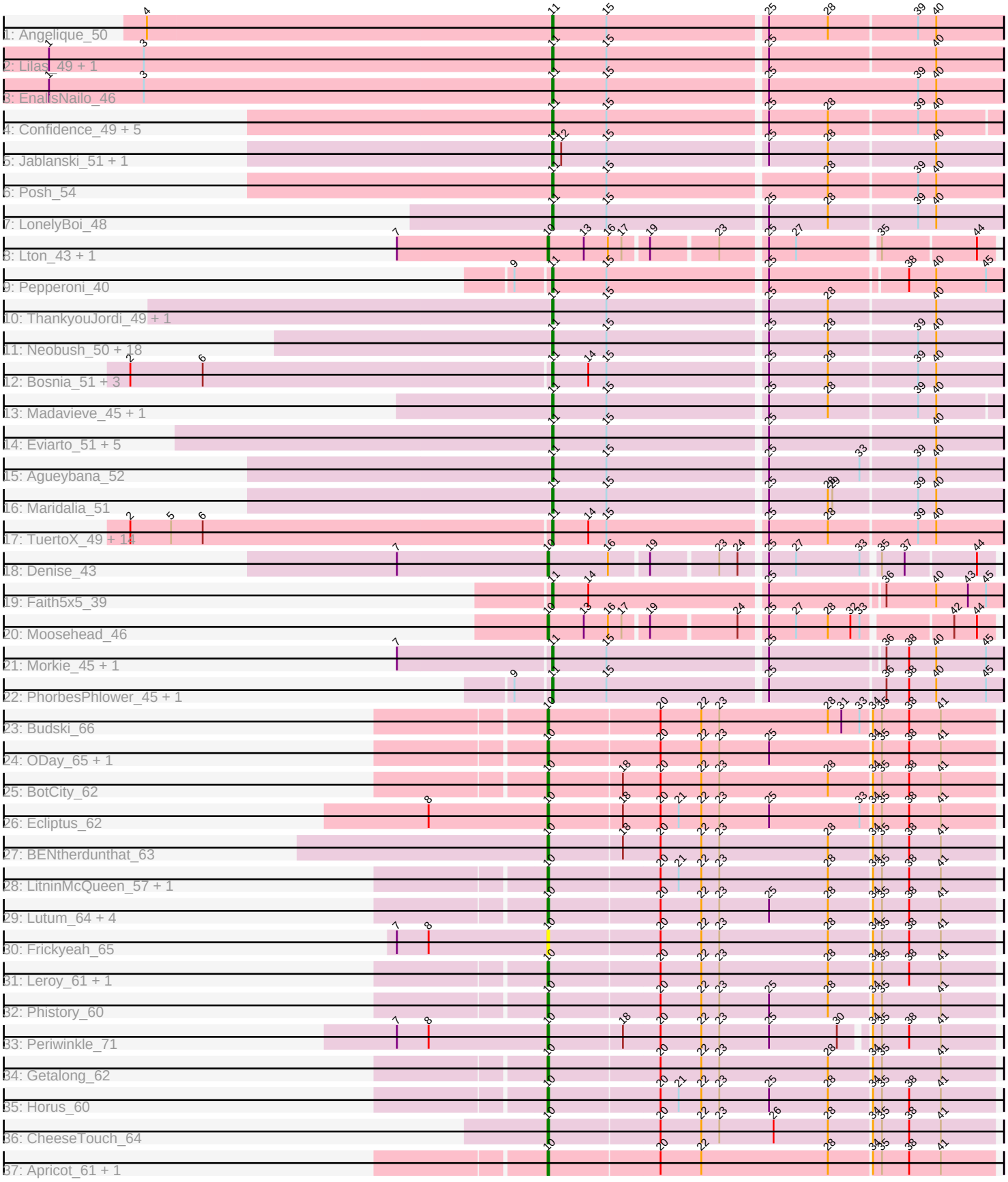
# Pham 347466


1: Angelique_50
2: Lilas_49 + 1
3: EnallsNailo_46
4: Confidence_49 + 5
5: Jablanski_51 + 1
6: Posh_54
7: LonelyBoi_48
8: Lton_43 + 1
9: Pepperoni_40
10: ThankyouJordi_49 + 1
11: Neobush_50 + 18
12: Bosnia_51 + 3
13: Madavieve_45 + 1
14: Eviarto_51 + 5
15: Agueybana_52
16: Maridalia_51
17: TuertoX_49 + 14
18: Denise_43
19: Faith5x5_39
20: Moosehead_46
21: Morkie_45 + 1
22: PhorbesPhlower_45 + 1
23: Budski_66
24: ODay_65 + 1
25: BotCity_62
26: Ecliptus_62
27: BENtherdunthat_63
28: LitninMcQueen_57 + 1
29: Lutum_64 + 4
30: Frickyeah_65
31: Leroy_61 + 1
32: Phistory_60
33: Periwinkle_71
34: Getalong_62
35: Horus_60
36: CheeseTouch_64
37: Apricot_61 + 1

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly with annotated starts, the track will be further scaled to only show that region of the ORF with annotated starts. This action will be indicated by adding "Zoomed" to the title. For starts, yellow indicates the location of called starts comprised solely of Glimmer/GeneMark auto-annotations, green indicates the location of called starts with at least 1 manual gene annotation.

