Zoomed Pham 202845

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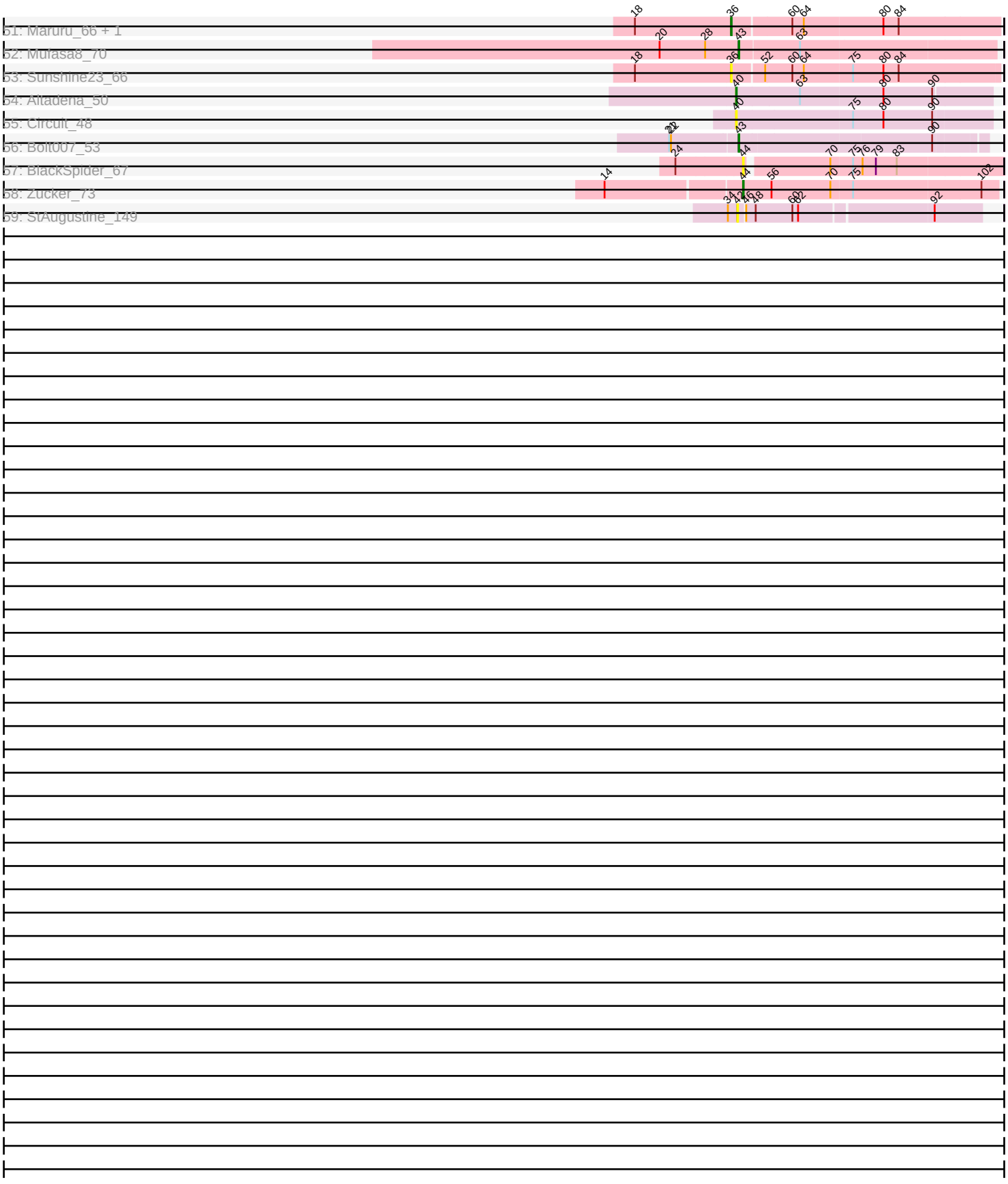

Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 202845 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202845 has 92 members, 32 are drafts.

