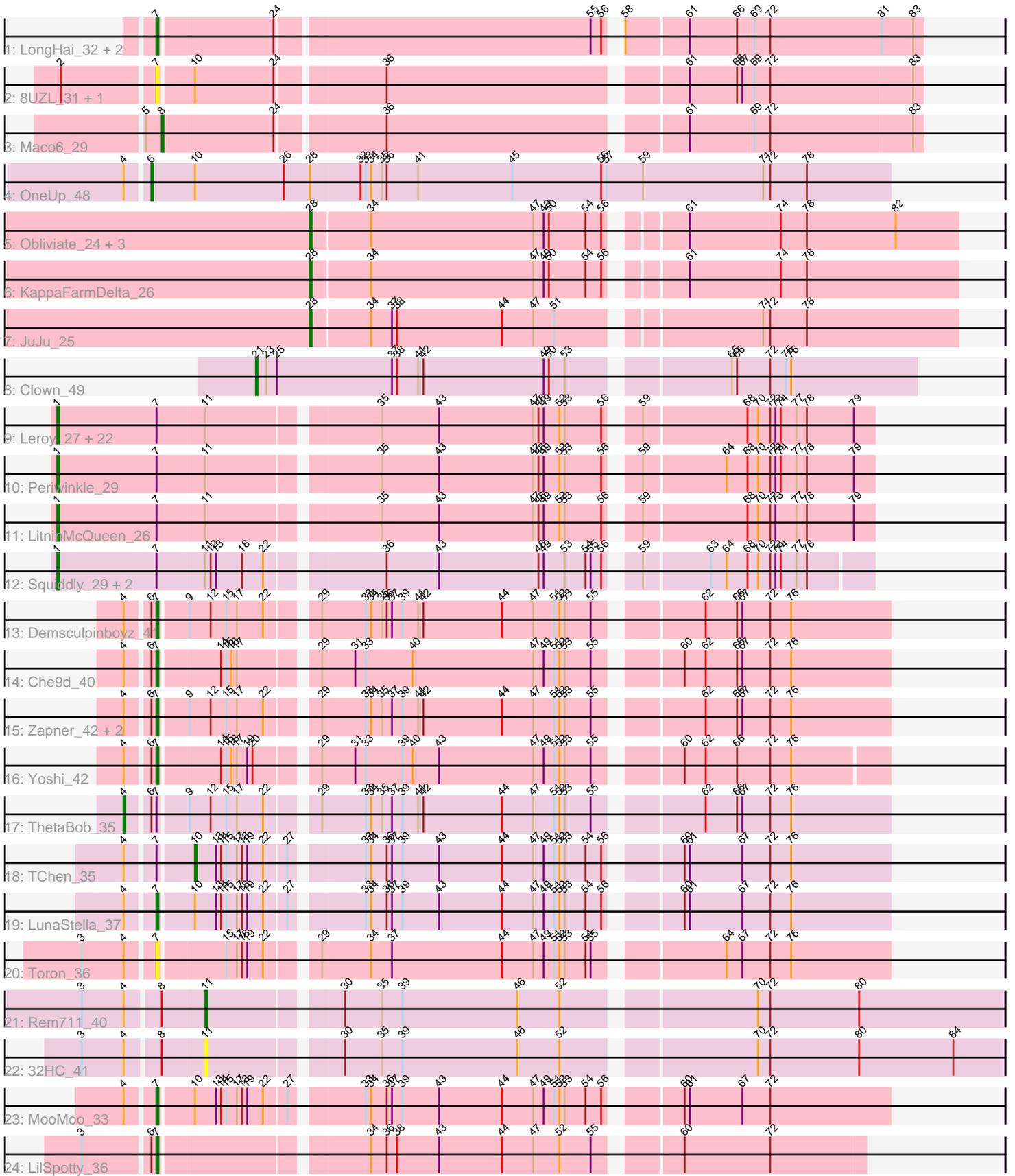# Pham 283853

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 283853 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283853 has 56 members, 8 are drafts.

Phages represented in each track:
• Track 1 : LongHai_32, Muddy_31, Salvus_32
• Track 2 : 8UZL_31, FF47_31
• Track 3 : Maco6_29
• Track 4 : OneUp_48
• Track 5 : Obliviate_24, CarolAnn_25, ZiggyZoo_24, Blino_25
• Track 6 : KappaFarmDelta_26
• Track 7 : JuJu_25
• Track 8 : Clown_49
• Track 9 : Leroy_27, Apricot_26, Crater_25, Budski_27, MortyNRick_26, Horus_27, Phistory_28, Kuwabara_26, BotCity_27, ShawBrad_27, Kamaru_27, BENtherdunthat_27, Holliday_27, Lutum_27, CheeseTouch_27, Getalong_28, Birdsong_26, Kenna_26, Asapag_27, Whitney_28, Frickyeah_26, Phabuloso_26, BearBQ_26
• Track 10 : Periwinkle_29
• Track 11 : LitninMcQueen_26
• Track 12 : Squiddly_29, Malisha_28, Spooky_27
• Track 13 : Demsculpinboyz_41
• Track 14 : Che9d_40
• Track 15 : Zapner_42, Jabbawokkie_43, Avani_40
• Track 16 : Yoshi_42
• Track 17 : ThetaBob_35
• Track 18 : TChen_35
• Track 19 : LunaStella_37
• Track 20 : Toron_36
• Track 21 : Rem711_40
• Track 22 : 32HC_41
• Track 23 : MooMoo_33
• Track 24 : LilSpotty_36

