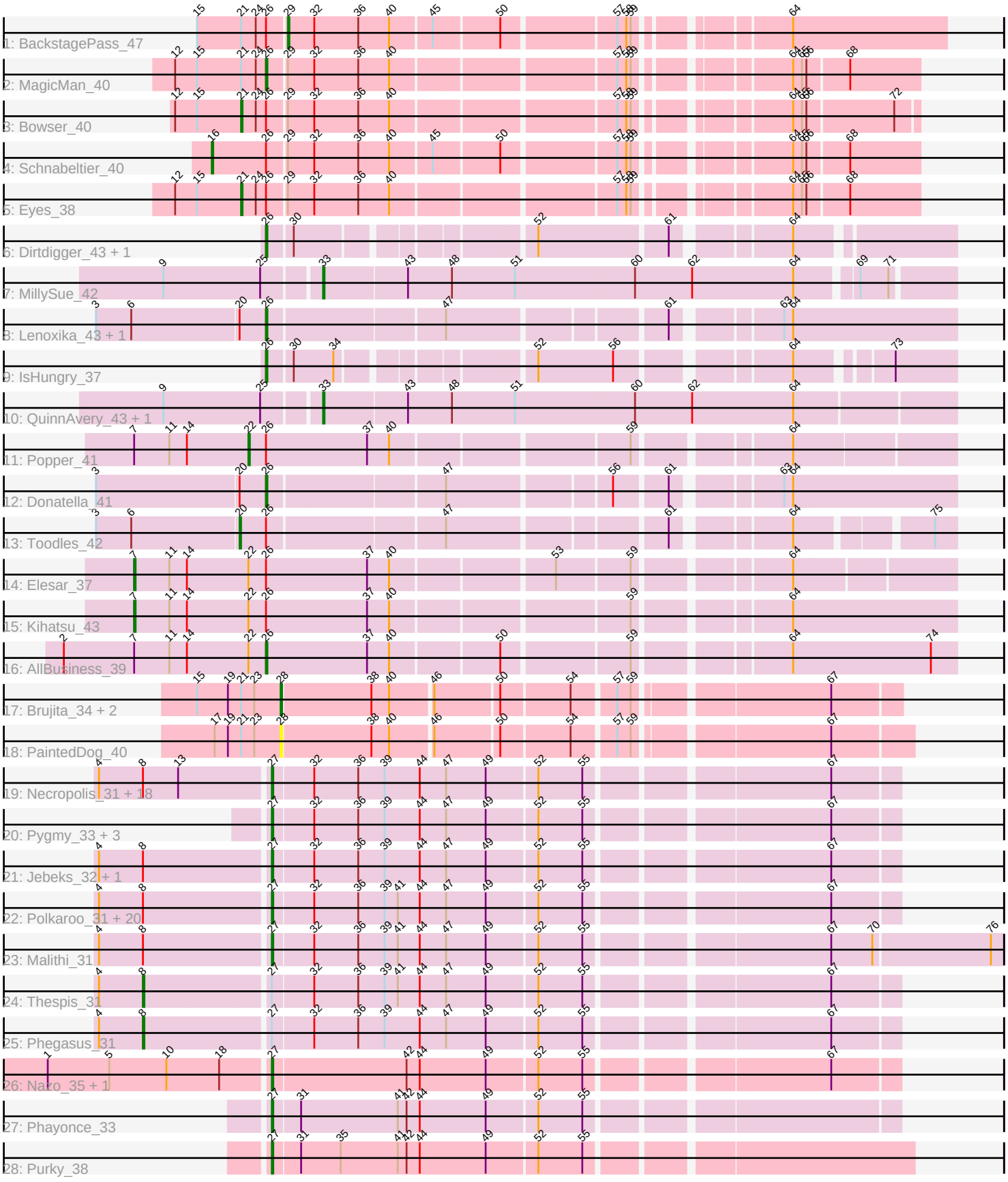
Pham 347549


1: BackstagePass_47
2: MagicMan_40
3: Bowser_40
4: Schnabeltier_40
5: Eyes_38
6: Dirtdigger_43 + 1
7: MillySue_42
8: Lenoxika_43 + 1
9: IsHungry_37
10: QuinnAvery_43 + 1
11: Popper_41
12: Donatella_41
13: Toodles_42
14: Elesar_37
15: Kihatsu_43
16: AllBusiness_39
17: Brujita_34 + 2
18: PaintedDog_40
19: Necropolis_31 + 18
20: Pygmy_33 + 3
21: Jebeks_32 + 1
22: Polkaroo_31 + 20
23: Malithi_31
24: Thespis_31
25: Phegasus_31
26: Nazo_35 + 1
27: Phayonce_33
28: Purky_38

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 347549 Report

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

Pham number 347549 has 76 members, 7 are drafts.

