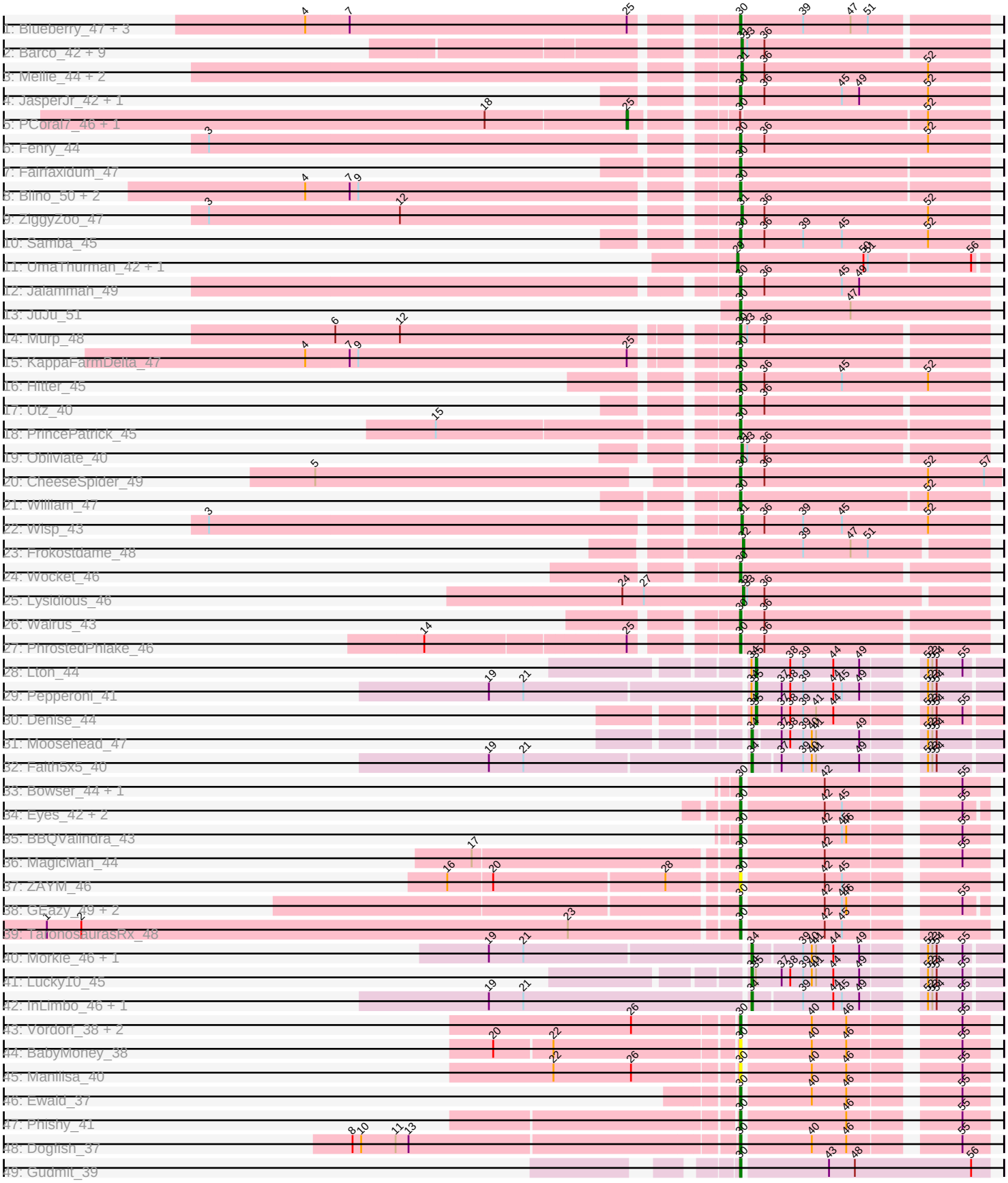
Pham 347546


1: Blueberry_47 + 3
2: Barco_42 + 9
3: Mellie_44 + 2
4: JasperJr_42 + 1
5: PCoral7_46 + 1
6: Fenry_44
7: Fairfaxidum_47
8: Blino_50 + 2
9: ZiggyZoo_47
10: Samba_45
11: UmaThurman_42 + 1
12: Jalamman_49
13: JuJu_51
14: Murp_48
15: KappaFarmDelta_47
16: Hitter_45
17: Otz_40
18: PrincePatrick_45
19: Obliviate_40
20: CheeseSpider_49
21: William_47
22: Wisp_43
23: Frokostdame_48
24: Wocket_46
25: Lysidious_46
26: Walrus_43
27: PhrostedPhlake_46
28: Lton_44
29: Pepperoni_41
30: Denise_44
31: Moosehead_47
32: Faith5x5_40
33: Bowser_44 + 1
34: Eyes_42 + 2
35: BBQValindra_43
36: MagicMan_44
37: ZAYM_46
38: GEazy_49 + 2
39: TalonosaurasRx_48
40: Morkie_46 + 1
41: Lucky10_45
42: InLimbo_46 + 1
43: Vordon_38 + 2
44: BabyMoney_38
45: Manlisa_40
46: Ewald_37
47: Phishy_41
48: Dogfish_37
49: Gudmit_39

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 347546 Report

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

Pham number 347546 has 77 members, 8 are drafts.

Phages represented in each track:
- Track 1 : Blueberry_47, MissRona_48, Gambino_50, Azula_48
- Track 2 : Barco_42, Melba_43, Delian_47, CaptainKirk2_44, Zilla_42, Petra_41, Zarbodnamra_43, Archis_47, BlingBling_41, MintFen_44
- Track 3 : Mellie_44, Malachai_45, Begonia_45
- Track 4 : JasperJr_42, Guacamole_42
- Track 5 : PCoral7_46, Toast_46
- Track 6 : Fenry_44
- Track 7 : Fairfaxidum_47
- Track 8 : Blino_50, CarolAnn_49, Soilmate_52
- Track 9 : ZiggyZoo_47
- Track 10 : Samba_45
- Track 11 : UmaThurman_42, Pipp_45
- Track 12 : Jalammah_49
- Track 13 : JuJu_51
- Track 14 : Murp_48
- Track 15 : KappaFarmDelta_47
- Track 16 : Hitter_45
- Track 17 : Utz_40