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

The start number called the most often in the published annotations is 1, it was called in 26 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Apricot_26, Asapag_27, BENtherdunthat_27, BearBQ_26, Birdsong_26, BotCity_27, Budski_27, CheeseTouch_27, Crater_25, Frickyeah_26, Getalong_28, Holliday_27, Horus_27, Kamaru_27, Kenna_26, Kuwabara_26, Leroy_27, LitninMcQueen_26, Lutum_27, Malisha_28, MortyNRick_26, Periwinkle_29, Phabuloso_26, Phistory_28, ShawBrad_27, Spooky_27, Squiddly_29, Whitney_28,

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

Genes that do not have the "Most Annotated" start:
• 32HC_41, 8UZL_31, Avani_40, Blino_25, CarolAnn_25, Che9d_40, Clown_49, Demsculpinboyz_41, FF47_31, Jabbawokkie_43, JuJu_25, KappaFarmDelta_26, LilSpotty_36, LongHai_32, LunaStella_37, Maco6_29, MooMoo_33, Muddy_31, Obliviate_24, OneUp_48, Rem711_40, Salvus_32, TChen_35, ThetaBob_35, Toron_36, Yoshi_42, Zapner_42, ZiggyZoo_24,

Summary by start number:

Start 1:
• Found in 28 of 56 (50.0%) of genes in pham
• Manual Annotations of this start: 26 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apricot_26 (DN3), Asapag_27 (DN1), BENtherdunthat_27 (DN1), BearBQ_26 (DN), Birdsong_26 (DN), BotCity_27 (DN), Budski_27 (DN), CheeseTouch_27 (DN1), Crater_25 (DN3), Frickyeah_26 (DN1), Getalong_28 (DN1), Holliday_27 (DN1), Horus_27 (DN1), Kamaru_27 (DN1), Kenna_26 (DN1), Kuwabara_26 (DN4), Leroy_27 (DN1), LitninMcQueen_26 (DN1), Lutum_27 (DN1), Malisha_28 (DN), MortyNRick_26 (DN), Periwinkle_29 (DN1), Phabuloso_26 (DN1), Phistory_28 (DN1), ShawBrad_27 (DN1), Spooky_27 (DN2), Squiddly_29 (DN2), Whitney_28 (DN1),

Start 4:
• Found in 14 of 56 (25.0%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 7.1% of time when present
• Phage (with cluster) where this start called: ThetaBob_35 (F4),

Start 6:
• Found in 9 of 56 (16.1%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 11.1% of time when present
• Phage (with cluster) where this start called: OneUp_48 (CQ2),

Start 7:
• Found in 45 of 56 (80.4%) of genes in pham
• Manual Annotations of this start: 10 of 48
• Called 33.3% of time when present
• Phage (with cluster) where this start called: 8UZL_31 (AB), Avani_40 (F2), Che9d_40 (F2), Demsculpinboyz_41 (F2), FF47_31 (AB), Jabbawokkie_43 (F2), LilSpotty_36 (singleton), LongHai_32 (AB), LunaStella_37 (F4), MooMoo_33 (singleton), Muddy_31 (AB), Salvus_32 (AB), Toron_36 (F6), Yoshi_42 (F2), Zapner_42 (F2),

Start 8:
• Found in 3 of 56 (5.4%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Maco6_29 (AB),

Start 10:
• Found in 6 of 56 (10.7%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 16.7% of time when present
• Phage (with cluster) where this start called: TChen_35 (F4),

Start 11:
• Found in 30 of 56 (53.6%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 6.7% of time when present
• Phage (with cluster) where this start called: 32HC_41 (Z), Rem711_40 (Z),

Start 21:
• Found in 1 of 56 (1.8%) of genes in pham
• Manual Annotations of this start: 1 of 48
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Clown_49 (DC2),

Start 28:
• Found in 7 of 56 (12.5%) of genes in pham
• Manual Annotations of this start: 6 of 48
• Called 85.7% of time when present
• Phage (with cluster) where this start called: Blino_25 (CV), CarolAnn_25 (CV), JuJu_25 (CV), KappaFarmDelta_26 (CV), Obliviate_24 (CV), ZiggyZoo_24 (CV),

Summary by clusters:

There are 14 clusters represented in this pham: DN, singleton, AB, F4, F6, F2, DN4, DN1, DN3, DN2, CQ2, Z, DC2, CV,

Info for manual annotations of cluster AB:
•Start number 7 was manually annotated 1 time for cluster AB.
•Start number 8 was manually annotated 1 time for cluster AB.

Info for manual annotations of cluster CQ2:
•Start number 6 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CV:
•Start number 28 was manually annotated 6 times for cluster CV.