Phages represented in each track:
• Track 1 : BackstagePass_47
• Track 2 : MagicMan_40
• Track 3 : Bowser_40
• Track 4 : Schnabeltier_40
• Track 5 : Eyes_38
• Track 6 : Dirtdigger_43, Gusanita_40
• Track 7 : MillySue_42
• Track 8 : Lenoxika_43, ToastyOats_44
• Track 9 : IsHungry_37
• Track 10 : QuinnAvery_43, GoodLuckBabe_43
• Track 11 : Popper_41
• Track 12 : Donatella_41
• Track 13 : Toodles_42
• Track 14 : Elesar_37
• Track 15 : Kihatsu_43
• Track 16 : AllBusiness_39
• Track 17 : Brujita_34, Island3_34, Babsiella_34
• Track 18 : PaintedDog_40
• Track 19 : Necropolis_31, Venti_31, Fishburne_31, Techage_31, Phineas_31, Chubbello_31, Dynamo_31, Langerak_31, GaloreK_31, Donovan_31, Mangethe_31, BronnyJr_31, Kari_31, Majeke_31, HUHilltop_31, Zilizebeth_31, Vidya_31, Bartholomew_30, Etoile_31
• Track 20 : Pygmy_33, Bogie_33, Shipwreck_33, Arib1_31
• Track 21 : Jebeks_32, FirstPlacePfu_31
• Track 22 : Polkaroo_31, Bhagsy_31, KilKor_31, Brusacoram_31, Phalm_31, GreaseLightnin_31, PeanutPie_31, Willsammy_30, Ksquared_31, StevieRay_31, Camster_31, Sonah_31, Jung_30, Bunnies_31, Atcoo_31, Glaske_31, Gavriela_31, Megiddo_31, Juniormint_31, StressBall_31, CactusJack_31
• Track 23 : Malithi_31
• Track 24 : Thespis_31
• Track 25 : Phegasus_31
• Track 26 : Nazo_35, BigNuz_34
• Track 27 : Phayonce_33
• Track 28 : Purky_38

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 46 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Arib1_31, Atcoo_31, Bartholomew_30, Bhagsy_31, BigNuz_34, Bogie_33, BronnyJr_31, Brusacoram_31, Bunnies_31, CactusJack_31, Camster_31, Chubbello_31, Donovan_31, Dynamo_31, Etoile_31, FirstPlacePfu_31, Fishburne_31, GaloreK_31, Gavriela_31, Glaske_31, GreaseLightnin_31, HUHilltop_31, Jebeks_32, Jung_30, Juniormint_31, Kari_31, KilKor_31, Ksquared_31, Langerak_31, Majeke_31, Malithi_31, Mangethe_31, Megiddo_31, Nazo_35, Necropolis_31, PeanutPie_31, Phalm_31, Phayonce_33, Phineas_31, Polkaroo_31, Purky_38, Pygmy_33, Shipwreck_33, Sonah_31, StevieRay_31, StressBall_31, Techage_31, Venti_31, Vidya_31, Willsammy_30, Zilizebeth_31,

Genes that have the "Most Annotated" start but do not call it:
• Phegasus_31, Thespis_31,

Genes that do not have the "Most Annotated" start:
• AllBusiness_39, Babsiella_34, BackstagePass_47, Bowser_40, Brujita_34, Dirtdigger_43, Donatella_41, Elesar_37, Eyes_38, GoodLuckBabe_43, Gusanita_40, IsHungry_37, Island3_34, Kihatsu_43, Lenoxika_43, MagicMan_40, MillySue_42, PaintedDog_40, Popper_41, QuinnAvery_43, Schnabeltier_40, ToastyOats_44, Toodles_42,

Summary by start number:

Start 7:
• Found in 4 of 76 (5.3%) of genes in pham
• Manual Annotations of this start: 2 of 69
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Elesar_37 (FF), Kihatsu_43 (FF),

Start 8:
• Found in 45 of 76 (59.2%) of genes in pham
• Manual Annotations of this start: 2 of 69
• Called 4.4% of time when present
• Phage (with cluster) where this start called: Phegasus_31 (P1), Thespis_31 (P1),

Start 16:
• Found in 1 of 76 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Schnabeltier_40 (DB),

Start 20:
• Found in 4 of 76 (5.3%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Toodles_42 (FF),

Start 21:
• Found in 8 of 76 (10.5%) of genes in pham
• Manual Annotations of this start: 2 of 69
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Bowser_40 (DB), Eyes_38 (DB),

Start 22:
• Found in 4 of 76 (5.3%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Popper_41 (FF),

Start 26:
• Found in 16 of 76 (21.1%) of genes in pham
• Manual Annotations of this start: 7 of 69
• Called 50.0% of time when present
• Phage (with cluster) where this start called: AllBusiness_39 (FF), Dirtdigger_43 (FF), Donatella_41 (FF), Gusanita_40 (FF), IsHungry_37 (FF), Lenoxika_43 (FF), MagicMan_40 (DB), ToastyOats_44 (FF),