# Pham 347466 Report

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

Pham number 347466 has 97 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Angelique_50
• Track 2 : Lilas_49, Bradissa_47
• Track 3 : EnalisNailo_46
• Track 4 : Confidence_49, Hyzer_55, BoyNamedSue_50, SushiChef_47, AlumE_50, Bunnybear_43
• Track 5 : Jablanski_51, Pytheas_51
• Track 6 : Posh_54
• Track 7 : LonelyBoi_48
• Track 8 : Lton_43, Lucky10_44
• Track 9 : Pepperoni_40
• Track 10 : ThankyouJordi_49, WelcomeAyanna_49
• Track 11 : Neobush_50, Antonio_50, Kita_51, Attis_45, Pickett_43, Manasvini_51, Trumpet_50, Polly_47, Yeet412_45, LordFarquaad_47, Eudoria_50, Dillpickles_55, Zirinka_47, SoilAssassin_45, EdnaMode_44, Zameen_50, Tayonia_50, Suscepit_50, Bialota_48
• Track 12 : Bosnia_51, Sahara_48, Matteo_42, Jalleen_49
• Track 13 : Madavieve_45, Wrigley_55
• Track 14 : Eviarto_51, Herod_50, BatStarr_50, Nymphadora_51, TimTam_51, Hugley_47
• Track 15 : Agueybana_52
• Track 16 : Maridalia_51
• Track 17 : TuertoX_49, Sproutie_49, Bjanes7_46, Ebert_51, Savage_49, Clap_49, Nettuno_45, Lamberg_45, GemG_49, Yinzer_49, Whiteclaw_49, Haley23_49, Gizermo_49, Mocha12_49, Cynthia_49
• Track 18 : Denise_43
• Track 19 : Faith5x5_39
• Track 20 : Moosehead_46
• Track 21 : Morkie_45, OneDirection_40
• Track 22 : PhorbesPhlower_45, InLimbo_45
• Track 23 : Budski_66
• Track 24 : ODay_65, Holliday_62
• Track 25 : BotCity_62
• Track 26 : Ecliptus_62
• Track 27 : BENtherdunthat_63
• Track 28 : LitninMcQueen_57, Kamaru_58
• Track 29 : Lutum_64, Asapag_59, Kenna_59, Birdsong_59, Phabuloso_61
• Track 30 : Frickyeah_65

• Track 31 : Leroy_61, ShawBrad_65
• Track 32 : Phistory_60
• Track 33 : Periwinkle_71
• Track 34 : Getalong_62
• Track 35 : Horus_60
• Track 36 : CheeseTouch_64
• Track 37 : Apricot_61, Crater_61

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

The start number called the most often in the published annotations is 11, it was called in 63 of the 89 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agueybana_52, AlumE_50, Angelique_50, Antonio_50, Attis_45, BatStarr_50, Bialota_48, Bjanes7_46, Bosnia_51, BoyNamedSue_50, Bradissa_47, Bunnybear_43, Clap_49, Confidence_49, Cynthia_49, Dillpickles_55, Ebert_51, EdnaMode_44, EnalisNailo_46, Eudoria_50, Eviarto_51, Faith5x5_39, GemG_49, Gizermo_49, Haley23_49, Herod_50, Hugley_47, Hyzer_55, InLimbo_45, Jablanski_51, Jalleen_49, Kita_51, Lamberg_45, Lilas_49, LonelyBoi_48, LordFarquaad_47, Madavieve_45, Manasvini_51, Maridalia_51, Matteo_42, Mocha12_49, Morkie_45, Neobush_50, Nettuno_45, Nymphadora_51, OneDirection_40, Pepperoni_40, PhorbesPhlower_45, Pickett_43, Polly_47, Posh_54, Pytheas_51, Sahara_48, Savage_49, SoilAssassin_45, Sproutie_49, Suscepit_50, SushiChef_47, Tayonia_50, ThankyouJordi_49, TimTam_51, Trumpet_50, TuertoX_49, WelcomeAyanna_49, Whiteclaw_49, Wrigley_55, Yeet412_45, Yinzer_49, Zameen_50, Zirinka_47,

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

Genes that do not have the "Most Annotated" start:
• Apricot_61, Asapag_59, BENtherdunthat_63, Birdsong_59, BotCity_62, Budski_66, CheeseTouch_64, Crater_61, Denise_43, Ecliptus_62, Frickyeah_65, Getalong_62, Holliday_62, Horus_60, Kamaru_58, Kenna_59, Leroy_61, LitninMcQueen_57, Lton_43, Lucky10_44, Lutum_64, Moosehead_46, ODay_65, Periwinkle_71, Phabuloso_61, Phistory_60, ShawBrad_65,