Info for manual annotations of cluster DC2:
•Start number 21 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DN:
•Start number 1 was manually annotated 6 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 1 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN2:
•Start number 1 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:
•Start number 1 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster DN4:
•Start number 1 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster F2:
•Start number 7 was manually annotated 6 times for cluster F2.

Info for manual annotations of cluster F4:
•Start number 4 was manually annotated 1 time for cluster F4.
•Start number 7 was manually annotated 1 time for cluster F4.
•Start number 10 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster Z:
•Start number 11 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_41 Start: 30730, Stop: 31161, Start Num: 11
Candidate Starts for 32HC_41:
(3, 30664), (Start: 4 @30688 has 1 MA's), (Start: 8 @30706 has 1 MA's), (Start: 11 @30730 has 1 MA's), (30, 30799), (35, 30820), (39, 30832), (46, 30898), (52, 30922), (70, 31021), (72, 31027), (80, 31078), (84, 31132),

Gene: 8UZL_31 Start: 24782, Stop: 25192, Start Num: 7
Candidate Starts for 8UZL_31:
(2, 24731), (Start: 7 @24782 has 10 MA's), (Start: 10 @24800 has 1 MA's), (24, 24845), (36, 24902), (61, 25061), (66, 25088), (67, 25091), (69, 25097), (72, 25106), (83, 25187),

Gene: Apricot_26 Start: 20622, Stop: 21062, Start Num: 1
Candidate Starts for Apricot_26:
(Start: 1 @20622 has 26 MA's), (Start: 7 @20679 has 10 MA's), (Start: 11 @20706 has 1 MA's), (35, 20796), (43, 20829), (47, 20883), (48, 20886), (49, 20889), (52, 20898), (53, 20901), (56, 20922), (59, 20934), (68, 20991), (70, 20997), (72, 21003), (73, 21006), (74, 21009), (77, 21018), (78, 21024), (79, 21051),

Gene: Asapag_27 Start: 21064, Stop: 21504, Start Num: 1
Candidate Starts for Asapag_27:
(Start: 1 @21064 has 26 MA's), (Start: 7 @21121 has 10 MA's), (Start: 11 @21148 has 1 MA's), (35, 21238), (43, 21271), (47, 21325), (48, 21328), (49, 21331), (52, 21340), (53, 21343), (56, 21364), (59, 21376), (68, 21433), (70, 21439), (72, 21445), (73, 21448), (74, 21451), (77, 21460), (78, 21466), (79, 21493),

Gene: Avani_40 Start: 28789, Stop: 29178, Start Num: 7
Candidate Starts for Avani_40:
(Start: 4 @28774 has 1 MA's), (Start: 6 @28786 has 1 MA's), (Start: 7 @28789 has 10 MA's), (9, 28804), (12, 28816), (15, 28825), (17, 28831), (22, 28846), (29, 28870), (33, 28894), (34, 28897), (35, 28903), (37, 28909), (39, 28915), (41, 28924), (42, 28927), (44, 28972), (47, 28990), (51, 29002), (52, 29005), (53, 29008), (55, 29023), (62, 29074), (66, 29092), (67, 29095), (72, 29110), (76, 29122),

Gene: BENtherdunthat_27 Start: 21061, Stop: 21501, Start Num: 1
Candidate Starts for BENtherdunthat_27:
(Start: 1 @21061 has 26 MA's), (Start: 7 @21118 has 10 MA's), (Start: 11 @21145 has 1 MA's), (35, 21235), (43, 21268), (47, 21322), (48, 21325), (49, 21328), (52, 21337), (53, 21340), (56, 21361), (59, 21373), (68, 21430), (70, 21436), (72, 21442), (73, 21445), (74, 21448), (77, 21457), (78, 21463), (79, 21490),

Gene: BearBQ_26 Start: 21901, Stop: 22341, Start Num: 1
Candidate Starts for BearBQ_26:
(Start: 1 @21901 has 26 MA's), (Start: 7 @21958 has 10 MA's), (Start: 11 @21985 has 1 MA's), (35, 22075), (43, 22108), (47, 22162), (48, 22165), (49, 22168), (52, 22177), (53, 22180), (56, 22201), (59, 22213), (68, 22270), (70, 22276), (72, 22282), (73, 22285), (74, 22288), (77, 22297), (78, 22303), (79, 22330),

Gene: Birdsong_26 Start: 20794, Stop: 21234, Start Num: 1
Candidate Starts for Birdsong_26:
(Start: 1 @20794 has 26 MA's), (Start: 7 @20851 has 10 MA's), (Start: 11 @20878 has 1 MA's), (35, 20968), (43, 21001), (47, 21055), (48, 21058), (49, 21061), (52, 21070), (53, 21073), (56, 21094), (59, 21106), (68, 21163), (70, 21169), (72, 21175), (73, 21178), (74, 21181), (77, 21190), (78, 21196), (79, 21223),

Gene: Blino_25 Start: 20905, Stop: 21255, Start Num: 28
Candidate Starts for Blino_25:
(Start: 28 @20905 has 6 MA's), (34, 20938), (47, 21031), (49, 21037), (50, 21040), (54, 21061), (56, 21070), (61, 21103), (74, 21154), (78, 21169), (82, 21220),