Start 27:
• Found in 53 of 76 (69.7%) of genes in pham
• Manual Annotations of this start: 46 of 69
• Called 96.2% of time when present
• Phage (with cluster) where this start called: Arib1_31 (P1), Atcoo_31 (P1), Bartholomew_30 (P1), Bhagsy_31 (P1), BigNuz_34 (P4), Bogie_33 (P1), BronnyJr_31 (P1), Brusacoram_31 (P1), Bunnies_31 (P1), CactusJack_31 (P1), Camster_31 (P1), Chubbello_31 (P1), Donovan_31 (P1), Dynamo_31 (P1), Etoile_31 (P1), FirstPlacePfu_31 (P1), Fishburne_31 (P1), GaloreK_31 (P1), Gavriela_31 (P1), Glaske_31 (P1), GreaseLightnin_31 (P1), HUHilltop_31 (P1), Jebeks_32 (P1), Jung_30 (P1), Juniormint_31 (P1), Kari_31 (P1), KilKor_31 (P1), Ksquared_31 (P1), Langerak_31 (P1), Majeke_31 (P1), Malithi_31 (P1), Mangethe_31 (P1), Megiddo_31 (P1), Nazo_35 (P4), Necropolis_31 (P1), PeanutPie_31 (P1), Phalm_31 (P1), Phayonce_33 (P5), Phineas_31 (P1), Polkaroo_31 (P1), Purky_38 (P6), Pygmy_33 (P1), Shipwreck_33 (P1), Sonah_31 (P1), StevieRay_31 (P1), StressBall_31 (P1), Techage_31 (P1), Venti_31 (P1), Vidya_31 (P1), Willsammy_30 (P1), Zilizebeth_31 (P1),

Start 28:
• Found in 4 of 76 (5.3%) of genes in pham
• Manual Annotations of this start: 3 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Babsiella_34 (I1), Brujita_34 (I1), Island3_34 (I1), PaintedDog_40 (I1),

Start 29:
• Found in 5 of 76 (6.6%) of genes in pham
• Manual Annotations of this start: 1 of 69
• Called 20.0% of time when present
• Phage (with cluster) where this start called: BackstagePass_47 (DB),

Start 33:
• Found in 3 of 76 (3.9%) of genes in pham

• Manual Annotations of this start: 3 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: GoodLuckBabe_43 (FF), MillySue_42 (FF), QuinnAvery_43 (FF),

Summary by clusters:

There are 7 clusters represented in this pham: P1, P6, P4, P5, I1, DB, FF,

Info for manual annotations of cluster DB:
•Start number 16 was manually annotated 1 time for cluster DB.
•Start number 21 was manually annotated 2 times for cluster DB.
•Start number 26 was manually annotated 1 time for cluster DB.
•Start number 29 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster FF:
•Start number 7 was manually annotated 2 times for cluster FF.
•Start number 20 was manually annotated 1 time for cluster FF.
•Start number 22 was manually annotated 1 time for cluster FF.
•Start number 26 was manually annotated 6 times for cluster FF.
•Start number 33 was manually annotated 3 times for cluster FF.

Info for manual annotations of cluster I1:
•Start number 28 was manually annotated 3 times for cluster I1.

Info for manual annotations of cluster P1:
•Start number 8 was manually annotated 2 times for cluster P1.
•Start number 27 was manually annotated 42 times for cluster P1.

Info for manual annotations of cluster P4:
•Start number 27 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 27 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:
•Start number 27 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: AllBusiness_39 Start: 31045, Stop: 30608, Start Num: 26
Candidate Starts for AllBusiness_39:
(2, 31183), (Start: 7 @31135 has 2 MA's), (11, 31111), (14, 31099), (Start: 22 @31057 has 1 MA's), (Start: 26 @31045 has 7 MA's), (37, 30976), (40, 30961), (50, 30892), (59, 30811), (64, 30718), (74, 30625),

Gene: Arib1_31 Start: 27353, Stop: 26952, Start Num: 27
Candidate Starts for Arib1_31:
(Start: 27 @27353 has 46 MA's), (32, 27326), (36, 27296), (39, 27278), (44, 27254), (47, 27236), (49, 27209), (52, 27176), (55, 27146), (67, 26996),

Gene: Atcoo_31 Start: 27834, Stop: 27433, Start Num: 27
Candidate Starts for Atcoo_31:
(4, 27945), (Start: 8 @27915 has 2 MA's), (Start: 27 @27834 has 46 MA's), (32, 27807), (36, 27777), (39, 27759), (41, 27750), (44, 27735), (47, 27717), (49, 27690), (52, 27657), (55, 27627), (67, 27477),

Gene: Babsiella_34 Start: 28570, Stop: 28175, Start Num: 28
Candidate Starts for Babsiella_34:
(15, 28627), (19, 28606), (Start: 21 @28597 has 2 MA's), (23, 28588), (Start: 28 @28570 has 3 MA's), (38, 28510), (40, 28498), (46, 28471), (50, 28429), (54, 28384), (57, 28357), (59, 28348), (67, 28228),

Gene: BackstagePass_47 Start: 34436, Stop: 34846, Start Num: 29
Candidate Starts for BackstagePass_47:
(15, 34379), (Start: 21 @34409 has 2 MA's), (24, 34418), (Start: 26 @34424 has 7 MA's), (Start: 29 @34436 has 1 MA's), (32, 34454), (36, 34484), (40, 34505), (45, 34532), (50, 34574), (57, 34646), (58, 34652), (59, 34655), (64, 34742),

Gene: Bartholomew_30 Start: 27347, Stop: 26946, Start Num: 27
Candidate Starts for Bartholomew_30:
(4, 27458), (Start: 8 @27428 has 2 MA's), (13, 27404), (Start: 27 @27347 has 46 MA's), (32, 27320), (36, 27290), (39, 27272), (44, 27248), (47, 27230), (49, 27203), (52, 27170), (55, 27140), (67, 26990),

