidate Starts for Argan_11:
(Start: 11 @7698 has 16 MA's), (28, 7971), (30, 7998), (33, 8025), (56, 8289), (59, 8319), (66, 8421),

Gene: Arzan_10 Start: 6829, Stop: 7500, Start Num: 11
Candidate Starts for Arzan_10:
(Start: 11 @6829 has 16 MA's), (25, 7018), (28, 7093), (45, 7249), (56, 7360),

Gene: BarbieDoll_16 Start: 9649, Stop: 10374, Start Num: 11
Candidate Starts for BarbieDoll_16:
(Start: 11 @9649 has 16 MA's), (28, 9916), (43, 10078), (56, 10234), (58, 10255), (59, 10264),

Gene: Barbonzobean_14 Start: 9345, Stop: 10070, Start Num: 11
Candidate Starts for Barbonzobean_14:
(9, 9342), (Start: 11 @9345 has 16 MA's), (16, 9378), (28, 9612), (56, 9930), (58, 9951), (59, 9960), (64, 10029),

Gene: BenitoAntonio_11 Start: 7439, Stop: 8050, Start Num: 13
Candidate Starts for BenitoAntonio_11:
(Start: 13 @7439 has 26 MA's), (21, 7559), (27, 7628), (39, 7775),

Gene: Benllo_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Benllo_10:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Biscute_13 Start: 9345, Stop: 10070, Start Num: 11
Candidate Starts for Biscute_13:
(Start: 11 @9345 has 16 MA's), (28, 9612), (54, 9885), (56, 9930), (58, 9951), (59, 9960),

Gene: BlackHoleSun_13 Start: 7519, Stop: 8250, Start Num: 11
Candidate Starts for BlackHoleSun_13:
(Start: 11 @7519 has 16 MA's), (28, 7792), (30, 7819), (56, 8110), (59, 8140), (66, 8242),

Gene: Bouchard_13 Start: 9100, Stop: 9834, Start Num: 13
Candidate Starts for Bouchard_13:
(Start: 13 @9100 has 26 MA's), (Start: 14 @9103 has 4 MA's), (21, 9223), (33, 9379), (34, 9406), (44, 9487), (47, 9514), (62, 9700),

Gene: Bowling_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Bowling_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (39, 7777),

Gene: Camille_13 Start: 7538, Stop: 8218, Start Num: 5

Candidate Starts for Camille_13:
(4, 7532), (Start: 5 @7538 has 1 MA's), (Start: 8 @7547 has 3 MA's), (37, 7901), (46, 7988), (47, 7991), (60, 8111),

Gene: Cheesy_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Cheesy_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Chlochlo_13 Start: 9135, Stop: 9869, Start Num: 13
Candidate Starts for Chlochlo_13:
(Start: 13 @9135 has 26 MA's), (Start: 14 @9138 has 4 MA's), (21, 9258), (33, 9414), (34, 9441), (44, 9522), (47, 9549), (62, 9735),

Gene: Circum_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Circum_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Correa_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Correa_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Count_18 Start: 10435, Stop: 11076, Start Num: 12
Candidate Starts for Count_18:
(Start: 12 @10435 has 1 MA's), (15, 10462), (49, 10894), (55, 10936),

Gene: Daddyjeff_16 Start: 11817, Stop: 12416, Start Num: 20
Candidate Starts for Daddyjeff_16:
(Start: 20 @11817 has 7 MA's), (22, 11862), (25, 11886), (38, 12075), (41, 12105), (50, 12207), (51, 12210), (52, 12219), (53, 12222), (57, 12288),

Gene: Damascus_13 Start: 7411, Stop: 8085, Start Num: 8
Candidate Starts for Damascus_13:
(1, 7366), (4, 7396), (Start: 8 @7411 has 3 MA's), (46, 7855), (47, 7858), (48, 7879),

Gene: DizzyRudy_13 Start: 7409, Stop: 8083, Start Num: 8
Candidate Starts for DizzyRudy_13:
(1, 7364), (4, 7394), (Start: 8 @7409 has 3 MA's), (46, 7853), (47, 7856), (48, 7877),

Gene: Dynamite_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Dynamite_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Eevee_17 Start: 13823, Stop: 14371, Start Num: 20
Candidate Starts for Eevee_17:
(Start: 18 @13808 has 1 MA's), (Start: 20 @13823 has 7 MA's), (23, 13868), (50, 14183), (53, 14198), (63, 14306),