Phages represented in each track:
- Track 1 : Ruchi_30
- Track 2 : Vulpecula_30
- Track 3 : Abidatro_30
- Track 4 : Brynnie_30
- Track 5 : Basilisk_31
- Track 6 : Chickaboom_31
- Track 7 : Zhuangyuan_36
- Track 8 : LittleTokyo_33
- Track 9 : PhluffyCoco_31, Atlantica_31, RedFox_31, HamCheese_30, Camara_31, Rattail_31, Juno112_30
- Track 10 : Andrew_32
- Track 11 : Leona_30
- Track 12 : Glotell_33, KHumphrey_31, AmiCi24_30
- Track 13 : Renna12_30
- Track 14 : Hillester_80, RadFad_81
- Track 15 : Raphaella_77, Hestia_70, AdaS_72, Faja_79, YoungHarleezy_74, BenchScraper_76, CookieBear_73
- Track 16 : MidnightRain_81, SpicyFrank_78
- Track 17 : BlueShadow_78
- Track 18 : Gorpy_74, MaterMagnus_76, Sakai_73, Aikyam_75
- Track 19 : Persistence_70
- Track 20 : Anekin_78
- Track 21 : Shukran_73
- Track 22 : Windest_79, BillyTP_77, Lawnathon_76
- Track 23 : Isolde_74
- Track 24 : Raqqa_74
- Track 25 : Globfish_75, ThayneTheZag_81, EvePickles_75
- Track 26 : Richie_79
- Track 27 : Tiff81_77
- Track 28 : Seahorse_84
- Track 29 : Phrank15_80
- Track 30 : Bhageatrice_81
- Track 31 : Sashimi_76
- Track 32 : Auxilium_74
- Track 33 : AbbyDaisy_79
- Track 34 : Zenteno07_93
- Track 35 : BirdsNest_93

• Track 36 : Hashim76_90
• Track 37 : Thonko_86
• Track 38 : CherryTomatoes_47
• Track 39 : Pupper_45, SCentae_45
• Track 40 : Fresco_48, Axumite_48, Shatter_48, Ligma_48
• Track 41 : CharlottesWeb_47
• Track 42 : Evaa_48
• Track 43 : Mariokart_48
• Track 44 : Sisko_47, Yago84_47, AnClar_48
• Track 45 : LittleMunchkin_50
• Track 46 : Wolfstar_76
• Track 47 : Tandem_71, Pioneer3_71, OlinDD_71, Hortus1_71
• Track 48 : Platte_71
• Track 49 : Alatato_57
• Track 50 : AllBusiness_47
• Track 51 : Maruru_66, Sonali_65
• Track 52 : Mufasa8_70
• Track 53 : Sunshine23_66
• Track 54 : Altadena_50
• Track 55 : Circuit_48
• Track 56 : Bolt007_53
• Track 57 : BlackSpider_67
• Track 58 : Zucker_73
• Track 59 : StAugustine_149

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

The start number called the most often in the published annotations is 44, it was called in 19 of the 60 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AbbyDaisy_79, AdaS_72, Aikyam_75, Alatato_57, Anekin_78, Auxilium_74, BenchScraper_76, Bhageatrice_81, BillyTP_77, BlackSpider_67, BlueShadow_78, CookieBear_73, EvePickles_75, Faja_79, Globfish_75, Gorpy_74, Hestia_70, Hillester_80, Isolde_74, Lawnathon_76, MaterMagnus_76, MidnightRain_81, Persistence_70, Phrank15_80, RadFad_81, Raphaella_77, Richie_79, Sakai_73, Sashimi_76, Seahorse_84, Shukran_73, SpicyFrank_78, ThayneTheZag_81, Tiff81_77, Windest_79, YoungHarleezy_74, Zucker_73,