Gene: Bhagsy_31 Start: 27343, Stop: 26942, Start Num: 27
Candidate Starts for Bhagsy_31:
(4, 27454), (Start: 8 @27424 has 2 MA's), (Start: 27 @27343 has 46 MA's), (32, 27316), (36, 27286), (39, 27268), (41, 27259), (44, 27244), (47, 27226), (49, 27199), (52, 27166), (55, 27136), (67, 26986),

Gene: BigNuz_34 Start: 29474, Stop: 29073, Start Num: 27
Candidate Starts for BigNuz_34:
(1, 29621), (5, 29579), (10, 29540), (18, 29504), (Start: 27 @29474 has 46 MA's), (42, 29384), (44, 29375), (49, 29330), (52, 29297), (55, 29267), (67, 29117),

Gene: Bogie_33 Start: 29130, Stop: 28729, Start Num: 27
Candidate Starts for Bogie_33:
(Start: 27 @29130 has 46 MA's), (32, 29103), (36, 29073), (39, 29055), (44, 29031), (47, 29013), (49, 28986), (52, 28953), (55, 28923), (67, 28773),

Gene: Bowser_40 Start: 32553, Stop: 32140, Start Num: 21
Candidate Starts for Bowser_40:
(12, 32598), (15, 32583), (Start: 21 @32553 has 2 MA's), (24, 32544), (Start: 26 @32538 has 7 MA's), (Start: 29 @32526 has 1 MA's), (32, 32508), (36, 32478), (40, 32457), (57, 32316), (58, 32310), (59, 32307), (64, 32220), (65, 32214), (66, 32211), (72, 32154),

Gene: BronnyJr_31 Start: 27844, Stop: 27443, Start Num: 27
Candidate Starts for BronnyJr_31:
(4, 27955), (Start: 8 @27925 has 2 MA's), (13, 27901), (Start: 27 @27844 has 46 MA's), (32, 27817), (36, 27787), (39, 27769), (44, 27745), (47, 27727), (49, 27700), (52, 27667), (55, 27637), (67, 27487),

Gene: Brujita_34 Start: 29468, Stop: 29082, Start Num: 28
Candidate Starts for Brujita_34:
(15, 29525), (19, 29504), (Start: 21 @29495 has 2 MA's), (23, 29486), (Start: 28 @29468 has 3 MA's), (38, 29408), (40, 29396), (46, 29369), (50, 29327), (54, 29282), (57, 29255), (59, 29246), (67, 29126),

Gene: Brusacoram_31 Start: 27340, Stop: 26939, Start Num: 27

Candidate Starts for Brusacoram_31:
(4, 27451), (Start: 8 @27421 has 2 MA's), (Start: 27 @27340 has 46 MA's), (32, 27313), (36, 27283), (39, 27265), (41, 27256), (44, 27241), (47, 27223), (49, 27196), (52, 27163), (55, 27133), (67, 26983),

Gene: Bunnies_31 Start: 27361, Stop: 26960, Start Num: 27
Candidate Starts for Bunnies_31:
(4, 27472), (Start: 8 @27442 has 2 MA's), (Start: 27 @27361 has 46 MA's), (32, 27334), (36, 27304), (39, 27286), (41, 27277), (44, 27262), (47, 27244), (49, 27217), (52, 27184), (55, 27154), (67, 27004),

Gene: CactusJack_31 Start: 27604, Stop: 27203, Start Num: 27
Candidate Starts for CactusJack_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: Camster_31 Start: 27377, Stop: 26976, Start Num: 27
Candidate Starts for Camster_31:
(4, 27488), (Start: 8 @27458 has 2 MA's), (Start: 27 @27377 has 46 MA's), (32, 27350), (36, 27320), (39, 27302), (41, 27293), (44, 27278), (47, 27260), (49, 27233), (52, 27200), (55, 27170), (67, 27020),

Gene: Chubbello_31 Start: 27346, Stop: 26945, Start Num: 27
Candidate Starts for Chubbello_31:
(4, 27457), (Start: 8 @27427 has 2 MA's), (13, 27403), (Start: 27 @27346 has 46 MA's), (32, 27319), (36, 27289), (39, 27271), (44, 27247), (47, 27229), (49, 27202), (52, 27169), (55, 27139), (67, 26989),

Gene: Dirtdigger_43 Start: 30759, Stop: 30352, Start Num: 26
Candidate Starts for Dirtdigger_43:
(Start: 26 @30759 has 7 MA's), (30, 30744), (52, 30603), (61, 30519), (64, 30450),

Gene: Donatella_41 Start: 30320, Stop: 29892, Start Num: 26
Candidate Starts for Donatella_41:
(3, 30434), (Start: 20 @30338 has 1 MA's), (Start: 26 @30320 has 7 MA's), (47, 30206), (56, 30104), (61, 30071), (63, 30008), (64, 30002),

Gene: Donovan_31 Start: 27369, Stop: 26968, Start Num: 27
Candidate Starts for Donovan_31:
(4, 27480), (Start: 8 @27450 has 2 MA's), (13, 27426), (Start: 27 @27369 has 46 MA's), (32, 27342), (36, 27312), (39, 27294), (44, 27270), (47, 27252), (49, 27225), (52, 27192), (55, 27162), (67, 27012),