Gene: Elsa_11 Start: 7831, Stop: 8442, Start Num: 13
Candidate Starts for Elsa_11:
(Start: 13 @7831 has 26 MA's), (21, 7951), (27, 8020), (28, 8053), (39, 8167),

Gene: Elver_27 Start: 17557, Stop: 18336, Start Num: 6
Candidate Starts for Elver_27:

(2, 17542), (3, 17545), (4, 17548), (Start: 6 @17557 has 4 MA's), (Start: 13 @17581 has 26 MA's), (21, 17701), (24, 17725), (35, 17890), (45, 17974),

Gene: Gandionco_27 Start: 18079, Stop: 18858, Start Num: 6
Candidate Starts for Gandionco_27:
(2, 18064), (3, 18067), (4, 18070), (Start: 6 @18079 has 4 MA's), (Start: 13 @18103 has 26 MA's), (21, 18223), (24, 18247), (35, 18412), (45, 18496),

Gene: GantcherGoblin_11 Start: 7698, Stop: 8429, Start Num: 11
Candidate Starts for GantcherGoblin_11:
(Start: 11 @7698 has 16 MA's), (28, 7971), (30, 7998), (56, 8289), (59, 8319), (66, 8421),

Gene: GermyBearimy_12 Start: 7272, Stop: 7943, Start Num: 11
Candidate Starts for GermyBearimy_12:
(Start: 11 @7272 has 16 MA's), (28, 7536), (45, 7692), (56, 7803),

Gene: Giantsbane_14 Start: 9644, Stop: 10378, Start Num: 13
Candidate Starts for Giantsbane_14:
(Start: 13 @9644 has 26 MA's), (Start: 14 @9647 has 4 MA's), (21, 9767), (33, 9923), (34, 9950), (44, 10031), (47, 10058), (48, 10079),

Gene: GoCrazy_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for GoCrazy_10:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Hankly_10 Start: 7465, Stop: 8076, Start Num: 13
Candidate Starts for Hankly_10:
(Start: 13 @7465 has 26 MA's), (21, 7585), (27, 7654), (39, 7801),

Gene: Heisenberger_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Heisenberger_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: JEGGS_11 Start: 7443, Stop: 8054, Start Num: 13
Candidate Starts for JEGGS_11:
(Start: 13 @7443 has 26 MA's), (21, 7563), (27, 7632), (28, 7665), (39, 7779),

Gene: Jazzy4900_11 Start: 6848, Stop: 7519, Start Num: 11
Candidate Starts for Jazzy4900_11:
(Start: 11 @6848 has 16 MA's), (25, 7037), (28, 7112), (42, 7253), (45, 7268), (51, 7346), (56, 7379),

Gene: JeNeSaisPas_26 Start: 18092, Stop: 18871, Start Num: 6
Candidate Starts for JeNeSaisPas_26:
(2, 18077), (3, 18080), (4, 18083), (Start: 6 @18092 has 4 MA's), (Start: 13 @18116 has 26 MA's), (21, 18236), (24, 18260), (35, 18425), (45, 18509),

Gene: JoyLin_17 Start: 13814, Stop: 14362, Start Num: 20
Candidate Starts for JoyLin_17:
(Start: 18 @13799 has 1 MA's), (Start: 20 @13814 has 7 MA's), (23, 13859), (50, 14174), (53, 14189), (63, 14297),

Gene: Kardesai_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Kardesai_10:

(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: KeaneyLin_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for KeaneyLin_10:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: KevinMinion_11 Start: 7854, Stop: 8585, Start Num: 11
Candidate Starts for KevinMinion_11:
(Start: 11 @7854 has 16 MA's), (28, 8127), (30, 8154), (56, 8445), (59, 8475), (66, 8577),

Gene: Kinny_14 Start: 9649, Stop: 10374, Start Num: 11
Candidate Starts for Kinny_14:
(Start: 11 @9649 has 16 MA's), (28, 9916), (43, 10078), (56, 10234), (58, 10255), (59, 10264),

Gene: Kureo_28 Start: 16902, Stop: 17681, Start Num: 6
Candidate Starts for Kureo_28:
(2, 16887), (3, 16890), (4, 16893), (Start: 6 @16902 has 4 MA's), (Start: 13 @16926 has 26 MA's), (21, 17046), (24, 17070), (35, 17235), (45, 17319),

Gene: Leathea_12 Start: 7869, Stop: 8600, Start Num: 10
Candidate Starts for Leathea_12:
(10, 7869), (28, 8142), (31, 8172), (33, 8196), (43, 8304), (56, 8460), (59, 8490),