Genes that have the "Most Annotated" start but do not call it:
• Raqqa_74,

Genes that do not have the "Most Annotated" start:
• Abidatro_30, AllBusiness_47, Altadena_50, AmiCi24_30, AnClar_48, Andrew_32, Atlantica_31, Axumite_48, Basilisk_31, BirdsNest_93, Bolt007_53, Brynnie_30, Camara_31, CharlottesWeb_47, CherryTomatoes_47, Chickaboom_31, Circuit_48, Evaa_48, Fresco_48, Glotell_33, HamCheese_30, Hashim76_90, Hortus1_71, Juno112_30, KHumphrey_31, Leona_30, Ligma_48, LittleMunchkin_50, LittleTokyo_33, Mariokart_48, Maruru_66, Mufasa8_70, OlinDD_71, PhluffyCoco_31, Pioneer3_71, Platte_71, Pupper_45, Rattail_31, RedFox_31, Renna12_30, Ruchi_30,

SCentae_45, Shatter_48, Sisko_47, Sonali_65, StAugustine_149, Sunshine23_66, Tandem_71, Thonko_86, Vulpecula_30, Wolfstar_76, Yago84_47, Zenteno07_93, Zhuangyuan_36,

Summary by start number:

Start 30:
• Found in 3 of 92 (3.3%) of genes in pham
• Manual Annotations of this start: 3 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BirdsNest_93 (B13), Hashim76_90 (B13), Zenteno07_93 (B13),

Start 32:
• Found in 1 of 92 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Thonko_86 (B8),

Start 33:
• Found in 13 of 92 (14.1%) of genes in pham
• Manual Annotations of this start: 9 of 60
• Called 84.6% of time when present
• Phage (with cluster) where this start called: AllBusiness_47 (FF), AnClar_48 (DR), Axumite_48 (DR), Evaa_48 (DR), Fresco_48 (DR), Ligma_48 (DR), LittleMunchkin_50 (DR), Shatter_48 (DR), Sisko_47 (DR), Yago84_47 (DR), Zhuangyuan_36 (AS2),

Start 36:
• Found in 3 of 92 (3.3%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Maruru_66 (FG), Sonali_65 (FG), Sunshine23_66 (FG),

Start 37:
• Found in 6 of 92 (6.5%) of genes in pham
• Manual Annotations of this start: 5 of 60
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Abidatro_30 (AS1), Basilisk_31 (AS1), Brynnie_30 (AS1), Ruchi_30 (AS1), Vulpecula_30 (AS1),

Start 40:
• Found in 2 of 92 (2.2%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Altadena_50 (FH), Circuit_48 (FH),

Start 42:
• Found in 1 of 92 (1.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: StAugustine_149 (singleton),

Start 43:
• Found in 4 of 92 (4.3%) of genes in pham
• Manual Annotations of this start: 3 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bolt007_53 (FH), CharlottesWeb_47 (DR), Mariokart_48 (DR), Mufasa8_70 (FG),

Start 44:
• Found in 38 of 92 (41.3%) of genes in pham
• Manual Annotations of this start: 19 of 60
• Called 97.4% of time when present
• Phage (with cluster) where this start called: AbbyDaisy_79 (AY), AdaS_72 (AY), Aikyam_75 (AY), Alatato_57 (FB), Anekin_78 (AY), Auxilium_74 (AY), BenchScraper_76 (AY), Bhageatrice_81 (AY), BillyTP_77 (AY), BlackSpider_67 (FN), BlueShadow_78 (AY), CookieBear_73 (AY), EvePickles_75 (AY), Faja_79 (AY), Globfish_75 (AY), Gorpy_74 (AY), Hestia_70 (AY), Hillester_80 (AY), Isolde_74 (AY), Lawnathon_76 (AY), MaterMagnus_76 (AY), MidnightRain_81 (AY), Persistence_70 (AY), Phrank15_80 (AY), RadFad_81 (AY), Raphaella_77 (AY), Richie_79 (AY), Sakai_73 (AY), Sashimi_76 (AY), Seahorse_84 (AY), Shukran_73 (AY), SpicyFrank_78 (AY), ThayneTheZag_81 (AY), Tiff81_77 (AY), Windest_79 (AY), YoungHarleezy_74 (AY), Zucker_73 (FN),