Gene: Dynamo_31 Start: 27758, Stop: 27357, Start Num: 27
Candidate Starts for Dynamo_31:
(4, 27869), (Start: 8 @27839 has 2 MA's), (13, 27815), (Start: 27 @27758 has 46 MA's), (32, 27731), (36, 27701), (39, 27683), (44, 27659), (47, 27641), (49, 27614), (52, 27581), (55, 27551), (67, 27401),

Gene: Elesar_37 Start: 30914, Stop: 30393, Start Num: 7
Candidate Starts for Elesar_37:
(Start: 7 @30914 has 2 MA's), (11, 30890), (14, 30878), (Start: 22 @30836 has 1 MA's), (Start: 26 @30824 has 7 MA's), (37, 30755), (40, 30740), (53, 30638), (59, 30590), (64, 30497),

Gene: Etoile_31 Start: 27347, Stop: 26946, Start Num: 27
Candidate Starts for Etoile_31:
(4, 27458), (Start: 8 @27428 has 2 MA's), (13, 27404), (Start: 27 @27347 has 46 MA's), (32, 27320), (36, 27290), (39, 27272), (44, 27248), (47, 27230), (49, 27203), (52, 27170), (55, 27140), (67, 26990),

Gene: Eyes_38 Start: 32329, Stop: 31913, Start Num: 21
Candidate Starts for Eyes_38:
(12, 32374), (15, 32359), (Start: 21 @32329 has 2 MA's), (24, 32320), (Start: 26 @32314 has 7 MA's), (Start: 29 @32302 has 1 MA's), (32, 32284), (36, 32254), (40, 32233), (57, 32092), (58, 32086), (59, 32083), (64, 31996), (65, 31990), (66, 31987), (68, 31960),

Gene: FirstPlacePfu_31 Start: 27379, Stop: 26978, Start Num: 27
Candidate Starts for FirstPlacePfu_31:
(4, 27490), (Start: 8 @27460 has 2 MA's), (Start: 27 @27379 has 46 MA's), (32, 27352), (36, 27322), (39, 27304), (44, 27280), (47, 27262), (49, 27235), (52, 27202), (55, 27172), (67, 27022),

Gene: Fishburne_31 Start: 27347, Stop: 26946, Start Num: 27
Candidate Starts for Fishburne_31:
(4, 27458), (Start: 8 @27428 has 2 MA's), (13, 27404), (Start: 27 @27347 has 46 MA's), (32, 27320), (36, 27290), (39, 27272), (44, 27248), (47, 27230), (49, 27203), (52, 27170), (55, 27140), (67, 26990),

Gene: GaloreK_31 Start: 27343, Stop: 26942, Start Num: 27
Candidate Starts for GaloreK_31:
(4, 27454), (Start: 8 @27424 has 2 MA's), (13, 27400), (Start: 27 @27343 has 46 MA's), (32, 27316), (36, 27286), (39, 27268), (44, 27244), (47, 27226), (49, 27199), (52, 27166), (55, 27136), (67, 26986),

Gene: Gavriela_31 Start: 27604, Stop: 27203, Start Num: 27
Candidate Starts for Gavriela_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: Glaske_31 Start: 27604, Stop: 27203, Start Num: 27
Candidate Starts for Glaske_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: GoodLuckBabe_43 Start: 30465, Stop: 30046, Start Num: 33
Candidate Starts for GoodLuckBabe_43:
(9, 30567), (25, 30501), (Start: 33 @30465 has 3 MA's), (43, 30411), (48, 30381), (51, 30339), (60, 30258), (62, 30219), (64, 30150),

Gene: GreaseLightnin_31 Start: 27596, Stop: 27195, Start Num: 27
Candidate Starts for GreaseLightnin_31:
(4, 27707), (Start: 8 @27677 has 2 MA's), (Start: 27 @27596 has 46 MA's), (32, 27569), (36, 27539), (39, 27521), (41, 27512), (44, 27497), (47, 27479), (49, 27452), (52, 27419), (55, 27389), (67, 27239),

Gene: Gusanita_40 Start: 30510, Stop: 30103, Start Num: 26
Candidate Starts for Gusanita_40:
(Start: 26 @30510 has 7 MA's), (30, 30495), (52, 30354), (61, 30270), (64, 30201),

Gene: HUHilltop_31 Start: 27380, Stop: 26979, Start Num: 27
Candidate Starts for HUHilltop_31:
(4, 27491), (Start: 8 @27461 has 2 MA's), (13, 27437), (Start: 27 @27380 has 46 MA's), (32, 27353), (36, 27323), (39, 27305), (44, 27281), (47, 27263), (49, 27236), (52, 27203), (55, 27173), (67, 27023),

Gene: IsHungry_37 Start: 28697, Stop: 28293, Start Num: 26
Candidate Starts for IsHungry_37:

(Start: 26 @28697 has 7 MA's), (30, 28682), (34, 28655), (52, 28541), (56, 28490), (64, 28388), (73, 28334),