Gene: Lewando_15 Start: 9648, Stop: 10373, Start Num: 11
Candidate Starts for Lewando_15:
(Start: 11 @9648 has 16 MA's), (28, 9915), (54, 10188), (56, 10233), (58, 10254), (59, 10263), (64, 10332),

Gene: LilHuddy_13 Start: 9111, Stop: 9839, Start Num: 14
Candidate Starts for LilHuddy_13:
(7, 9084), (Start: 13 @9108 has 26 MA's), (Start: 14 @9111 has 4 MA's), (21, 9228), (33, 9384), (34, 9411), (44, 9492), (47, 9519),

Gene: Mardi_13 Start: 8286, Stop: 9017, Start Num: 11
Candidate Starts for Mardi_13:
(Start: 11 @8286 has 16 MA's), (28, 8559), (30, 8586), (56, 8877), (59, 8907), (66, 9009),

Gene: Marianna39_28 Start: 18079, Stop: 18858, Start Num: 6
Candidate Starts for Marianna39_28:
(2, 18064), (3, 18067), (4, 18070), (Start: 6 @18079 has 4 MA's), (Start: 13 @18103 has 26 MA's), (21, 18223), (24, 18247), (35, 18412), (45, 18496),

Gene: Mooshroom_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Mooshroom_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Mudcat_11 Start: 7442, Stop: 8053, Start Num: 13
Candidate Starts for Mudcat_11:
(Start: 13 @7442 has 26 MA's), (21, 7562), (27, 7631), (28, 7664), (39, 7778),

Gene: Muglass_14 Start: 9345, Stop: 10070, Start Num: 11
Candidate Starts for Muglass_14:
(Start: 11 @9345 has 16 MA's), (28, 9612), (54, 9885), (56, 9930), (58, 9951), (59, 9960),

Gene: NapoleonB_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for NapoleonB_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Nason_11 Start: 7831, Stop: 8442, Start Num: 13
Candidate Starts for Nason_11:
(Start: 13 @7831 has 26 MA's), (21, 7951), (27, 8020), (28, 8053), (39, 8167),

Gene: Navi1117_12 Start: 8093, Stop: 8824, Start Num: 11
Candidate Starts for Navi1117_12:
(Start: 11 @8093 has 16 MA's), (28, 8366), (30, 8393), (56, 8684), (59, 8714), (66, 8816),

Gene: Paella_27 Start: 17559, Stop: 18338, Start Num: 6
Candidate Starts for Paella_27:
(2, 17544), (3, 17547), (4, 17550), (Start: 6 @17559 has 4 MA's), (Start: 13 @17583 has 26 MA's), (21, 17703), (24, 17727), (35, 17892), (45, 17976),

Gene: Phaby_13 Start: 9100, Stop: 9831, Start Num: 14
Candidate Starts for Phaby_13:
(Start: 13 @9097 has 26 MA's), (Start: 14 @9100 has 4 MA's), (21, 9220), (33, 9376), (44, 9484), (47, 9511), (62, 9697),

Gene: Phaila_11 Start: 7421, Stop: 8152, Start Num: 11
Candidate Starts for Phaila_11:
(Start: 11 @7421 has 16 MA's), (28, 7694), (30, 7721), (56, 8012), (59, 8042), (66, 8144),

Gene: Pippin15_16 Start: 11491, Stop: 12030, Start Num: 20
Candidate Starts for Pippin15_16:
(Start: 18 @11476 has 1 MA's), (Start: 20 @11491 has 7 MA's), (50, 11842), (53, 11857), (63, 11965),

Gene: PoeMe_13 Start: 8122, Stop: 8853, Start Num: 11
Candidate Starts for PoeMe_13:
(Start: 11 @8122 has 16 MA's), (28, 8395), (30, 8422), (56, 8713), (59, 8743), (61, 8770), (66, 8845),

Gene: Powelldog_14 Start: 9342, Stop: 10031, Start Num: 8
Candidate Starts for Powelldog_14:
(Start: 8 @9342 has 3 MA's), (19, 9453), (29, 9630), (49, 9846), (58, 9912), (65, 9993),

Gene: Qui_27 Start: 17559, Stop: 18338, Start Num: 6
Candidate Starts for Qui_27:
(2, 17544), (3, 17547), (4, 17550), (Start: 6 @17559 has 4 MA's), (Start: 13 @17583 has 26 MA's), (21, 17703), (24, 17727), (35, 17892), (45, 17976),