- Track 18 : PrincePatrick_45
- Track 19 : Obliviate_40
- Track 20 : CheeseSpider_49
- Track 21 : William_47
- Track 22 : Wisp_43
- Track 23 : Frokostdame_48
- Track 24 : Wocket_46
- Track 25 : Lysidious_46
- Track 26 : Walrus_43
- Track 27 : PhrostedPhlake_46
- Track 28 : Lton_44
- Track 29 : Pepperoni_41
- Track 30 : Denise_44
- Track 31 : Moosehead_47
- Track 32 : Faith5x5_40
- Track 33 : Bowser_44, Schnabeltier_45
- Track 34 : Eyes_42, Jecs_46, Opie_47
- Track 35 : BBQValindra_43
- Track 36 : MagicMan_44

• Track 37 : ZAYM_46
• Track 38 : GEazy_49, NaLuna_47, HannahD_46
• Track 39 : TaronosaurasRx_48
• Track 40 : Morkie_46, OneDirection_41
• Track 41 : Lucky10_45
• Track 42 : InLimbo_46, PhorbesPhlower_46
• Track 43 : Vordorf_38, Meyran_37, Nyceirae_41
• Track 44 : BabyMoney_38
• Track 45 : Manilisa_40
• Track 46 : Ewald_37
• Track 47 : Phishy_41
• Track 48 : Dogfish_37
• Track 49 : Gudmit_39

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

The start number called the most often in the published annotations is 30, it was called in 38 of the 69 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Azula_48, BBQValindra_43, BabyMoney_38, Blino_50, Blueberry_47, Bowser_44, CarolAnn_49, CheeseSpider_49, Dogfish_37, Ewald_37, Eyes_42, Fairfaxidum_47, Fenry_44, GEazy_49, Gambino_50, Guacamole_42, Gudmit_39, HannahD_46, Hitter_45, Jalammah_49, JasperJr_42, Jecs_46, JuJu_51, KappaFarmDelta_47, MagicMan_44, Manilisa_40, Meyran_37, MissRona_48, Murp_48, NaLuna_47, Nyceirae_41, Opie_47, Phishy_41, PhrostedPhlake_46, PrincePatrick_45, Samba_45, Schnabeltier_45, Soilmate_52, TaronosaurasRx_48, Utz_40, Vordorf_38, Walrus_43, William_47, Wocket_46, ZAYM_46,