Gene: Island3_34 Start: 29468, Stop: 29082, Start Num: 28
Candidate Starts for Island3_34:
(15, 29525), (19, 29504), (Start: 21 @29495 has 2 MA's), (23, 29486), (Start: 28 @29468 has 3 MA's), (38, 29408), (40, 29396), (46, 29369), (50, 29327), (54, 29282), (57, 29255), (59, 29246), (67, 29126),

Gene: Jebeks_32 Start: 27332, Stop: 26931, Start Num: 27
Candidate Starts for Jebeks_32:
(4, 27443), (Start: 8 @27413 has 2 MA's), (Start: 27 @27332 has 46 MA's), (32, 27305), (36, 27275), (39, 27257), (44, 27233), (47, 27215), (49, 27188), (52, 27155), (55, 27125), (67, 26975),

Gene: Jung_30 Start: 27311, Stop: 26910, Start Num: 27
Candidate Starts for Jung_30:
(4, 27422), (Start: 8 @27392 has 2 MA's), (Start: 27 @27311 has 46 MA's), (32, 27284), (36, 27254), (39, 27236), (41, 27227), (44, 27212), (47, 27194), (49, 27167), (52, 27134), (55, 27104), (67, 26954),

Gene: Juniormint_31 Start: 27383, Stop: 26982, Start Num: 27
Candidate Starts for Juniormint_31:
(4, 27494), (Start: 8 @27464 has 2 MA's), (Start: 27 @27383 has 46 MA's), (32, 27356), (36, 27326), (39, 27308), (41, 27299), (44, 27284), (47, 27266), (49, 27239), (52, 27206), (55, 27176), (67, 27026),

Gene: Kari_31 Start: 27344, Stop: 26943, Start Num: 27
Candidate Starts for Kari_31:
(4, 27455), (Start: 8 @27425 has 2 MA's), (13, 27401), (Start: 27 @27344 has 46 MA's), (32, 27317), (36, 27287), (39, 27269), (44, 27245), (47, 27227), (49, 27200), (52, 27167), (55, 27137), (67, 26987),

Gene: Kihatsu_43 Start: 31043, Stop: 30516, Start Num: 7
Candidate Starts for Kihatsu_43:
(Start: 7 @31043 has 2 MA's), (11, 31019), (14, 31007), (Start: 22 @30965 has 1 MA's), (Start: 26 @30953 has 7 MA's), (37, 30884), (40, 30869), (59, 30719), (64, 30626),

Gene: KilKor_31 Start: 27604, Stop: 27203, Start Num: 27
Candidate Starts for KilKor_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: Ksquared_31 Start: 27361, Stop: 26960, Start Num: 27
Candidate Starts for Ksquared_31:
(4, 27472), (Start: 8 @27442 has 2 MA's), (Start: 27 @27361 has 46 MA's), (32, 27334), (36, 27304), (39, 27286), (41, 27277), (44, 27262), (47, 27244), (49, 27217), (52, 27184), (55, 27154), (67, 27004),

Gene: Langerak_31 Start: 27363, Stop: 26962, Start Num: 27
Candidate Starts for Langerak_31:
(4, 27474), (Start: 8 @27444 has 2 MA's), (13, 27420), (Start: 27 @27363 has 46 MA's), (32, 27336), (36, 27306), (39, 27288), (44, 27264), (47, 27246), (49, 27219), (52, 27186), (55, 27156), (67, 27006),

Gene: Lenoxika_43 Start: 30210, Stop: 29782, Start Num: 26
Candidate Starts for Lenoxika_43:
(3, 30324), (6, 30300), (Start: 20 @30228 has 1 MA's), (Start: 26 @30210 has 7 MA's), (47, 30096), (61, 29961), (63, 29898), (64, 29892),

Gene: MagicMan_40 Start: 32861, Stop: 32460, Start Num: 26
Candidate Starts for MagicMan_40:
(12, 32921), (15, 32906), (Start: 21 @32876 has 2 MA's), (24, 32867), (Start: 26 @32861 has 7 MA's), (Start: 29 @32849 has 1 MA's), (32, 32831), (36, 32801), (40, 32780), (57, 32639), (58, 32633), (59, 32630), (64, 32543), (65, 32537), (66, 32534), (68, 32507),

Gene: Majeke_31 Start: 27385, Stop: 26984, Start Num: 27
Candidate Starts for Majeke_31:
(4, 27496), (Start: 8 @27466 has 2 MA's), (13, 27442), (Start: 27 @27385 has 46 MA's), (32, 27358), (36, 27328), (39, 27310), (44, 27286), (47, 27268), (49, 27241), (52, 27208), (55, 27178), (67, 27028),

Gene: Malithi_31 Start: 27270, Stop: 26800, Start Num: 27
Candidate Starts for Malithi_31:
(4, 27381), (Start: 8 @27351 has 2 MA's), (Start: 27 @27270 has 46 MA's), (32, 27243), (36, 27213), (39, 27195), (41, 27186), (44, 27171), (47, 27153), (49, 27126), (52, 27093), (55, 27063), (67, 26913), (70, 26886), (76, 26808),

Gene: Mangethe_31 Start: 27385, Stop: 26984, Start Num: 27
Candidate Starts for Mangethe_31:
(4, 27496), (Start: 8 @27466 has 2 MA's), (13, 27442), (Start: 27 @27385 has 46 MA's), (32, 27358), (36, 27328), (39, 27310), (44, 27286), (47, 27268), (49, 27241), (52, 27208), (55, 27178), (67, 27028),