Gene: BotCity_27 Start: 21062, Stop: 21502, Start Num: 1
Candidate Starts for BotCity_27:
(Start: 1 @21062 has 26 MA's), (Start: 7 @21119 has 10 MA's), (Start: 11 @21146 has 1 MA's), (35, 21236), (43, 21269), (47, 21323), (48, 21326), (49, 21329), (52, 21338), (53, 21341), (56, 21362), (59, 21374), (68, 21431), (70, 21437), (72, 21443), (73, 21446), (74, 21449), (77, 21458), (78, 21464), (79, 21491),

Gene: Budski_27 Start: 21169, Stop: 21609, Start Num: 1
Candidate Starts for Budski_27:
(Start: 1 @21169 has 26 MA's), (Start: 7 @21226 has 10 MA's), (Start: 11 @21253 has 1 MA's), (35, 21343), (43, 21376), (47, 21430), (48, 21433), (49, 21436), (52, 21445), (53, 21448), (56, 21469), (59, 21481), (68, 21538), (70, 21544), (72, 21550), (73, 21553), (74, 21556), (77, 21565), (78, 21571), (79, 21598),

Gene: CarolAnn_25 Start: 20904, Stop: 21254, Start Num: 28
Candidate Starts for CarolAnn_25:
(Start: 28 @20904 has 6 MA's), (34, 20937), (47, 21030), (49, 21036), (50, 21039), (54, 21060), (56, 21069), (61, 21102), (74, 21153), (78, 21168), (82, 21219),

Gene: Che9d_40 Start: 28798, Stop: 29187, Start Num: 7

Candidate Starts for Che9d_40:
(Start: 4 @28783 has 1 MA's), (Start: 6 @28795 has 1 MA's), (Start: 7 @28798 has 10 MA's), (14, 28831), (15, 28834), (16, 28837), (17, 28840), (29, 28879), (31, 28897), (33, 28903), (40, 28930), (47, 28999), (49, 29005), (51, 29011), (52, 29014), (53, 29017), (55, 29032), (60, 29071), (62, 29083), (66, 29101), (67, 29104), (72, 29119), (76, 29131),

Gene: CheeseTouch_27 Start: 21055, Stop: 21495, Start Num: 1
Candidate Starts for CheeseTouch_27:
(Start: 1 @21055 has 26 MA's), (Start: 7 @21112 has 10 MA's), (Start: 11 @21139 has 1 MA's), (35, 21229), (43, 21262), (47, 21316), (48, 21319), (49, 21322), (52, 21331), (53, 21334), (56, 21355), (59, 21367), (68, 21424), (70, 21430), (72, 21436), (73, 21439), (74, 21442), (77, 21451), (78, 21457), (79, 21484),

Gene: Clown_49 Start: 38210, Stop: 38572, Start Num: 21
Candidate Starts for Clown_49:
(Start: 21 @38210 has 1 MA's), (23, 38216), (25, 38222), (37, 38288), (38, 38291), (41, 38303), (42, 38306), (49, 38375), (50, 38378), (53, 38387), (65, 38468), (66, 38471), (72, 38489), (75, 38498), (76, 38501),

Gene: Crater_25 Start: 20622, Stop: 21062, Start Num: 1
Candidate Starts for Crater_25:
(Start: 1 @20622 has 26 MA's), (Start: 7 @20679 has 10 MA's), (Start: 11 @20706 has 1 MA's), (35, 20796), (43, 20829), (47, 20883), (48, 20886), (49, 20889), (52, 20898), (53, 20901), (56, 20922), (59, 20934), (68, 20991), (70, 20997), (72, 21003), (73, 21006), (74, 21009), (77, 21018), (78, 21024), (79, 21051),

Gene: Demsculpinboyz_41 Start: 28731, Stop: 29120, Start Num: 7
Candidate Starts for Demsculpinboyz_41:
(Start: 4 @28716 has 1 MA's), (Start: 6 @28728 has 1 MA's), (Start: 7 @28731 has 10 MA's), (9, 28746), (12, 28758), (15, 28767), (17, 28773), (22, 28788), (29, 28812), (33, 28836), (34, 28839), (35, 28845), (36, 28848), (37, 28851), (39, 28857), (41, 28866), (42, 28869), (44, 28914), (47, 28932), (51, 28944), (52, 28947), (53, 28950), (55, 28965), (62, 29016), (66, 29034), (67, 29037), (72, 29052), (76, 29064),

Gene: FF47_31 Start: 24709, Stop: 25119, Start Num: 7
Candidate Starts for FF47_31:
(2, 24658), (Start: 7 @24709 has 10 MA's), (Start: 10 @24727 has 1 MA's), (24, 24772), (36, 24829), (61, 24988), (66, 25015), (67, 25018), (69, 25024), (72, 25033), (83, 25114),

Gene: Frickyeah_26 Start: 20827, Stop: 21267, Start Num: 1
Candidate Starts for Frickyeah_26:
(Start: 1 @20827 has 26 MA's), (Start: 7 @20884 has 10 MA's), (Start: 11 @20911 has 1 MA's), (35, 21001), (43, 21034), (47, 21088), (48, 21091), (49, 21094), (52, 21103), (53, 21106), (56, 21127), (59, 21139), (68, 21196), (70, 21202), (72, 21208), (73, 21211), (74, 21214), (77, 21223), (78, 21229), (79, 21256),