Genes that have the "Most Annotated" start but do not call it:
• PCoral7_46, Toast_46,

Genes that do not have the "Most Annotated" start:
• Archis_47, Barco_42, Begonia_45, BlingBling_41, CaptainKirk2_44, Delian_47, Denise_44, Faith5x5_40, Frokostdame_48, InLimbo_46, Lton_44, Lucky10_45, Lysidious_46, Malachai_45, Melba_43, Mellie_44, MintFen_44, Moosehead_47, Morkie_46, Obliviate_40, OneDirection_41, Pepperoni_41, Petra_41, PhorbesPhlower_46, Pipp_45, UmaThurman_42, Wisp_43, Zarbodnamra_43, ZiggyZoo_47, Zilla_42,

Summary by start number:

Start 25:
• Found in 8 of 77 (10.4%) 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: PCoral7_46 (CV), Toast_46 (CV),

Start 29:
• Found in 2 of 77 (2.6%) of genes in pham

• Manual Annotations of this start: 2 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Pipp_45 (CV), UmaThurman_42 (CV),

Start 30:
• Found in 47 of 77 (61.0%) of genes in pham
• Manual Annotations of this start: 38 of 69
• Called 95.7% of time when present
• Phage (with cluster) where this start called: Azula_48 (CV), BBQValindra_43 (DB), BabyMoney_38 (DT), Blino_50 (CV), Blueberry_47 (CV), Bowser_44 (DB), CarolAnn_49 (CV), CheeseSpider_49 (CV), Dogfish_37 (DT), Ewald_37 (DT), Eyes_42 (DB), Fairfaxidum_47 (CV), Fenry_44 (CV), GEazy_49 (DB), Gambino_50 (CV), Guacamole_42 (CV), Gudmit_39 (singleton), HannahD_46 (DB), Hitter_45 (CV), Jalammah_49 (CV), JasperJr_42 (CV), Jecs_46 (DB), JuJu_51 (CV), KappaFarmDelta_47 (CV), MagicMan_44 (DB), Manilisa_40 (DT), Meyran_37 (DT), MissRona_48 (CV), Murp_48 (CV), NaLuna_47 (DB), Nyceirae_41 (DT), Opie_47 (DB), Phishy_41 (DT), PhrostedPhlake_46 (CV), PrincePatrick_45 (CV), Samba_45 (CV), Schnabeltier_45 (DB), Soilmate_52 (CV), TaronosaurasRx_48 (DB), Utz_40 (CV), Vordorf_38 (DT), Walrus_43 (CV), William_47 (CV), Wocket_46 (CV), ZAYM_46 (DB),

Start 31:
• Found in 16 of 77 (20.8%) of genes in pham
• Manual Annotations of this start: 16 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archis_47 (CV), Barco_42 (CV), Begonia_45 (CV), BlingBling_41 (CV), CaptainKirk2_44 (CV), Delian_47 (CV), Malachai_45 (CV), Melba_43 (CV), Mellie_44 (CV), MintFen_44 (CV), Obliviate_40 (CV), Petra_41 (CV), Wisp_43 (CV), Zarbodnamra_43 (CV), ZiggyZoo_47 (CV), Zilla_42 (CV),

Start 32:
• Found in 2 of 77 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 69
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Frokostdame_48 (CV), Lysidious_46 (CV),

Start 34:
• Found in 10 of 77 (13.0%) of genes in pham
• Manual Annotations of this start: 6 of 69
• Called 70.0% of time when present
• Phage (with cluster) where this start called: Faith5x5_40 (CZ6), InLimbo_46 (DH), Lucky10_45 (DH), Moosehead_47 (CZ6), Morkie_46 (DH), OneDirection_41 (CZ6), PhorbesPhlower_46 (DH),