**Summary by start number:**

Start 10:
• Found in 27 of 97 ( 27.8% ) of genes in pham
• Manual Annotations of this start: 26 of 89
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apricot_61 (DN3), Asapag_59 (DN1), BENtherdunthat_63 (DN1), Birdsong_59 (DN), BotCity_62 (DN), Budski_66 (DN), CheeseTouch_64 (DN1), Crater_61 (DN3), Denise_43 (CZ5), Ecliptus_62 (DN), Frickyeah_65 (DN1), Getalong_62 (DN1), Holliday_62 (DN1), Horus_60 (DN1), Kamaru_58 (DN1), Kenna_59 (DN1), Leroy_61 (DN1), LitninMcQueen_57 (DN1), Lton_43 (CZ), Lucky10_44 (DH), Lutum_64 (DN1), Moosehead_46 (CZ6), ODay_65

(DN), Periwinkle_71 (DN1), Phabuloso_61 (DN1), Phistory_60 (DN1), ShawBrad_65 (DN1),

Start 11:
• Found in 70 of 97 ( 72.2% ) of genes in pham
• Manual Annotations of this start: 63 of 89
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Agueybana_52 (CZ1), AlumE_50 (CZ1), Angelique_50 (CY1), Antonio_50 (CZ1), Attis_45 (CZ2), BatStarr_50 (CZ1), Bialota_48 (CZ1), Bjanes7_46 (CZ2), Bosnia_51 (CZ1), BoyNamedSue_50 (CZ1), Bradissa_47 (CY1), Bunnybear_43 (CZ), Clap_49 (CZ2), Confidence_49 (CY1), Cynthia_49 (CZ2), Dillpickles_55 (CZ1), Ebert_51 (CZ2), EdnaMode_44 (CZ2), EnalisNailo_46 (CY1), Eudoria_50 (CZ1), Eviarto_51 (CZ1), Faith5x5_39 (CZ6), GemG_49 (CZ2), Gizermo_49 (CZ2), Haley23_49 (CZ2), Herod_50 (CZ1), Hugley_47 (CZ1), Hyzer_55 (CZ1), InLimbo_45 (DH), Jablanski_51 (CY3), Jalleen_49 (CZ2), Kita_51 (CZ1), Lamberg_45 (CZ2), Lilas_49 (CY1), LonelyBoi_48 (CY7), LordFarquaad_47 (CZ2), Madavieve_45 (CZ1), Manasvini_51 (CZ1), Maridalia_51 (CZ1), Matteo_42 (CZ2), Mocha12_49 (CZ2), Morkie_45 (DH), Neobush_50 (CZ1), Nettuno_45 (CZ2), Nymphadora_51 (CZ1), OneDirection_40 (CZ6), Pepperoni_40 (CZ), PhorbesPhlower_45 (DH), Pickett_43 (CZ2), Polly_47 (CZ1), Posh_54 (CY4), Pytheas_51 (CY3), Sahara_48 (CZ2), Savage_49 (CZ2), SoilAssassin_45 (CZ2), Sproutie_49 (CZ2), Suscepit_50 (CZ1), SushiChef_47 (CZ), Tayonia_50 (CZ1), ThankyouJordi_49 (CZ1), TimTam_51 (CZ1), Trumpet_50 (CZ1), TuertoX_49 (CZ2), WelcomeAyanna_49 (CZ1), Whiteclaw_49 (CZ2), Wrigley_55 (CY4), Yeet412_45 (CZ2), Yinzer_49 (CZ2), Zameen_50 (CZ1), Zirinka_47 (CZ1),

**Summary by clusters:**

There are 13 clusters represented in this pham: DN, CY3, CY1, CY7, DH, CY4, CZ2, CZ1, CZ6, CZ5, CZ, DN1, DN3,

Info for manual annotations of cluster CY1:
•Start number 11 was manually annotated 5 times for cluster CY1.

Info for manual annotations of cluster CY3:
•Start number 11 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:
•Start number 11 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY7:
•Start number 11 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster CZ:
•Start number 10 was manually annotated 1 time for cluster CZ.
•Start number 11 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 11 was manually annotated 25 times for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 11 was manually annotated 22 times for cluster CZ2.

Info for manual annotations of cluster CZ5:
•Start number 10 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:
•Start number 10 was manually annotated 1 time for cluster CZ6.
•Start number 11 was manually annotated 2 times for cluster CZ6.

Info for manual annotations of cluster DH:
•Start number 10 was manually annotated 1 time for cluster DH.
•Start number 11 was manually annotated 2 times for cluster DH.

Info for manual annotations of cluster DN:
•Start number 10 was manually annotated 5 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 10 was manually annotated 15 times for cluster DN1.

Info for manual annotations of cluster DN3:
•Start number 10 was manually annotated 2 times for cluster DN3.

***Gene Information:***

Gene: Agueybana_52 Start: 38634, Stop: 38924, Start Num: 11
Candidate Starts for Agueybana_52:
(Start: 11 @38634 has 63 MA's), (15, 38670), (25, 38772), (33, 38832), (39, 38868), (40, 38880),

Gene: AlumE_50 Start: 37134, Stop: 37424, Start Num: 11
Candidate Starts for AlumE_50:
(Start: 11 @37134 has 63 MA's), (15, 37170), (25, 37272), (28, 37311), (39, 37368), (40, 37380),

Gene: Angelique_50 Start: 38349, Stop: 38639, Start Num: 11
Candidate Starts for Angelique_50:
(4, 38082), (Start: 11 @38349 has 63 MA's), (15, 38385), (25, 38487), (28, 38526), (39, 38583), (40, 38595),