Start 45:
• Found in 6 of 92 (6.5%) of genes in pham
• Manual Annotations of this start: 6 of 60
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hortus1_71 (ED1), OlinDD_71 (ED1), Pioneer3_71 (ED1), Platte_71 (ED1), Tandem_71 (ED1), Wolfstar_76 (ED),

Start 46:
• Found in 4 of 92 (4.3%) of genes in pham
• Manual Annotations of this start: 3 of 60
• Called 75.0% of time when present
• Phage (with cluster) where this start called: CherryTomatoes_47 (DO), Pupper_45 (DO), SCentae_45 (DO),

Start 47:
• Found in 15 of 92 (16.3%) of genes in pham
• Manual Annotations of this start: 7 of 60
• Called 73.3% of time when present
• Phage (with cluster) where this start called: Andrew_32 (AS3), Atlantica_31 (AS3), Camara_31 (AS3), HamCheese_30 (AS3), Juno112_30 (AS3), Leona_30 (AS3), LittleTokyo_33 (AS2), PhluffyCoco_31 (AS3), Rattail_31 (AS3), RedFox_31 (AS3), Renna12_30 (AS3),

Start 49:
• Found in 8 of 92 (8.7%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Chickaboom_31 (AS1), Raqqa_74 (AY),

Start 50:

• Found in 10 of 92 (10.9%) of genes in pham
• Manual Annotations of this start: 1 of 60
• Called 30.0% of time when present
• Phage (with cluster) where this start called: AmiCi24_30 (AS3), Glotell_33 (AS3), KHumphrey_31 (AS3),

Summary by clusters:

There are 16 clusters represented in this pham: AS3, AS2, AS1, B8, DO, ED, singleton, FH, FB, ED1, B13, FF, FG, AY, DR, FN,

Info for manual annotations of cluster AS1:
•Start number 37 was manually annotated 5 times for cluster AS1.
•Start number 49 was manually annotated 1 time for cluster AS1.

Info for manual annotations of cluster AS2:
•Start number 47 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:
•Start number 47 was manually annotated 6 times for cluster AS3.
•Start number 50 was manually annotated 1 time for cluster AS3.

Info for manual annotations of cluster AY:
•Start number 44 was manually annotated 18 times for cluster AY.

Info for manual annotations of cluster B13:
•Start number 30 was manually annotated 3 times for cluster B13.

Info for manual annotations of cluster B8:
•Start number 32 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster DO:
•Start number 46 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DR:
•Start number 33 was manually annotated 9 times for cluster DR.
•Start number 43 was manually annotated 1 time for cluster DR.

Info for manual annotations of cluster ED:
•Start number 45 was manually annotated 1 time for cluster ED.

Info for manual annotations of cluster ED1:
•Start number 45 was manually annotated 5 times for cluster ED1.

Info for manual annotations of cluster FG:
•Start number 36 was manually annotated 1 time for cluster FG.
•Start number 43 was manually annotated 1 time for cluster FG.

Info for manual annotations of cluster FH:
•Start number 40 was manually annotated 1 time for cluster FH.
•Start number 43 was manually annotated 1 time for cluster FH.

Info for manual annotations of cluster FN:
•Start number 44 was manually annotated 1 time for cluster FN.

Gene Information:

Gene: AbbyDaisy_79 Start: 44094, Stop: 44489, Start Num: 44
Candidate Starts for AbbyDaisy_79:
(Start: 44 @44094 has 19 MA's), (Start: 49 @44118 has 1 MA's), (56, 44139), (75, 44265), (102, 44463),

Gene: Abidatro_30 Start: 21728, Stop: 21387, Start Num: 37
Candidate Starts for Abidatro_30:
(Start: 37 @21728 has 5 MA's), (Start: 49 @21707 has 1 MA's), (82, 21497), (97, 21401),

Gene: AdaS_72 Start: 39804, Stop: 40205, Start Num: 44
Candidate Starts for AdaS_72:
(Start: 44 @39804 has 19 MA's), (75, 39972), (83, 40041),