Start 35:
• Found in 4 of 77 (5.2%) of genes in pham
• Manual Annotations of this start: 3 of 69
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Denise_44 (CZ5), Lton_44 (CZ), Pepperoni_41 (CZ),

Summary by clusters:

There are 8 clusters represented in this pham: singleton, DH, CZ6, DB, CZ5, CZ, DT, CV,

Info for manual annotations of cluster CV:
•Start number 25 was manually annotated 2 times for cluster CV.
•Start number 29 was manually annotated 2 times for cluster CV.
•Start number 30 was manually annotated 23 times for cluster CV.
•Start number 31 was manually annotated 16 times for cluster CV.
•Start number 32 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CZ:
•Start number 35 was manually annotated 2 times for cluster CZ.

Info for manual annotations of cluster CZ5:
•Start number 35 was manually annotated 1 time for cluster CZ5.

Info for manual annotations of cluster CZ6:
•Start number 34 was manually annotated 3 times for cluster CZ6.

Info for manual annotations of cluster DB:
•Start number 30 was manually annotated 9 times for cluster DB.

Info for manual annotations of cluster DH:
•Start number 34 was manually annotated 3 times for cluster DH.

Info for manual annotations of cluster DT:
•Start number 30 was manually annotated 5 times for cluster DT.

Gene Information:

Gene: Archis_47 Start: 33441, Stop: 33605, Start Num: 31
Candidate Starts for Archis_47:
(Start: 31 @33441 has 16 MA's), (33, 33444), (36, 33456),

Gene: Azula_48 Start: 36031, Stop: 36195, Start Num: 30
Candidate Starts for Azula_48:
(4, 35752), (7, 35782), (Start: 25 @35974 has 2 MA's), (Start: 30 @36031 has 38 MA's), (39, 36073), (47, 36106), (51, 36118),

Gene: BBQValindra_43 Start: 34125, Stop: 34277, Start Num: 30
Candidate Starts for BBQValindra_43:
(Start: 30 @34125 has 38 MA's), (42, 34179), (45, 34191), (46, 34194), (55, 34260),

Gene: BabyMoney_38 Start: 31354, Stop: 31506, Start Num: 30
Candidate Starts for BabyMoney_38:
(20, 31195), (22, 31234), (Start: 30 @31354 has 38 MA's), (40, 31399), (46, 31423), (55, 31489),

Gene: Barco_42 Start: 32491, Stop: 32655, Start Num: 31
Candidate Starts for Barco_42:

(Start: 31 @32491 has 16 MA's), (33, 32494), (36, 32506),

Gene: Begonia_45 Start: 36146, Stop: 36316, Start Num: 31
Candidate Starts for Begonia_45:
(Start: 31 @36146 has 16 MA's), (36, 36161), (52, 36275),

Gene: BlingBling_41 Start: 33454, Stop: 33618, Start Num: 31
Candidate Starts for BlingBling_41:
(Start: 31 @33454 has 16 MA's), (33, 33457), (36, 33469),

Gene: Blino_50 Start: 39330, Stop: 39497, Start Num: 30
Candidate Starts for Blino_50:
(4, 39048), (7, 39078), (9, 39084), (Start: 30 @39330 has 38 MA's),

Gene: Blueberry_47 Start: 36031, Stop: 36195, Start Num: 30
Candidate Starts for Blueberry_47:
(4, 35752), (7, 35782), (Start: 25 @35974 has 2 MA's), (Start: 30 @36031 has 38 MA's), (39, 36073), (47, 36106), (51, 36118),

Gene: Bowser_44 Start: 33934, Stop: 34086, Start Num: 30
Candidate Starts for Bowser_44:
(Start: 30 @33934 has 38 MA's), (42, 33988), (55, 34069),

Gene: CaptainKirk2_44 Start: 32739, Stop: 32903, Start Num: 31
Candidate Starts for CaptainKirk2_44:
(Start: 31 @32739 has 16 MA's), (33, 32742), (36, 32754),

Gene: CarolAnn_49 Start: 39329, Stop: 39496, Start Num: 30
Candidate Starts for CarolAnn_49:
(4, 39047), (7, 39077), (9, 39083), (Start: 30 @39329 has 38 MA's),