Gene: Getalong_28 Start: 21864, Stop: 22304, Start Num: 1
Candidate Starts for Getalong_28:
(Start: 1 @21864 has 26 MA's), (Start: 7 @21921 has 10 MA's), (Start: 11 @21948 has 1 MA's), (35, 22038), (43, 22071), (47, 22125), (48, 22128), (49, 22131), (52, 22140), (53, 22143), (56, 22164), (59, 22176), (68, 22233), (70, 22239), (72, 22245), (73, 22248), (74, 22251), (77, 22260), (78, 22266), (79, 22293),

Gene: Holliday_27 Start: 21169, Stop: 21609, Start Num: 1
Candidate Starts for Holliday_27:
(Start: 1 @21169 has 26 MA's), (Start: 7 @21226 has 10 MA's), (Start: 11 @21253 has 1 MA's), (35, 21343), (43, 21376), (47, 21430), (48, 21433), (49, 21436), (52, 21445), (53, 21448), (56, 21469), (59, 21481), (68, 21538), (70, 21544), (72, 21550), (73, 21553), (74, 21556), (77, 21565), (78, 21571), (79, 21598),

Gene: Horus_27 Start: 21086, Stop: 21526, Start Num: 1
Candidate Starts for Horus_27:
(Start: 1 @21086 has 26 MA's), (Start: 7 @21143 has 10 MA's), (Start: 11 @21170 has 1 MA's), (35, 21260), (43, 21293), (47, 21347), (48, 21350), (49, 21353), (52, 21362), (53, 21365), (56, 21386), (59, 21398), (68, 21455), (70, 21461), (72, 21467), (73, 21470), (74, 21473), (77, 21482), (78, 21488), (79, 21515),

Gene: Jabbawokkie_43 Start: 30179, Stop: 30568, Start Num: 7
Candidate Starts for Jabbawokkie_43:
(Start: 4 @30164 has 1 MA's), (Start: 6 @30176 has 1 MA's), (Start: 7 @30179 has 10 MA's), (9, 30194), (12, 30206), (15, 30215), (17, 30221), (22, 30236), (29, 30260), (33, 30284), (34, 30287), (35, 30293), (37, 30299), (39, 30305), (41, 30314), (42, 30317), (44, 30362), (47, 30380), (51, 30392), (52, 30395), (53, 30398), (55, 30413), (62, 30464), (66, 30482), (67, 30485), (72, 30500), (76, 30512),

Gene: JuJu_25 Start: 20877, Stop: 21227, Start Num: 28
Candidate Starts for JuJu_25:
(Start: 28 @20877 has 6 MA's), (34, 20910), (37, 20922), (38, 20925), (44, 20985), (47, 21003), (51, 21015), (71, 21117), (72, 21120), (78, 21141),

Gene: Kamaru_27 Start: 21169, Stop: 21609, Start Num: 1
Candidate Starts for Kamaru_27:
(Start: 1 @21169 has 26 MA's), (Start: 7 @21226 has 10 MA's), (Start: 11 @21253 has 1 MA's), (35, 21343), (43, 21376), (47, 21430), (48, 21433), (49, 21436), (52, 21445), (53, 21448), (56, 21469), (59, 21481), (68, 21538), (70, 21544), (72, 21550), (73, 21553), (74, 21556), (77, 21565), (78, 21571), (79, 21598),

Gene: KappaFarmDelta_26 Start: 21305, Stop: 21655, Start Num: 28
Candidate Starts for KappaFarmDelta_26:
(Start: 28 @21305 has 6 MA's), (34, 21338), (47, 21431), (49, 21437), (50, 21440), (54, 21461), (56, 21470), (61, 21503), (74, 21554), (78, 21569),

Gene: Kenna_26 Start: 21062, Stop: 21502, Start Num: 1
Candidate Starts for Kenna_26:
(Start: 1 @21062 has 26 MA's), (Start: 7 @21119 has 10 MA's), (Start: 11 @21146 has 1 MA's), (35, 21236), (43, 21269), (47, 21323), (48, 21326), (49, 21329), (52, 21338), (53, 21341), (56, 21362), (59, 21374), (68, 21431), (70, 21437), (72, 21443), (73, 21446), (74, 21449), (77, 21458), (78, 21464), (79, 21491),

Gene: Kuwabara_26 Start: 20488, Stop: 20928, Start Num: 1
Candidate Starts for Kuwabara_26:
(Start: 1 @20488 has 26 MA's), (Start: 7 @20545 has 10 MA's), (Start: 11 @20572 has 1 MA's), (35, 20662), (43, 20695), (47, 20749), (48, 20752), (49, 20755), (52, 20764), (53, 20767), (56, 20788), (59, 20800), (68, 20857), (70, 20863), (72, 20869), (73, 20872), (74, 20875), (77, 20884), (78, 20890), (79, 20917),