Gene: Megiddo_31 Start: 27604, Stop: 27203, Start Num: 27
Candidate Starts for Megiddo_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: MillySue_42 Start: 30310, Stop: 29900, Start Num: 33
Candidate Starts for MillySue_42:
(9, 30412), (25, 30346), (Start: 33 @30310 has 3 MA's), (43, 30256), (48, 30226), (51, 30184), (60, 30103), (62, 30064), (64, 29995), (69, 29959), (71, 29941),

Gene: Nazo_35 Start: 29476, Stop: 29075, Start Num: 27
Candidate Starts for Nazo_35:
(1, 29623), (5, 29581), (10, 29542), (18, 29506), (Start: 27 @29476 has 46 MA's), (42, 29386), (44, 29377), (49, 29332), (52, 29299), (55, 29269), (67, 29119),

Gene: Necropolis_31 Start: 27344, Stop: 26943, Start Num: 27
Candidate Starts for Necropolis_31:
(4, 27455), (Start: 8 @27425 has 2 MA's), (13, 27401), (Start: 27 @27344 has 46 MA's), (32, 27317), (36, 27287), (39, 27269), (44, 27245), (47, 27227), (49, 27200), (52, 27167), (55, 27137), (67, 26987),

Gene: PaintedDog_40 Start: 31112, Stop: 30717, Start Num: 28
Candidate Starts for PaintedDog_40:
(17, 31157), (19, 31148), (Start: 21 @31139 has 2 MA's), (23, 31130), (Start: 28 @31112 has 3 MA's), (38, 31052), (40, 31040), (46, 31013), (50, 30971), (54, 30926), (57, 30899), (59, 30890), (67, 30770),

Gene: PeanutPie_31 Start: 27343, Stop: 26942, Start Num: 27
Candidate Starts for PeanutPie_31:
(4, 27454), (Start: 8 @27424 has 2 MA's), (Start: 27 @27343 has 46 MA's), (32, 27316), (36, 27286), (39, 27268), (41, 27259), (44, 27244), (47, 27226), (49, 27199), (52, 27166), (55, 27136), (67, 26986),

Gene: Phalm_31 Start: 27604, Stop: 27203, Start Num: 27

Candidate Starts for Phalm_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: Phayonce_33 Start: 29388, Stop: 28987, Start Num: 27
Candidate Starts for Phayonce_33:
(Start: 27 @29388 has 46 MA's), (31, 29370), (41, 29304), (42, 29298), (44, 29289), (49, 29244), (52, 29211), (55, 29181),

Gene: Phegasus_31 Start: 27433, Stop: 26951, Start Num: 8
Candidate Starts for Phegasus_31:
(4, 27463), (Start: 8 @27433 has 2 MA's), (Start: 27 @27352 has 46 MA's), (32, 27325), (36, 27295), (39, 27277), (44, 27253), (47, 27235), (49, 27208), (52, 27175), (55, 27145), (67, 26995),

Gene: Phineas_31 Start: 27718, Stop: 27317, Start Num: 27
Candidate Starts for Phineas_31:
(4, 27829), (Start: 8 @27799 has 2 MA's), (13, 27775), (Start: 27 @27718 has 46 MA's), (32, 27691), (36, 27661), (39, 27643), (44, 27619), (47, 27601), (49, 27574), (52, 27541), (55, 27511), (67, 27361),

Gene: Polkaroo_31 Start: 27361, Stop: 26960, Start Num: 27
Candidate Starts for Polkaroo_31:
(4, 27472), (Start: 8 @27442 has 2 MA's), (Start: 27 @27361 has 46 MA's), (32, 27334), (36, 27304), (39, 27286), (41, 27277), (44, 27262), (47, 27244), (49, 27217), (52, 27184), (55, 27154), (67, 27004),

Gene: Popper_41 Start: 29991, Stop: 29548, Start Num: 22
Candidate Starts for Popper_41:
(Start: 7 @30069 has 2 MA's), (11, 30045), (14, 30033), (Start: 22 @29991 has 1 MA's), (Start: 26 @29979 has 7 MA's), (37, 29910), (40, 29895), (59, 29745), (64, 29652),

Gene: Purky_38 Start: 30118, Stop: 29705, Start Num: 27
Candidate Starts for Purky_38:
(Start: 27 @30118 has 46 MA's), (31, 30100), (35, 30073), (41, 30034), (42, 30028), (44, 30019), (49, 29974), (52, 29941), (55, 29911),

Gene: Pygmy_33 Start: 29186, Stop: 28785, Start Num: 27
Candidate Starts for Pygmy_33:
(Start: 27 @29186 has 46 MA's), (32, 29159), (36, 29129), (39, 29111), (44, 29087), (47, 29069), (49, 29042), (52, 29009), (55, 28979), (67, 28829),

Gene: QuinnAvery_43 Start: 30914, Stop: 30495, Start Num: 33
Candidate Starts for QuinnAvery_43:
(9, 31016), (25, 30950), (Start: 33 @30914 has 3 MA's), (43, 30860), (48, 30830), (51, 30788), (60, 30707), (62, 30668), (64, 30599),