Gene: CheeseSpider_49 Start: 34508, Stop: 34687, Start Num: 30
Candidate Starts for CheeseSpider_49:
(5, 34238), (Start: 30 @34508 has 38 MA's), (36, 34523), (52, 34637), (57, 34676),

Gene: Delian_47 Start: 32737, Stop: 32901, Start Num: 31
Candidate Starts for Delian_47:
(Start: 31 @32737 has 16 MA's), (33, 32740), (36, 32752),

Gene: Denise_44 Start: 32315, Stop: 32467, Start Num: 35
Candidate Starts for Denise_44:
(Start: 34 @32312 has 6 MA's), (Start: 35 @32315 has 3 MA's), (37, 32333), (38, 32339), (39, 32348), (41, 32357), (44, 32369), (52, 32420), (53, 32423), (54, 32426), (55, 32444),

Gene: Dogfish_37 Start: 30784, Stop: 30936, Start Num: 30
Candidate Starts for Dogfish_37:
(8, 30526), (10, 30532), (11, 30556), (13, 30565), (Start: 30 @30784 has 38 MA's), (40, 30829), (46, 30853), (55, 30919),

Gene: Ewald_37 Start: 30602, Stop: 30754, Start Num: 30
Candidate Starts for Ewald_37:
(Start: 30 @30602 has 38 MA's), (40, 30647), (46, 30671), (55, 30737),

Gene: Eyes_42 Start: 33981, Stop: 34130, Start Num: 30
Candidate Starts for Eyes_42:
(Start: 30 @33981 has 38 MA's), (42, 34035), (45, 34047), (55, 34116),

Gene: Fairfaxidum_47 Start: 35996, Stop: 36163, Start Num: 30
Candidate Starts for Fairfaxidum_47:
(Start: 30 @35996 has 38 MA's),

Gene: Faith5x5_40 Start: 29956, Stop: 30108, Start Num: 34
Candidate Starts for Faith5x5_40:
(19, 29782), (21, 29806), (Start: 34 @29956 has 6 MA's), (37, 29974), (39, 29989), (40, 29995), (41, 29998), (49, 30028), (52, 30061), (53, 30064), (54, 30067),

Gene: Fenry_44 Start: 35040, Stop: 35210, Start Num: 30
Candidate Starts for Fenry_44:
(3, 34692), (Start: 30 @35040 has 38 MA's), (36, 35055), (52, 35169),

Gene: Frokostdame_48 Start: 35842, Stop: 36006, Start Num: 32
Candidate Starts for Frokostdame_48:
(Start: 32 @35842 has 2 MA's), (39, 35884), (47, 35917), (51, 35929),

Gene: GEazy_49 Start: 34256, Stop: 34405, Start Num: 30
Candidate Starts for GEazy_49:
(Start: 30 @34256 has 38 MA's), (42, 34310), (45, 34322), (46, 34325), (55, 34391),

Gene: Gambino_50 Start: 36031, Stop: 36195, Start Num: 30
Candidate Starts for Gambino_50:
(4, 35752), (7, 35782), (Start: 25 @35974 has 2 MA's), (Start: 30 @36031 has 38 MA's), (39, 36073), (47, 36106), (51, 36118),

Gene: Guacamole_42 Start: 33394, Stop: 33564, Start Num: 30
Candidate Starts for Guacamole_42:
(Start: 30 @33394 has 38 MA's), (36, 33409), (45, 33463), (49, 33475), (52, 33523),

Gene: Gudmit_39 Start: 27962, Stop: 28129, Start Num: 30
Candidate Starts for Gudmit_39:
(Start: 30 @27962 has 38 MA's), (43, 28019), (48, 28037), (56, 28118),

Gene: HannahD_46 Start: 33623, Stop: 33772, Start Num: 30
Candidate Starts for HannahD_46:
(Start: 30 @33623 has 38 MA's), (42, 33677), (45, 33689), (46, 33692), (55, 33758),

Gene: Hitter_45 Start: 33039, Stop: 33209, Start Num: 30
Candidate Starts for Hitter_45:
(Start: 30 @33039 has 38 MA's), (36, 33054), (45, 33108), (52, 33168),