Gene: Leroy_27 Start: 21087, Stop: 21527, Start Num: 1

Candidate Starts for Leroy_27:
(Start: 1 @21087 has 26 MA's), (Start: 7 @21144 has 10 MA's), (Start: 11 @21171 has 1 MA's), (35, 21261), (43, 21294), (47, 21348), (48, 21351), (49, 21354), (52, 21363), (53, 21366), (56, 21387), (59, 21399), (68, 21456), (70, 21462), (72, 21468), (73, 21471), (74, 21474), (77, 21483), (78, 21489), (79, 21516),

Gene: LilSpotty_36 Start: 26778, Stop: 27152, Start Num: 7
Candidate Starts for LilSpotty_36:
(3, 26739), (Start: 6 @26775 has 1 MA's), (Start: 7 @26778 has 10 MA's), (34, 26886), (36, 26895), (38, 26901), (43, 26925), (44, 26961), (47, 26979), (52, 26994), (55, 27012), (60, 27051), (72, 27099),

Gene: LitninMcQueen_26 Start: 20818, Stop: 21258, Start Num: 1
Candidate Starts for LitninMcQueen_26:
(Start: 1 @20818 has 26 MA's), (Start: 7 @20875 has 10 MA's), (Start: 11 @20902 has 1 MA's), (35, 20992), (43, 21025), (47, 21079), (48, 21082), (49, 21085), (52, 21094), (53, 21097), (56, 21118), (59, 21130), (68, 21187), (70, 21193), (72, 21199), (73, 21202), (77, 21214), (78, 21220), (79, 21247),

Gene: LongHai_32 Start: 25084, Stop: 25494, Start Num: 7
Candidate Starts for LongHai_32:
(Start: 7 @25084 has 10 MA's), (24, 25147), (55, 25321), (56, 25327), (58, 25330), (61, 25363), (66, 25390), (69, 25399), (72, 25408), (81, 25471), (83, 25489),

Gene: LunaStella_37 Start: 30071, Stop: 30460, Start Num: 7
Candidate Starts for LunaStella_37:
(Start: 4 @30056 has 1 MA's), (Start: 7 @30071 has 10 MA's), (Start: 10 @30089 has 1 MA's), (13, 30101), (14, 30104), (15, 30107), (17, 30113), (18, 30116), (19, 30119), (22, 30128), (27, 30140), (33, 30176), (34, 30179), (36, 30188), (37, 30191), (39, 30197), (43, 30218), (44, 30254), (47, 30272), (49, 30278), (51, 30284), (52, 30287), (53, 30290), (54, 30302), (56, 30311), (60, 30344), (61, 30347), (67, 30377), (72, 30392), (76, 30404),

Gene: Lutum_27 Start: 21062, Stop: 21502, Start Num: 1
Candidate Starts for Lutum_27:
(Start: 1 @21062 has 26 MA's), (Start: 7 @21119 has 10 MA's), (Start: 11 @21146 has 1 MA's), (35, 21236), (43, 21269), (47, 21323), (48, 21326), (49, 21329), (52, 21338), (53, 21341), (56, 21362), (59, 21374), (68, 21431), (70, 21437), (72, 21443), (73, 21446), (74, 21449), (77, 21458), (78, 21464), (79, 21491),

Gene: Maco6_29 Start: 24049, Stop: 24459, Start Num: 8
Candidate Starts for Maco6_29:
(5, 24040), (Start: 8 @24049 has 1 MA's), (24, 24112), (36, 24169), (61, 24328), (69, 24364), (72, 24373), (83, 24454),

Gene: Malisha_28 Start: 22947, Stop: 23384, Start Num: 1
Candidate Starts for Malisha_28:
(Start: 1 @22947 has 26 MA's), (Start: 7 @23004 has 10 MA's), (Start: 11 @23031 has 1 MA's), (12, 23034), (13, 23037), (18, 23052), (22, 23064), (36, 23124), (43, 23154), (48, 23211), (49, 23214), (53, 23226), (54, 23238), (55, 23241), (56, 23247), (59, 23259), (63, 23295), (64, 23304), (68, 23316), (70, 23322), (72, 23328), (73, 23331), (74, 23334), (77, 23343), (78, 23349),

Gene: MooMoo_33 Start: 28618, Stop: 29007, Start Num: 7
Candidate Starts for MooMoo_33:
(Start: 4 @28603 has 1 MA's), (Start: 7 @28618 has 10 MA's), (Start: 10 @28636 has 1 MA's), (13, 28648), (14, 28651), (15, 28654), (17, 28660), (18, 28663), (19, 28666), (22, 28675), (27, 28687), (33,

28723), (34, 28726), (36, 28735), (37, 28738), (39, 28744), (43, 28765), (44, 28801), (47, 28819), (49, 28825), (51, 28831), (52, 28834), (53, 28837), (54, 28849), (56, 28858), (60, 28891), (61, 28894), (67, 28924), (72, 28939),

Gene: MortyNRick_26 Start: 20794, Stop: 21234, Start Num: 1
Candidate Starts for MortyNRick_26:
(Start: 1 @20794 has 26 MA's), (Start: 7 @20851 has 10 MA's), (Start: 11 @20878 has 1 MA's), (35, 20968), (43, 21001), (47, 21055), (48, 21058), (49, 21061), (52, 21070), (53, 21073), (56, 21094), (59, 21106), (68, 21163), (70, 21169), (72, 21175), (73, 21178), (74, 21181), (77, 21190), (78, 21196), (79, 21223),