Gene: Aikyam_75 Start: 40510, Stop: 40911, Start Num: 44
Candidate Starts for Aikyam_75:
(12, 40264), (Start: 44 @40510 has 19 MA's), (75, 40678), (83, 40747),

Gene: Alatato_57 Start: 32552, Stop: 32914, Start Num: 44
Candidate Starts for Alatato_57:
(Start: 44 @32552 has 19 MA's), (73, 32687), (75, 32708),

Gene: AllBusiness_47 Start: 35006, Stop: 35380, Start Num: 33
Candidate Starts for AllBusiness_47:
(29, 34973), (Start: 33 @35006 has 9 MA's), (38, 35018), (41, 35021), (51, 35054), (57, 35072), (64, 35120), (86, 35279),

Gene: Altadena_50 Start: 34978, Stop: 35370, Start Num: 40
Candidate Starts for Altadena_50:
(Start: 40 @34978 has 1 MA's), (63, 35077), (80, 35206), (90, 35281),

Gene: AmiCi24_30 Start: 21190, Stop: 20867, Start Num: 50
Candidate Starts for AmiCi24_30:
(Start: 47 @21208 has 7 MA's), (Start: 50 @21190 has 1 MA's),

Gene: AnClar_48 Start: 43435, Stop: 43061, Start Num: 33
Candidate Starts for AnClar_48:
(Start: 33 @43435 has 9 MA's), (54, 43375), (65, 43312), (66, 43303), (83, 43183),

Gene: Andrew_32 Start: 21174, Stop: 20812, Start Num: 47
Candidate Starts for Andrew_32:
(Start: 47 @21174 has 7 MA's), (64, 21087), (81, 20958), (89, 20892),

Gene: Anekin_78 Start: 43082, Stop: 43483, Start Num: 44
Candidate Starts for Anekin_78:
(12, 42836), (Start: 44 @43082 has 19 MA's), (75, 43250), (83, 43319),

Gene: Atlantica_31 Start: 21209, Stop: 20868, Start Num: 47
Candidate Starts for Atlantica_31:
(Start: 47 @21209 has 7 MA's), (Start: 50 @21191 has 1 MA's),

Gene: Auxilium_74 Start: 40053, Stop: 40418, Start Num: 44
Candidate Starts for Auxilium_74:
(Start: 44 @40053 has 19 MA's), (60, 40116), (66, 40149), (75, 40209), (82, 40272),

Gene: Axumite_48 Start: 41091, Stop: 40741, Start Num: 33
Candidate Starts for Axumite_48:
(Start: 33 @41091 has 9 MA's), (54, 41046), (57, 41037), (58, 41022), (66, 40974), (78, 40893),

Gene: Basilisk_31 Start: 22679, Stop: 22335, Start Num: 37
Candidate Starts for Basilisk_31:
(Start: 37 @22679 has 5 MA's), (Start: 49 @22658 has 1 MA's), (51, 22652), (57, 22634), (64, 22586),

Gene: BenchScraper_76 Start: 41215, Stop: 41616, Start Num: 44
Candidate Starts for BenchScraper_76:
(Start: 44 @41215 has 19 MA's), (75, 41383), (83, 41452),

Gene: Bhageatrice_81 Start: 44894, Stop: 45259, Start Num: 44
Candidate Starts for Bhageatrice_81:
(Start: 44 @44894 has 19 MA's), (60, 44957), (66, 44990), (75, 45050), (82, 45113),

Gene: BillyTP_77 Start: 43046, Stop: 43435, Start Num: 44
Candidate Starts for BillyTP_77:
(Start: 44 @43046 has 19 MA's), (70, 43169), (75, 43202), (76, 43217), (83, 43271),

Gene: BirdsNest_93 Start: 66573, Stop: 66154, Start Num: 30
Candidate Starts for BirdsNest_93:
(Start: 30 @66573 has 3 MA's), (54, 66492), (75, 66363), (78, 66330), (88, 66255),