Gene: Antonio_50 Start: 36407, Stop: 36697, Start Num: 11
Candidate Starts for Antonio_50:
(Start: 11 @36407 has 63 MA's), (15, 36443), (25, 36545), (28, 36584), (39, 36641), (40, 36653),

Gene: Apricot_61 Start: 38500, Stop: 38790, Start Num: 10
Candidate Starts for Apricot_61:
(Start: 10 @38500 has 26 MA's), (20, 38572), (22, 38599), (28, 38683), (34, 38710), (35, 38716), (38, 38734), (41, 38755),

Gene: Asapag_59 Start: 38078, Stop: 38368, Start Num: 10
Candidate Starts for Asapag_59:
(Start: 10 @38078 has 26 MA's), (20, 38150), (22, 38177), (23, 38189), (25, 38222), (28, 38261), (34, 38288), (35, 38294), (38, 38312), (41, 38333),

Gene: Attis_45 Start: 33540, Stop: 33830, Start Num: 11
Candidate Starts for Attis_45:

(Start: 11 @33540 has 63 MA's), (15, 33576), (25, 33678), (28, 33717), (39, 33774), (40, 33786),

Gene: BENtherdunthat_63 Start: 39358, Stop: 39648, Start Num: 10
Candidate Starts for BENtherdunthat_63:
(Start: 10 @39358 has 26 MA's), (18, 39406), (20, 39430), (22, 39457), (23, 39469), (28, 39541), (34, 39568), (35, 39574), (38, 39592), (41, 39613),

Gene: BatStarr_50 Start: 38377, Stop: 38667, Start Num: 11
Candidate Starts for BatStarr_50:
(Start: 11 @38377 has 63 MA's), (15, 38413), (25, 38515), (40, 38623),

Gene: Bialota_48 Start: 37039, Stop: 37329, Start Num: 11
Candidate Starts for Bialota_48:
(Start: 11 @37039 has 63 MA's), (15, 37075), (25, 37177), (28, 37216), (39, 37273), (40, 37285),

Gene: Birdsong_59 Start: 38299, Stop: 38589, Start Num: 10
Candidate Starts for Birdsong_59:
(Start: 10 @38299 has 26 MA's), (20, 38371), (22, 38398), (23, 38410), (25, 38443), (28, 38482), (34, 38509), (35, 38515), (38, 38533), (41, 38554),

Gene: Bjanes7_46 Start: 33715, Stop: 34005, Start Num: 11
Candidate Starts for Bjanes7_46:
(2, 33439), (5, 33466), (6, 33487), (Start: 11 @33715 has 63 MA's), (14, 33739), (15, 33751), (25, 33853), (28, 33892), (39, 33949), (40, 33961),

Gene: Bosnia_51 Start: 40079, Stop: 40369, Start Num: 11
Candidate Starts for Bosnia_51:
(2, 39803), (6, 39851), (Start: 11 @40079 has 63 MA's), (14, 40103), (15, 40115), (25, 40217), (28, 40256), (39, 40313), (40, 40325),

Gene: BotCity_62 Start: 39523, Stop: 39813, Start Num: 10
Candidate Starts for BotCity_62:
(Start: 10 @39523 has 26 MA's), (18, 39571), (20, 39595), (22, 39622), (23, 39634), (28, 39706), (34, 39733), (35, 39739), (38, 39757), (41, 39778),

Gene: BoyNamedSue_50 Start: 37134, Stop: 37424, Start Num: 11
Candidate Starts for BoyNamedSue_50:
(Start: 11 @37134 has 63 MA's), (15, 37170), (25, 37272), (28, 37311), (39, 37368), (40, 37380),

Gene: Bradissa_47 Start: 37475, Stop: 37765, Start Num: 11
Candidate Starts for Bradissa_47:
(1, 37142), (3, 37205), (Start: 11 @37475 has 63 MA's), (15, 37511), (25, 37613), (40, 37721),

Gene: Budski_66 Start: 40486, Stop: 40776, Start Num: 10
Candidate Starts for Budski_66:
(Start: 10 @40486 has 26 MA's), (20, 40558), (22, 40585), (23, 40597), (28, 40669), (31, 40678), (33, 40690), (34, 40696), (35, 40702), (38, 40720), (41, 40741),

Gene: Bunnybear_43 Start: 34807, Stop: 35097, Start Num: 11
Candidate Starts for Bunnybear_43:
(Start: 11 @34807 has 63 MA's), (15, 34843), (25, 34945), (28, 34984), (39, 35041), (40, 35053),

Gene: CheeseTouch_64 Start: 35768, Stop: 36058, Start Num: 10

Candidate Starts for CheeseTouch_64:
(Start: 10 @35768 has 26 MA's), (20, 35840), (22, 35867), (23, 35879), (26, 35915), (28, 35951), (34, 35978), (35, 35984), (38, 36002), (41, 36023),

Gene: Clap_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Clap_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Confidence_49 Start: 35366, Stop: 35653, Start Num: 11
Candidate Starts for Confidence_49:
(Start: 11 @35366 has 63 MA's), (15, 35402), (25, 35504), (28, 35543), (39, 35600), (40, 35612),