Gene: Muddy_31 Start: 24990, Stop: 25400, Start Num: 7
Candidate Starts for Muddy_31:
(Start: 7 @24990 has 10 MA's), (24, 25053), (55, 25227), (56, 25233), (58, 25236), (61, 25269), (66, 25296), (69, 25305), (72, 25314), (81, 25377), (83, 25395),

Gene: Obliviate_24 Start: 20727, Stop: 21077, Start Num: 28
Candidate Starts for Obliviate_24:
(Start: 28 @20727 has 6 MA's), (34, 20760), (47, 20853), (49, 20859), (50, 20862), (54, 20883), (56, 20892), (61, 20925), (74, 20976), (78, 20991), (82, 21042),

Gene: OneUp_48 Start: 31264, Stop: 31683, Start Num: 6
Candidate Starts for OneUp_48:
(Start: 4 @31252 has 1 MA's), (Start: 6 @31264 has 1 MA's), (Start: 10 @31288 has 1 MA's), (26, 31339), (Start: 28 @31354 has 6 MA's), (32, 31381), (33, 31384), (34, 31387), (35, 31393), (36, 31396), (41, 31414), (45, 31468), (56, 31519), (57, 31522), (59, 31543), (71, 31612), (72, 31615), (78, 31636),

Gene: Periwinkle_29 Start: 21531, Stop: 21971, Start Num: 1
Candidate Starts for Periwinkle_29:
(Start: 1 @21531 has 26 MA's), (Start: 7 @21588 has 10 MA's), (Start: 11 @21615 has 1 MA's), (35, 21705), (43, 21738), (47, 21792), (48, 21795), (49, 21798), (52, 21807), (53, 21810), (56, 21831), (59, 21843), (64, 21888), (68, 21900), (70, 21906), (72, 21912), (73, 21915), (74, 21918), (77, 21927), (78, 21933), (79, 21960),

Gene: Phabuloso_26 Start: 20818, Stop: 21258, Start Num: 1
Candidate Starts for Phabuloso_26:
(Start: 1 @20818 has 26 MA's), (Start: 7 @20875 has 10 MA's), (Start: 11 @20902 has 1 MA's), (35, 20992), (43, 21025), (47, 21079), (48, 21082), (49, 21085), (52, 21094), (53, 21097), (56, 21118), (59, 21130), (68, 21187), (70, 21193), (72, 21199), (73, 21202), (74, 21205), (77, 21214), (78, 21220), (79, 21247),

Gene: Phistory_28 Start: 21852, Stop: 22292, Start Num: 1
Candidate Starts for Phistory_28:
(Start: 1 @21852 has 26 MA's), (Start: 7 @21909 has 10 MA's), (Start: 11 @21936 has 1 MA's), (35, 22026), (43, 22059), (47, 22113), (48, 22116), (49, 22119), (52, 22128), (53, 22131), (56, 22152), (59, 22164), (68, 22221), (70, 22227), (72, 22233), (73, 22236), (74, 22239), (77, 22248), (78, 22254), (79, 22281),

Gene: Rem711_40 Start: 30711, Stop: 31142, Start Num: 11
Candidate Starts for Rem711_40:
(3, 30645), (Start: 4 @30669 has 1 MA's), (Start: 8 @30687 has 1 MA's), (Start: 11 @30711 has 1 MA's), (30, 30780), (35, 30801), (39, 30813), (46, 30879), (52, 30903), (70, 31002), (72, 31008), (80,

31059),

Gene: Salvus_32 Start: 25084, Stop: 25494, Start Num: 7
Candidate Starts for Salvus_32:
(Start: 7 @25084 has 10 MA's), (24, 25147), (55, 25321), (56, 25327), (58, 25330), (61, 25363), (66, 25390), (69, 25399), (72, 25408), (81, 25471), (83, 25489),

Gene: ShawBrad_27 Start: 21074, Stop: 21514, Start Num: 1
Candidate Starts for ShawBrad_27:
(Start: 1 @21074 has 26 MA's), (Start: 7 @21131 has 10 MA's), (Start: 11 @21158 has 1 MA's), (35, 21248), (43, 21281), (47, 21335), (48, 21338), (49, 21341), (52, 21350), (53, 21353), (56, 21374), (59, 21386), (68, 21443), (70, 21449), (72, 21455), (73, 21458), (74, 21461), (77, 21470), (78, 21476), (79, 21503),

Gene: Spooky_27 Start: 21156, Stop: 21593, Start Num: 1
Candidate Starts for Spooky_27:
(Start: 1 @21156 has 26 MA's), (Start: 7 @21213 has 10 MA's), (Start: 11 @21240 has 1 MA's), (12, 21243), (13, 21246), (18, 21261), (22, 21273), (36, 21333), (43, 21363), (48, 21420), (49, 21423), (53, 21435), (54, 21447), (55, 21450), (56, 21456), (59, 21468), (63, 21504), (64, 21513), (68, 21525), (70, 21531), (72, 21537), (73, 21540), (74, 21543), (77, 21552), (78, 21558),