Gene: Schnabeltier_40 Start: 32529, Stop: 32092, Start Num: 16
Candidate Starts for Schnabeltier_40:
(Start: 16 @32529 has 1 MA's), (Start: 26 @32493 has 7 MA's), (Start: 29 @32481 has 1 MA's), (32, 32463), (36, 32433), (40, 32412), (45, 32385), (50, 32343), (57, 32271), (58, 32265), (59, 32262), (64, 32175), (65, 32169), (66, 32166), (68, 32139),

Gene: Shipwreck_33 Start: 29161, Stop: 28760, Start Num: 27
Candidate Starts for Shipwreck_33:

(Start: 27 @29161 has 46 MA's), (32, 29134), (36, 29104), (39, 29086), (44, 29062), (47, 29044), (49, 29017), (52, 28984), (55, 28954), (67, 28804),

Gene: Sonah_31 Start: 27333, Stop: 26932, Start Num: 27
Candidate Starts for Sonah_31:
(4, 27444), (Start: 8 @27414 has 2 MA's), (Start: 27 @27333 has 46 MA's), (32, 27306), (36, 27276), (39, 27258), (41, 27249), (44, 27234), (47, 27216), (49, 27189), (52, 27156), (55, 27126), (67, 26976),

Gene: StevieRay_31 Start: 27312, Stop: 26911, Start Num: 27
Candidate Starts for StevieRay_31:
(4, 27423), (Start: 8 @27393 has 2 MA's), (Start: 27 @27312 has 46 MA's), (32, 27285), (36, 27255), (39, 27237), (41, 27228), (44, 27213), (47, 27195), (49, 27168), (52, 27135), (55, 27105), (67, 26955),

Gene: StressBall_31 Start: 27604, Stop: 27203, Start Num: 27
Candidate Starts for StressBall_31:
(4, 27715), (Start: 8 @27685 has 2 MA's), (Start: 27 @27604 has 46 MA's), (32, 27577), (36, 27547), (39, 27529), (41, 27520), (44, 27505), (47, 27487), (49, 27460), (52, 27427), (55, 27397), (67, 27247),

Gene: Techage_31 Start: 27370, Stop: 26969, Start Num: 27
Candidate Starts for Techage_31:
(4, 27481), (Start: 8 @27451 has 2 MA's), (13, 27427), (Start: 27 @27370 has 46 MA's), (32, 27343), (36, 27313), (39, 27295), (44, 27271), (47, 27253), (49, 27226), (52, 27193), (55, 27163), (67, 27013),

Gene: Thespis_31 Start: 27421, Stop: 26939, Start Num: 8
Candidate Starts for Thespis_31:
(4, 27451), (Start: 8 @27421 has 2 MA's), (Start: 27 @27340 has 46 MA's), (32, 27313), (36, 27283), (39, 27265), (41, 27256), (44, 27241), (47, 27223), (49, 27196), (52, 27163), (55, 27133), (67, 26983),

Gene: ToastyOats_44 Start: 30397, Stop: 29969, Start Num: 26
Candidate Starts for ToastyOats_44:
(3, 30511), (6, 30487), (Start: 20 @30415 has 1 MA's), (Start: 26 @30397 has 7 MA's), (47, 30283), (61, 30148), (63, 30085), (64, 30079),

Gene: Toodles_42 Start: 31031, Stop: 30600, Start Num: 20
Candidate Starts for Toodles_42:
(3, 31127), (6, 31103), (Start: 20 @31031 has 1 MA's), (Start: 26 @31013 has 7 MA's), (47, 30899), (61, 30764), (64, 30695), (75, 30614),

Gene: Venti_31 Start: 27347, Stop: 26946, Start Num: 27
Candidate Starts for Venti_31:
(4, 27458), (Start: 8 @27428 has 2 MA's), (13, 27404), (Start: 27 @27347 has 46 MA's), (32, 27320), (36, 27290), (39, 27272), (44, 27248), (47, 27230), (49, 27203), (52, 27170), (55, 27140), (67, 26990),

Gene: Vidya_31 Start: 27380, Stop: 26979, Start Num: 27
Candidate Starts for Vidya_31:
(4, 27491), (Start: 8 @27461 has 2 MA's), (13, 27437), (Start: 27 @27380 has 46 MA's), (32, 27353), (36, 27323), (39, 27305), (44, 27281), (47, 27263), (49, 27236), (52, 27203), (55, 27173), (67, 27023),

Gene: Willsammy_30 Start: 27087, Stop: 26686, Start Num: 27
Candidate Starts for Willsammy_30:
(4, 27198), (Start: 8 @27168 has 2 MA's), (Start: 27 @27087 has 46 MA's), (32, 27060), (36, 27030), (39, 27012), (41, 27003), (44, 26988), (47, 26970), (49, 26943), (52, 26910), (55, 26880), (67, 26730),

Gene: Zilizebeth_31 Start: 27379, Stop: 26978, Start Num: 27
Candidate Starts for Zilizebeth_31:
(4, 27490), (Start: 8 @27460 has 2 MA's), (13, 27436), (Start: 27 @27379 has 46 MA's), (32, 27352), (36, 27322), (39, 27304), (44, 27280), (47, 27262), (49, 27235), (52, 27202), (55, 27172), (67, 27022),