Gene: Crater_61 Start: 38895, Stop: 39185, Start Num: 10
Candidate Starts for Crater_61:
(Start: 10 @38895 has 26 MA's), (20, 38967), (22, 38994), (28, 39078), (34, 39105), (35, 39111), (38, 39129), (41, 39150),

Gene: Cynthia_49 Start: 33892, Stop: 34182, Start Num: 11
Candidate Starts for Cynthia_49:
(2, 33616), (5, 33643), (6, 33664), (Start: 11 @33892 has 63 MA's), (14, 33916), (15, 33928), (25, 34030), (28, 34069), (39, 34126), (40, 34138),

Gene: Denise_43 Start: 32043, Stop: 32315, Start Num: 10
Candidate Starts for Denise_43:
(7, 31944), (Start: 10 @32043 has 26 MA's), (16, 32082), (19, 32106), (23, 32148), (24, 32160), (25, 32175), (27, 32193), (33, 32235), (35, 32244), (37, 32259), (44, 32304),

Gene: Dillpickles_55 Start: 36451, Stop: 36741, Start Num: 11
Candidate Starts for Dillpickles_55:
(Start: 11 @36451 has 63 MA's), (15, 36487), (25, 36589), (28, 36628), (39, 36685), (40, 36697),

Gene: Ebert_51 Start: 33818, Stop: 34108, Start Num: 11
Candidate Starts for Ebert_51:
(2, 33542), (5, 33569), (6, 33590), (Start: 11 @33818 has 63 MA's), (14, 33842), (15, 33854), (25, 33956), (28, 33995), (39, 34052), (40, 34064),

Gene: Ecliptus_62 Start: 40698, Stop: 40988, Start Num: 10
Candidate Starts for Ecliptus_62:
(8, 40620), (Start: 10 @40698 has 26 MA's), (18, 40746), (20, 40770), (21, 40782), (22, 40797), (23, 40809), (25, 40842), (33, 40902), (34, 40908), (35, 40914), (38, 40932), (41, 40953),

Gene: EdnaMode_44 Start: 32228, Stop: 32518, Start Num: 11
Candidate Starts for EdnaMode_44:
(Start: 11 @32228 has 63 MA's), (15, 32264), (25, 32366), (28, 32405), (39, 32462), (40, 32474),

Gene: EnalisNailo_46 Start: 37009, Stop: 37302, Start Num: 11
Candidate Starts for EnalisNailo_46:
(1, 36676), (3, 36739), (Start: 11 @37009 has 63 MA's), (15, 37045), (25, 37147), (39, 37246), (40, 37258),

Gene: Eudoria_50 Start: 36407, Stop: 36697, Start Num: 11
Candidate Starts for Eudoria_50:

(Start: 11 @36407 has 63 MA's), (15, 36443), (25, 36545), (28, 36584), (39, 36641), (40, 36653),

Gene: Eviarto_51 Start: 38352, Stop: 38642, Start Num: 11
Candidate Starts for Eviarto_51:
(Start: 11 @38352 has 63 MA's), (15, 38388), (25, 38490), (40, 38598),

Gene: Faith5x5_39 Start: 29672, Stop: 29959, Start Num: 11
Candidate Starts for Faith5x5_39:
(Start: 11 @29672 has 63 MA's), (14, 29696), (25, 29810), (36, 29882), (40, 29915), (43, 29936), (45, 29948),

Gene: Frickyeah_65 Start: 38765, Stop: 39055, Start Num: 10
Candidate Starts for Frickyeah_65:
(7, 38666), (8, 38687), (Start: 10 @38765 has 26 MA's), (20, 38837), (22, 38864), (23, 38876), (28, 38948), (34, 38975), (35, 38981), (38, 38999), (41, 39020),

Gene: GemG_49 Start: 33898, Stop: 34188, Start Num: 11
Candidate Starts for GemG_49:
(2, 33622), (5, 33649), (6, 33670), (Start: 11 @33898 has 63 MA's), (14, 33922), (15, 33934), (25, 34036), (28, 34075), (39, 34132), (40, 34144),

Gene: Getalong_62 Start: 40330, Stop: 40620, Start Num: 10
Candidate Starts for Getalong_62:
(Start: 10 @40330 has 26 MA's), (20, 40402), (22, 40429), (23, 40441), (28, 40513), (34, 40540), (35, 40546), (41, 40585),

Gene: Gizermo_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Gizermo_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Haley23_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Haley23_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Herod_50 Start: 38377, Stop: 38667, Start Num: 11
Candidate Starts for Herod_50:
(Start: 11 @38377 has 63 MA's), (15, 38413), (25, 38515), (40, 38623),

Gene: Holliday_62 Start: 40065, Stop: 40355, Start Num: 10
Candidate Starts for Holliday_62:
(Start: 10 @40065 has 26 MA's), (20, 40137), (22, 40164), (23, 40176), (25, 40209), (34, 40275), (35, 40281), (38, 40299), (41, 40320),

Gene: Horus_60 Start: 39454, Stop: 39744, Start Num: 10
Candidate Starts for Horus_60:
(Start: 10 @39454 has 26 MA's), (20, 39526), (21, 39538), (22, 39553), (23, 39565), (25, 39598), (28, 39637), (34, 39664), (35, 39670), (38, 39688), (41, 39709),