Gene: Squiddly_29 Start: 22568, Stop: 23005, Start Num: 1
Candidate Starts for Squiddly_29:
(Start: 1 @22568 has 26 MA's), (Start: 7 @22625 has 10 MA's), (Start: 11 @22652 has 1 MA's), (12, 22655), (13, 22658), (18, 22673), (22, 22685), (36, 22745), (43, 22775), (48, 22832), (49, 22835), (53, 22847), (54, 22859), (55, 22862), (56, 22868), (59, 22880), (63, 22916), (64, 22925), (68, 22937), (70, 22943), (72, 22949), (73, 22952), (74, 22955), (77, 22964), (78, 22970),

Gene: TChen_35 Start: 30090, Stop: 30461, Start Num: 10
Candidate Starts for TChen_35:
(Start: 4 @30057 has 1 MA's), (Start: 7 @30072 has 10 MA's), (Start: 10 @30090 has 1 MA's), (13, 30102), (14, 30105), (15, 30108), (17, 30114), (18, 30117), (19, 30120), (22, 30129), (27, 30141), (33, 30177), (34, 30180), (36, 30189), (37, 30192), (39, 30198), (43, 30219), (44, 30255), (47, 30273), (49, 30279), (51, 30285), (52, 30288), (53, 30291), (54, 30303), (56, 30312), (60, 30345), (61, 30348), (67, 30378), (72, 30393), (76, 30405),

Gene: ThetaBob_35 Start: 29008, Stop: 29412, Start Num: 4
Candidate Starts for ThetaBob_35:
(Start: 4 @29008 has 1 MA's), (Start: 6 @29020 has 1 MA's), (Start: 7 @29023 has 10 MA's), (9, 29038), (12, 29050), (15, 29059), (17, 29065), (22, 29080), (29, 29104), (33, 29128), (34, 29131), (35, 29137), (37, 29143), (39, 29149), (41, 29158), (42, 29161), (44, 29206), (47, 29224), (51, 29236), (52, 29239), (53, 29242), (55, 29257), (62, 29308), (66, 29326), (67, 29329), (72, 29344), (76, 29356),

Gene: Toron_36 Start: 29915, Stop: 30304, Start Num: 7
Candidate Starts for Toron_36:
(3, 29876), (Start: 4 @29900 has 1 MA's), (Start: 7 @29915 has 10 MA's), (15, 29951), (17, 29957), (18, 29960), (19, 29963), (22, 29972), (29, 29996), (34, 30023), (37, 30035), (44, 30098), (47, 30116), (49, 30122), (51, 30128), (52, 30131), (53, 30134), (54, 30146), (55, 30149), (64, 30212), (67, 30221), (72, 30236), (76, 30248),

Gene: Whitney_28 Start: 21973, Stop: 22413, Start Num: 1
Candidate Starts for Whitney_28:

(Start: 1 @21973 has 26 MA's), (Start: 7 @22030 has 10 MA's), (Start: 11 @22057 has 1 MA's), (35, 22147), (43, 22180), (47, 22234), (48, 22237), (49, 22240), (52, 22249), (53, 22252), (56, 22273), (59, 22285), (68, 22342), (70, 22348), (72, 22354), (73, 22357), (74, 22360), (77, 22369), (78, 22375), (79, 22402),

Gene: Yoshi_42 Start: 29099, Stop: 29485, Start Num: 7
Candidate Starts for Yoshi_42:
(Start: 4 @29084 has 1 MA's), (Start: 6 @29096 has 1 MA's), (Start: 7 @29099 has 10 MA's), (14, 29132), (15, 29135), (16, 29138), (17, 29141), (19, 29147), (20, 29150), (29, 29180), (31, 29198), (33, 29204), (39, 29225), (40, 29231), (43, 29246), (47, 29300), (49, 29306), (51, 29312), (52, 29315), (53, 29318), (55, 29333), (60, 29372), (62, 29384), (66, 29402), (72, 29420), (76, 29432),

Gene: Zapner_42 Start: 30180, Stop: 30569, Start Num: 7
Candidate Starts for Zapner_42:
(Start: 4 @30165 has 1 MA's), (Start: 6 @30177 has 1 MA's), (Start: 7 @30180 has 10 MA's), (9, 30195), (12, 30207), (15, 30216), (17, 30222), (22, 30237), (29, 30261), (33, 30285), (34, 30288), (35, 30294), (37, 30300), (39, 30306), (41, 30315), (42, 30318), (44, 30363), (47, 30381), (51, 30393), (52, 30396), (53, 30399), (55, 30414), (62, 30465), (66, 30483), (67, 30486), (72, 30501), (76, 30513),

Gene: ZiggyZoo_24 Start: 20727, Stop: 21077, Start Num: 28
Candidate Starts for ZiggyZoo_24:
(Start: 28 @20727 has 6 MA's), (34, 20760), (47, 20853), (49, 20859), (50, 20862), (54, 20883), (56, 20892), (61, 20925), (74, 20976), (78, 20991), (82, 21042),