Gene: InLimbo_46 Start: 31750, Stop: 31902, Start Num: 34
Candidate Starts for InLimbo_46:
(19, 31573), (21, 31597), (Start: 34 @31750 has 6 MA's), (39, 31783), (44, 31804), (45, 31810), (49, 31822), (52, 31855), (53, 31858), (54, 31861), (55, 31879),

Gene: Jalammah_49 Start: 36356, Stop: 36526, Start Num: 30
Candidate Starts for Jalammah_49:

(Start: 30 @36356 has 38 MA's), (36, 36371), (45, 36425), (49, 36437),

Gene: JasperJr_42 Start: 33394, Stop: 33564, Start Num: 30
Candidate Starts for JasperJr_42:
(Start: 30 @33394 has 38 MA's), (36, 33409), (45, 33463), (49, 33475), (52, 33523),

Gene: Jecs_46 Start: 33620, Stop: 33769, Start Num: 30
Candidate Starts for Jecs_46:
(Start: 30 @33620 has 38 MA's), (42, 33674), (45, 33686), (55, 33755),

Gene: JuJu_51 Start: 37183, Stop: 37353, Start Num: 30
Candidate Starts for JuJu_51:
(Start: 30 @37183 has 38 MA's), (47, 37258),

Gene: KappaFarmDelta_47 Start: 33976, Stop: 34140, Start Num: 30
Candidate Starts for KappaFarmDelta_47:
(4, 33697), (7, 33727), (9, 33733), (Start: 25 @33919 has 2 MA's), (Start: 30 @33976 has 38 MA's),

Gene: Lton_44 Start: 29999, Stop: 30151, Start Num: 35
Candidate Starts for Lton_44:
(Start: 34 @29996 has 6 MA's), (Start: 35 @29999 has 3 MA's), (38, 30023), (39, 30032), (44, 30053), (49, 30071), (52, 30104), (53, 30107), (54, 30110), (55, 30128),

Gene: Lucky10_45 Start: 32714, Stop: 32869, Start Num: 34
Candidate Starts for Lucky10_45:
(Start: 34 @32714 has 6 MA's), (Start: 35 @32717 has 3 MA's), (37, 32735), (38, 32741), (39, 32750), (40, 32756), (41, 32759), (44, 32771), (49, 32789), (52, 32822), (53, 32825), (54, 32828), (55, 32846),

Gene: Lysidious_46 Start: 35415, Stop: 35579, Start Num: 32
Candidate Starts for Lysidious_46:
(24, 35334), (27, 35349), (Start: 32 @35415 has 2 MA's), (33, 35418), (36, 35430),

Gene: MagicMan_44 Start: 33860, Stop: 34012, Start Num: 30
Candidate Starts for MagicMan_44:
(17, 33686), (Start: 30 @33860 has 38 MA's), (42, 33914), (55, 33995),

Gene: Malachai_45 Start: 36146, Stop: 36316, Start Num: 31
Candidate Starts for Malachai_45:
(Start: 31 @36146 has 16 MA's), (36, 36161), (52, 36275),

Gene: Manilisa_40 Start: 31756, Stop: 31908, Start Num: 30
Candidate Starts for Manilisa_40:
(22, 31636), (26, 31690), (Start: 30 @31756 has 38 MA's), (40, 31801), (46, 31825), (55, 31891),

Gene: Melba_43 Start: 33279, Stop: 33443, Start Num: 31
Candidate Starts for Melba_43:
(Start: 31 @33279 has 16 MA's), (33, 33282), (36, 33294),

Gene: Mellie_44 Start: 33865, Stop: 34035, Start Num: 31
Candidate Starts for Mellie_44:
(Start: 31 @33865 has 16 MA's), (36, 33880), (52, 33994),

Gene: Meyran_37 Start: 31676, Stop: 31828, Start Num: 30

Candidate Starts for Meyran_37:
(26, 31610), (Start: 30 @31676 has 38 MA's), (40, 31721), (46, 31745), (55, 31811),

Gene: MintFen_44 Start: 33353, Stop: 33517, Start Num: 31
Candidate Starts for MintFen_44:
(Start: 31 @33353 has 16 MA's), (33, 33356), (36, 33368),