Gene: Hugley_47 Start: 38376, Stop: 38666, Start Num: 11
Candidate Starts for Hugley_47:
(Start: 11 @38376 has 63 MA's), (15, 38412), (25, 38514), (40, 38622),

Gene: Hyzer_55 Start: 39323, Stop: 39613, Start Num: 11
Candidate Starts for Hyzer_55:
(Start: 11 @39323 has 63 MA's), (15, 39359), (25, 39461), (28, 39500), (39, 39557), (40, 39569),

Gene: InLimbo_45 Start: 31463, Stop: 31753, Start Num: 11
Candidate Starts for InLimbo_45:
(9, 31442), (Start: 11 @31463 has 63 MA's), (15, 31499), (25, 31601), (36, 31676), (38, 31691), (40, 31709), (45, 31742),

Gene: Jablanski_51 Start: 39368, Stop: 39658, Start Num: 11
Candidate Starts for Jablanski_51:
(Start: 11 @39368 has 63 MA's), (12, 39374), (15, 39404), (25, 39506), (28, 39545), (40, 39614),

Gene: Jalleen_49 Start: 33533, Stop: 33823, Start Num: 11
Candidate Starts for Jalleen_49:
(2, 33257), (6, 33305), (Start: 11 @33533 has 63 MA's), (14, 33557), (15, 33569), (25, 33671), (28, 33710), (39, 33767), (40, 33779),

Gene: Kamaru_58 Start: 38562, Stop: 38852, Start Num: 10
Candidate Starts for Kamaru_58:
(Start: 10 @38562 has 26 MA's), (20, 38634), (21, 38646), (22, 38661), (23, 38673), (28, 38745), (34, 38772), (35, 38778), (38, 38796), (41, 38817),

Gene: Kenna_59 Start: 38531, Stop: 38821, Start Num: 10
Candidate Starts for Kenna_59:
(Start: 10 @38531 has 26 MA's), (20, 38603), (22, 38630), (23, 38642), (25, 38675), (28, 38714), (34, 38741), (35, 38747), (38, 38765), (41, 38786),

Gene: Kita_51 Start: 36416, Stop: 36706, Start Num: 11
Candidate Starts for Kita_51:
(Start: 11 @36416 has 63 MA's), (15, 36452), (25, 36554), (28, 36593), (39, 36650), (40, 36662),

Gene: Lamberg_45 Start: 32403, Stop: 32693, Start Num: 11
Candidate Starts for Lamberg_45:
(2, 32127), (5, 32154), (6, 32175), (Start: 11 @32403 has 63 MA's), (14, 32427), (15, 32439), (25, 32541), (28, 32580), (39, 32637), (40, 32649),

Gene: Leroy_61 Start: 38831, Stop: 39121, Start Num: 10
Candidate Starts for Leroy_61:
(Start: 10 @38831 has 26 MA's), (20, 38903), (22, 38930), (23, 38942), (28, 39014), (34, 39041), (35, 39047), (38, 39065), (41, 39086),

Gene: Lilas_49 Start: 38720, Stop: 39010, Start Num: 11
Candidate Starts for Lilas_49:
(1, 38387), (3, 38450), (Start: 11 @38720 has 63 MA's), (15, 38756), (25, 38858), (40, 38966),

Gene: LitninMcQueen_57 Start: 38309, Stop: 38599, Start Num: 10
Candidate Starts for LitninMcQueen_57:
(Start: 10 @38309 has 26 MA's), (20, 38381), (21, 38393), (22, 38408), (23, 38420), (28, 38492), (34, 38519), (35, 38525), (38, 38543), (41, 38564),

Gene: LonelyBoi_48 Start: 38880, Stop: 39170, Start Num: 11

Candidate Starts for LonelyBoi_48:
(Start: 11 @38880 has 63 MA's), (15, 38916), (25, 39018), (28, 39057), (39, 39114), (40, 39126),

Gene: LordFarquaad_47 Start: 33521, Stop: 33811, Start Num: 11
Candidate Starts for LordFarquaad_47:
(Start: 11 @33521 has 63 MA's), (15, 33557), (25, 33659), (28, 33698), (39, 33755), (40, 33767),

Gene: Lton_43 Start: 29727, Stop: 29999, Start Num: 10
Candidate Starts for Lton_43:
(7, 29628), (Start: 10 @29727 has 26 MA's), (13, 29751), (16, 29766), (17, 29775), (19, 29790), (23, 29832), (25, 29859), (27, 29877), (35, 29928), (44, 29988),

Gene: Lucky10_44 Start: 32445, Stop: 32717, Start Num: 10
Candidate Starts for Lucky10_44:
(7, 32346), (Start: 10 @32445 has 26 MA's), (13, 32469), (16, 32484), (17, 32493), (19, 32508), (23, 32550), (25, 32577), (27, 32595), (35, 32646), (44, 32706),

Gene: Lutum_64 Start: 39695, Stop: 39985, Start Num: 10
Candidate Starts for Lutum_64:
(Start: 10 @39695 has 26 MA's), (20, 39767), (22, 39794), (23, 39806), (25, 39839), (28, 39878), (34, 39905), (35, 39911), (38, 39929), (41, 39950),