Gene: Remlit_13 Start: 7435, Stop: 8166, Start Num: 11
Candidate Starts for Remlit_13:
(Start: 11 @7435 has 16 MA's), (28, 7708), (30, 7735), (56, 8026), (59, 8056), (66, 8158),

Gene: Renaldo_17 Start: 9649, Stop: 10374, Start Num: 11
Candidate Starts for Renaldo_17:
(Start: 11 @9649 has 16 MA's), (28, 9916), (33, 9970), (54, 10189), (56, 10234), (58, 10255), (59, 10264),

Gene: Serenabean_16 Start: 11846, Stop: 12445, Start Num: 20
Candidate Starts for Serenabean_16:
(Start: 20 @11846 has 7 MA's), (22, 11891), (25, 11915), (38, 12104), (41, 12134), (50, 12236), (51, 12239), (52, 12248), (53, 12251), (57, 12317),

Gene: Shepard_13 Start: 9105, Stop: 9836, Start Num: 13
Candidate Starts for Shepard_13:
(7, 9081), (Start: 13 @9105 has 26 MA's), (Start: 14 @9108 has 4 MA's), (21, 9225), (33, 9381), (34, 9408), (44, 9489), (47, 9516),

Gene: Stardom_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Stardom_10:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (39, 7777),

Gene: Stardrop_12 Start: 7995, Stop: 8726, Start Num: 11
Candidate Starts for Stardrop_12:
(Start: 11 @7995 has 16 MA's), (28, 8268), (30, 8295), (56, 8586), (59, 8616), (66, 8718),

Gene: Sunny4976_10 Start: 6848, Stop: 7519, Start Num: 11
Candidate Starts for Sunny4976_10:
(Start: 11 @6848 has 16 MA's), (25, 7037), (28, 7112), (42, 7253), (45, 7268), (51, 7346), (56, 7379),

Gene: Sweetclover_17 Start: 11321, Stop: 11929, Start Num: 20
Candidate Starts for Sweetclover_17:
(Start: 20 @11321 has 7 MA's), (25, 11393), (32, 11495), (53, 11726), (56, 11780),

Gene: Tenney120_12 Start: 7981, Stop: 8712, Start Num: 11
Candidate Starts for Tenney120_12:
(Start: 11 @7981 has 16 MA's), (28, 8254), (30, 8281), (33, 8308), (56, 8572), (59, 8602), (66, 8704),

Gene: Tipton_13 Start: 9138, Stop: 9869, Start Num: 14
Candidate Starts for Tipton_13:
(Start: 13 @9135 has 26 MA's), (Start: 14 @9138 has 4 MA's), (21, 9258), (33, 9414), (34, 9441), (44, 9522), (47, 9549), (62, 9735),

Gene: Tokki_13 Start: 9144, Stop: 9878, Start Num: 13
Candidate Starts for Tokki_13:
(Start: 13 @9144 has 26 MA's), (Start: 14 @9147 has 4 MA's), (21, 9267), (33, 9423), (34, 9450), (44, 9531), (47, 9558), (62, 9744),

Gene: Tribby_11 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Tribby_11:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: TrixiePhattel_12 Start: 7939, Stop: 8664, Start Num: 11
Candidate Starts for TrixiePhattel_12:
(Start: 11 @7939 has 16 MA's), (28, 8206), (31, 8236), (36, 8296), (40, 8335), (54, 8479), (56, 8524), (59, 8554), (66, 8656),

Gene: Uzumaki_12 Start: 7981, Stop: 8712, Start Num: 11
Candidate Starts for Uzumaki_12:
(Start: 11 @7981 has 16 MA's), (28, 8254), (30, 8281), (33, 8308), (56, 8572), (59, 8602), (66, 8704),

Gene: Xenomorph_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for Xenomorph_10:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: YoshiYama_10 Start: 7441, Stop: 8052, Start Num: 13
Candidate Starts for YoshiYama_10:
(Start: 13 @7441 has 26 MA's), (21, 7561), (27, 7630), (28, 7663), (39, 7777),

Gene: Yotsuba_17 Start: 13808, Stop: 14371, Start Num: 18
Candidate Starts for Yotsuba_17:
(Start: 18 @13808 has 1 MA's), (Start: 20 @13823 has 7 MA's), (23, 13868), (50, 14183), (53, 14198), (63, 14306),

Gene: Zeina_12 Start: 7991, Stop: 8722, Start Num: 11
Candidate Starts for Zeina_12:
(Start: 11 @7991 has 16 MA's), (28, 8264), (30, 8291), (56, 8582), (59, 8612), (66, 8714),