Gene: MissRona_48 Start: 36032, Stop: 36196, Start Num: 30
Candidate Starts for MissRona_48:
(4, 35753), (7, 35783), (Start: 25 @35975 has 2 MA's), (Start: 30 @36032 has 38 MA's), (39, 36074), (47, 36107), (51, 36119),

Gene: Moosehead_47 Start: 30929, Stop: 31081, Start Num: 34
Candidate Starts for Moosehead_47:
(Start: 34 @30929 has 6 MA's), (37, 30947), (38, 30953), (39, 30962), (40, 30968), (41, 30971), (49, 31001), (52, 31034), (53, 31037), (54, 31040),

Gene: Morkie_46 Start: 31833, Stop: 31985, Start Num: 34
Candidate Starts for Morkie_46:
(19, 31659), (21, 31683), (Start: 34 @31833 has 6 MA's), (39, 31866), (40, 31872), (41, 31875), (44, 31887), (49, 31905), (52, 31938), (53, 31941), (54, 31944), (55, 31962),

Gene: Murp_48 Start: 37601, Stop: 37765, Start Num: 30
Candidate Starts for Murp_48:
(6, 37343), (12, 37388), (Start: 30 @37601 has 38 MA's), (33, 37604), (36, 37616),

Gene: NaLuna_47 Start: 33623, Stop: 33772, Start Num: 30
Candidate Starts for NaLuna_47:
(Start: 30 @33623 has 38 MA's), (42, 33677), (45, 33689), (46, 33692), (55, 33758),

Gene: Nyceirae_41 Start: 31490, Stop: 31639, Start Num: 30
Candidate Starts for Nyceirae_41:
(26, 31421), (Start: 30 @31490 has 38 MA's), (40, 31535), (46, 31559), (55, 31625),

Gene: Obliviate_40 Start: 31641, Stop: 31805, Start Num: 31
Candidate Starts for Obliviate_40:
(Start: 31 @31641 has 16 MA's), (33, 31644), (36, 31656),

Gene: OneDirection_41 Start: 29447, Stop: 29599, Start Num: 34
Candidate Starts for OneDirection_41:
(19, 29273), (21, 29297), (Start: 34 @29447 has 6 MA's), (39, 29480), (40, 29486), (41, 29489), (44, 29501), (49, 29519), (52, 29552), (53, 29555), (54, 29558), (55, 29576),

Gene: Opie_47 Start: 34808, Stop: 34957, Start Num: 30
Candidate Starts for Opie_47:
(Start: 30 @34808 has 38 MA's), (42, 34862), (45, 34874), (55, 34943),

Gene: PCoral7_46 Start: 35353, Stop: 35580, Start Num: 25
Candidate Starts for PCoral7_46:
(18, 35257), (Start: 25 @35353 has 2 MA's), (Start: 30 @35413 has 38 MA's), (52, 35539),

Gene: Pepperoni_41 Start: 31012, Stop: 31164, Start Num: 35
Candidate Starts for Pepperoni_41:

(19, 30835), (21, 30859), (Start: 34 @31009 has 6 MA's), (Start: 35 @31012 has 3 MA's), (37, 31030), (38, 31036), (39, 31045), (44, 31066), (45, 31072), (49, 31084), (52, 31117), (53, 31120), (54, 31123),

Gene: Petra_41 Start: 31999, Stop: 32163, Start Num: 31
Candidate Starts for Petra_41:
(Start: 31 @31999 has 16 MA's), (33, 32002), (36, 32014),

Gene: Phishy_41 Start: 32661, Stop: 32813, Start Num: 30
Candidate Starts for Phishy_41:
(Start: 30 @32661 has 38 MA's), (46, 32730), (55, 32796),

Gene: PhorbesPhlower_46 Start: 31203, Stop: 31355, Start Num: 34
Candidate Starts for PhorbesPhlower_46:
(19, 31026), (21, 31050), (Start: 34 @31203 has 6 MA's), (39, 31236), (44, 31257), (45, 31263), (49, 31275), (52, 31308), (53, 31311), (54, 31314), (55, 31332),

Gene: PhrostedPhlake_46 Start: 33313, Stop: 33477, Start Num: 30
Candidate Starts for PhrostedPhlake_46:
(14, 33121), (Start: 25 @33253 has 2 MA's), (Start: 30 @33313 has 38 MA's), (36, 33328),