Gene: Madavieve_45 Start: 35724, Stop: 36011, Start Num: 11
Candidate Starts for Madavieve_45:
(Start: 11 @35724 has 63 MA's), (15, 35760), (25, 35862), (28, 35901), (39, 35958), (40, 35970),

Gene: Manasvini_51 Start: 36431, Stop: 36721, Start Num: 11
Candidate Starts for Manasvini_51:
(Start: 11 @36431 has 63 MA's), (15, 36467), (25, 36569), (28, 36608), (39, 36665), (40, 36677),

Gene: Maridalia_51 Start: 36553, Stop: 36843, Start Num: 11
Candidate Starts for Maridalia_51:
(Start: 11 @36553 has 63 MA's), (15, 36589), (25, 36691), (28, 36730), (29, 36733), (39, 36787), (40, 36799),

Gene: Matteo_42 Start: 31445, Stop: 31735, Start Num: 11
Candidate Starts for Matteo_42:
(2, 31169), (6, 31217), (Start: 11 @31445 has 63 MA's), (14, 31469), (15, 31481), (25, 31583), (28, 31622), (39, 31679), (40, 31691),

Gene: Mocha12_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Mocha12_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Moosehead_46 Start: 30660, Stop: 30932, Start Num: 10
Candidate Starts for Moosehead_46:
(Start: 10 @30660 has 26 MA's), (13, 30684), (16, 30699), (17, 30708), (19, 30723), (24, 30777), (25, 30792), (27, 30810), (28, 30831), (32, 30846), (33, 30852), (42, 30906), (44, 30921),

Gene: Morkie_45 Start: 31549, Stop: 31836, Start Num: 11
Candidate Starts for Morkie_45:

(7, 31450), (Start: 11 @31549 has 63 MA's), (15, 31585), (25, 31687), (36, 31759), (38, 31774), (40, 31792), (45, 31825),

Gene: Neobush_50 Start: 36401, Stop: 36691, Start Num: 11
Candidate Starts for Neobush_50:
(Start: 11 @36401 has 63 MA's), (15, 36437), (25, 36539), (28, 36578), (39, 36635), (40, 36647),

Gene: Nettuno_45 Start: 32403, Stop: 32693, Start Num: 11
Candidate Starts for Nettuno_45:
(2, 32127), (5, 32154), (6, 32175), (Start: 11 @32403 has 63 MA's), (14, 32427), (15, 32439), (25, 32541), (28, 32580), (39, 32637), (40, 32649),

Gene: Nymphadora_51 Start: 38376, Stop: 38666, Start Num: 11
Candidate Starts for Nymphadora_51:
(Start: 11 @38376 has 63 MA's), (15, 38412), (25, 38514), (40, 38622),

Gene: ODay_65 Start: 40735, Stop: 41025, Start Num: 10
Candidate Starts for ODay_65:
(Start: 10 @40735 has 26 MA's), (20, 40807), (22, 40834), (23, 40846), (25, 40879), (34, 40945), (35, 40951), (38, 40969), (41, 40990),

Gene: OneDirection_40 Start: 29163, Stop: 29450, Start Num: 11
Candidate Starts for OneDirection_40:
(7, 29064), (Start: 11 @29163 has 63 MA's), (15, 29199), (25, 29301), (36, 29373), (38, 29388), (40, 29406), (45, 29439),

Gene: Pepperoni_40 Start: 30725, Stop: 31012, Start Num: 11
Candidate Starts for Pepperoni_40:
(9, 30704), (Start: 11 @30725 has 63 MA's), (15, 30761), (25, 30863), (38, 30950), (40, 30968), (45, 31001),

Gene: Periwinkle_71 Start: 42094, Stop: 42378, Start Num: 10
Candidate Starts for Periwinkle_71:
(7, 41995), (8, 42016), (Start: 10 @42094 has 26 MA's), (18, 42142), (20, 42166), (22, 42193), (23, 42205), (25, 42238), (30, 42283), (34, 42298), (35, 42304), (38, 42322), (41, 42343),

Gene: Phabuloso_61 Start: 38740, Stop: 39030, Start Num: 10
Candidate Starts for Phabuloso_61:
(Start: 10 @38740 has 26 MA's), (20, 38812), (22, 38839), (23, 38851), (25, 38884), (28, 38923), (34, 38950), (35, 38956), (38, 38974), (41, 38995),

Gene: Phistory_60 Start: 37994, Stop: 38284, Start Num: 10
Candidate Starts for Phistory_60:
(Start: 10 @37994 has 26 MA's), (20, 38066), (22, 38093), (23, 38105), (25, 38138), (28, 38177), (34, 38204), (35, 38210), (41, 38249),

Gene: PhorbesPhlower_45 Start: 30916, Stop: 31206, Start Num: 11
Candidate Starts for PhorbesPhlower_45:
(9, 30895), (Start: 11 @30916 has 63 MA's), (15, 30952), (25, 31054), (36, 31129), (38, 31144), (40, 31162), (45, 31195),

Gene: Pickett_43 Start: 30704, Stop: 30994, Start Num: 11
Candidate Starts for Pickett_43:

(Start: 11 @30704 has 63 MA's), (15, 30740), (25, 30842), (28, 30881), (39, 30938), (40, 30950),

Gene: Polly_47 Start: 35850, Stop: 36140, Start Num: 11
Candidate Starts for Polly_47:
(Start: 11 @35850 has 63 MA's), (15, 35886), (25, 35988), (28, 36027), (39, 36084), (40, 36096),

Gene: Posh_54 Start: 39125, Stop: 39415, Start Num: 11
Candidate Starts for Posh_54:
(Start: 11 @39125 has 63 MA's), (15, 39161), (28, 39302), (39, 39359), (40, 39371),

Gene: Pytheas_51 Start: 39367, Stop: 39657, Start Num: 11
Candidate Starts for Pytheas_51:
(Start: 11 @39367 has 63 MA's), (12, 39373), (15, 39403), (25, 39505), (28, 39544), (40, 39613),

Gene: Sahara_48 Start: 33641, Stop: 33931, Start Num: 11
Candidate Starts for Sahara_48:
(2, 33365), (6, 33413), (Start: 11 @33641 has 63 MA's), (14, 33665), (15, 33677), (25, 33779), (28, 33818), (39, 33875), (40, 33887),

Gene: Savage_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Savage_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: ShawBrad_65 Start: 39157, Stop: 39447, Start Num: 10
Candidate Starts for ShawBrad_65:
(Start: 10 @39157 has 26 MA's), (20, 39229), (22, 39256), (23, 39268), (28, 39340), (34, 39367), (35, 39373), (38, 39391), (41, 39412),

Gene: SoilAssassin_45 Start: 33539, Stop: 33829, Start Num: 11
Candidate Starts for SoilAssassin_45:
(Start: 11 @33539 has 63 MA's), (15, 33575), (25, 33677), (28, 33716), (39, 33773), (40, 33785),

Gene: Sproutie_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Sproutie_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Suscepit_50 Start: 36408, Stop: 36698, Start Num: 11
Candidate Starts for Suscepit_50:
(Start: 11 @36408 has 63 MA's), (15, 36444), (25, 36546), (28, 36585), (39, 36642), (40, 36654),

Gene: SushiChef_47 Start: 37321, Stop: 37611, Start Num: 11
Candidate Starts for SushiChef_47:
(Start: 11 @37321 has 63 MA's), (15, 37357), (25, 37459), (28, 37498), (39, 37555), (40, 37567),

Gene: Tayonia_50 Start: 36407, Stop: 36697, Start Num: 11
Candidate Starts for Tayonia_50:
(Start: 11 @36407 has 63 MA's), (15, 36443), (25, 36545), (28, 36584), (39, 36641), (40, 36653),

Gene: ThankyouJordi_49 Start: 38252, Stop: 38542, Start Num: 11
Candidate Starts for ThankyouJordi_49:
(Start: 11 @38252 has 63 MA's), (15, 38288), (25, 38390), (28, 38429), (40, 38498),

Gene: TimTam_51 Start: 38376, Stop: 38666, Start Num: 11
Candidate Starts for TimTam_51:
(Start: 11 @38376 has 63 MA's), (15, 38412), (25, 38514), (40, 38622),

Gene: Trumpet_50 Start: 36408, Stop: 36698, Start Num: 11
Candidate Starts for Trumpet_50:
(Start: 11 @36408 has 63 MA's), (15, 36444), (25, 36546), (28, 36585), (39, 36642), (40, 36654),

Gene: TuertoX_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for TuertoX_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: WelcomeAyanna_49 Start: 38399, Stop: 38689, Start Num: 11
Candidate Starts for WelcomeAyanna_49:
(Start: 11 @38399 has 63 MA's), (15, 38435), (25, 38537), (28, 38576), (40, 38645),

Gene: Whiteclaw_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Whiteclaw_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Wrigley_55 Start: 38285, Stop: 38572, Start Num: 11
Candidate Starts for Wrigley_55:
(Start: 11 @38285 has 63 MA's), (15, 38321), (25, 38423), (28, 38462), (39, 38519), (40, 38531),

Gene: Yeet412_45 Start: 33540, Stop: 33830, Start Num: 11
Candidate Starts for Yeet412_45:
(Start: 11 @33540 has 63 MA's), (15, 33576), (25, 33678), (28, 33717), (39, 33774), (40, 33786),

Gene: Yinzer_49 Start: 33894, Stop: 34184, Start Num: 11
Candidate Starts for Yinzer_49:
(2, 33618), (5, 33645), (6, 33666), (Start: 11 @33894 has 63 MA's), (14, 33918), (15, 33930), (25, 34032), (28, 34071), (39, 34128), (40, 34140),

Gene: Zameen_50 Start: 36407, Stop: 36697, Start Num: 11
Candidate Starts for Zameen_50:
(Start: 11 @36407 has 63 MA's), (15, 36443), (25, 36545), (28, 36584), (39, 36641), (40, 36653),

Gene: Zirinka_47 Start: 37027, Stop: 37317, Start Num: 11
Candidate Starts for Zirinka_47:
(Start: 11 @37027 has 63 MA's), (15, 37063), (25, 37165), (28, 37204), (39, 37261), (40, 37273),