Gene: Pipp_45 Start: 33774, Stop: 33941, Start Num: 29
Candidate Starts for Pipp_45:
(Start: 29 @33774 has 2 MA's), (50, 33861), (51, 33864), (56, 33933),

Gene: PrincePatrick_45 Start: 33768, Stop: 33935, Start Num: 30
Candidate Starts for PrincePatrick_45:
(15, 33576), (Start: 30 @33768 has 38 MA's),

Gene: Samba_45 Start: 36251, Stop: 36421, Start Num: 30
Candidate Starts for Samba_45:
(Start: 30 @36251 has 38 MA's), (36, 36266), (39, 36293), (45, 36320), (52, 36380),

Gene: Schnabeltier_45 Start: 34053, Stop: 34205, Start Num: 30
Candidate Starts for Schnabeltier_45:
(Start: 30 @34053 has 38 MA's), (42, 34107), (55, 34188),

Gene: Soilmate_52 Start: 39329, Stop: 39496, Start Num: 30
Candidate Starts for Soilmate_52:
(4, 39047), (7, 39077), (9, 39083), (Start: 30 @39329 has 38 MA's),

Gene: TaronosaurasRx_48 Start: 33378, Stop: 33530, Start Num: 30
Candidate Starts for TaronosaurasRx_48:
(1, 32904), (2, 32928), (23, 33267), (Start: 30 @33378 has 38 MA's), (42, 33432), (45, 33444),

Gene: Toast_46 Start: 35353, Stop: 35580, Start Num: 25
Candidate Starts for Toast_46:
(18, 35257), (Start: 25 @35353 has 2 MA's), (Start: 30 @35413 has 38 MA's), (52, 35539),

Gene: UmaThurman_42 Start: 34120, Stop: 34287, Start Num: 29
Candidate Starts for UmaThurman_42:
(Start: 29 @34120 has 2 MA's), (50, 34207), (51, 34210), (56, 34279),

Gene: Utz_40 Start: 34941, Stop: 35105, Start Num: 30

Candidate Starts for Utz_40:
(Start: 30 @34941 has 38 MA's), (36, 34956),

Gene: Vordorf_38 Start: 30951, Stop: 31103, Start Num: 30
Candidate Starts for Vordorf_38:
(26, 30885), (Start: 30 @30951 has 38 MA's), (40, 30996), (46, 31020), (55, 31086),

Gene: Walrus_43 Start: 33174, Stop: 33338, Start Num: 30
Candidate Starts for Walrus_43:
(Start: 30 @33174 has 38 MA's), (36, 33189),

Gene: William_47 Start: 35452, Stop: 35619, Start Num: 30
Candidate Starts for William_47:
(Start: 30 @35452 has 38 MA's), (52, 35578),

Gene: Wisp_43 Start: 34993, Stop: 35163, Start Num: 31
Candidate Starts for Wisp_43:
(3, 34645), (Start: 31 @34993 has 16 MA's), (36, 35008), (39, 35035), (45, 35062), (52, 35122),

Gene: Wocket_46 Start: 34143, Stop: 34307, Start Num: 30
Candidate Starts for Wocket_46:
(Start: 30 @34143 has 38 MA's),

Gene: ZAYM_46 Start: 33126, Stop: 33278, Start Num: 30
Candidate Starts for ZAYM_46:
(16, 32937), (20, 32967), (28, 33084), (Start: 30 @33126 has 38 MA's), (42, 33180), (45, 33192),

Gene: Zarbodnamra_43 Start: 32761, Stop: 32925, Start Num: 31
Candidate Starts for Zarbodnamra_43:
(Start: 31 @32761 has 16 MA's), (33, 32764), (36, 32776),

Gene: ZiggyZoo_47 Start: 36213, Stop: 36383, Start Num: 31
Candidate Starts for ZiggyZoo_47:
(3, 35865), (12, 35997), (Start: 31 @36213 has 16 MA's), (36, 36228), (52, 36342),

Gene: Zilla_42 Start: 32508, Stop: 32672, Start Num: 31
Candidate Starts for Zilla_42:
(Start: 31 @32508 has 16 MA's), (33, 32511), (36, 32523),