Gene: BlackSpider_67 Start: 39612, Stop: 40001, Start Num: 44
Candidate Starts for BlackSpider_67:
(24, 39510), (Start: 44 @39612 has 19 MA's), (70, 39735), (75, 39768), (76, 39783), (79, 39804), (83, 39837),

Gene: BlueShadow_78 Start: 42358, Stop: 42759, Start Num: 44
Candidate Starts for BlueShadow_78:
(Start: 44 @42358 has 19 MA's), (75, 42526), (83, 42595),

Gene: Bolt007_53 Start: 38007, Stop: 38369, Start Num: 43
Candidate Starts for Bolt007_53:
(21, 37902), (22, 37905), (Start: 43 @38007 has 3 MA's), (90, 38295),

Gene: Brynnie_30 Start: 22557, Stop: 22213, Start Num: 37
Candidate Starts for Brynnie_30:
(Start: 37 @22557 has 5 MA's), (Start: 49 @22536 has 1 MA's), (75, 22389), (97, 22230),

Gene: Camara_31 Start: 21210, Stop: 20869, Start Num: 47
Candidate Starts for Camara_31:
(Start: 47 @21210 has 7 MA's), (Start: 50 @21192 has 1 MA's),

Gene: CharlottesWeb_47 Start: 40439, Stop: 40119, Start Num: 43
Candidate Starts for CharlottesWeb_47:
(Start: 33 @40457 has 9 MA's), (Start: 43 @40439 has 3 MA's), (66, 40352), (85, 40223),

Gene: CherryTomatoes_47 Start: 15930, Stop: 16262, Start Num: 46
Candidate Starts for CherryTomatoes_47:
(11, 15675), (35, 15903), (Start: 46 @15930 has 3 MA's), (58, 15984), (59, 15993), (66, 16032), (78, 16116), (87, 16179), (91, 16206),

Gene: Chickaboom_31 Start: 21673, Stop: 21350, Start Num: 49
Candidate Starts for Chickaboom_31:
(Start: 37 @21694 has 5 MA's), (Start: 49 @21673 has 1 MA's), (64, 21601), (87, 21430), (97, 21367),

Gene: Circuit_48 Start: 36342, Stop: 36734, Start Num: 40
Candidate Starts for Circuit_48:
(Start: 40 @36342 has 1 MA's), (75, 36522), (80, 36570), (90, 36645),

Gene: CookieBear_73 Start: 41689, Stop: 42090, Start Num: 44
Candidate Starts for CookieBear_73:
(Start: 44 @41689 has 19 MA's), (75, 41857), (83, 41926),

Gene: Evaa_48 Start: 41735, Stop: 41361, Start Num: 33
Candidate Starts for Evaa_48:
(10, 41960), (31, 41741), (Start: 33 @41735 has 9 MA's), (54, 41675), (61, 41630), (65, 41612), (66, 41603),

Gene: EvePickles_75 Start: 42959, Stop: 43348, Start Num: 44
Candidate Starts for EvePickles_75:
(Start: 44 @42959 has 19 MA's), (70, 43082), (75, 43115), (76, 43130), (83, 43184),

Gene: Faja_79 Start: 43731, Stop: 44132, Start Num: 44
Candidate Starts for Faja_79:
(Start: 44 @43731 has 19 MA's), (75, 43899), (83, 43968),

Gene: Fresco_48 Start: 41091, Stop: 40741, Start Num: 33
Candidate Starts for Fresco_48:
(Start: 33 @41091 has 9 MA's), (54, 41046), (57, 41037), (58, 41022), (66, 40974), (78, 40893),

Gene: Globfish_75 Start: 41426, Stop: 41815, Start Num: 44
Candidate Starts for Globfish_75:
(Start: 44 @41426 has 19 MA's), (70, 41549), (75, 41582), (76, 41597), (83, 41651),

Gene: Glotell_33 Start: 21348, Stop: 21025, Start Num: 50
Candidate Starts for Glotell_33:
(Start: 47 @21366 has 7 MA's), (Start: 50 @21348 has 1 MA's),

Gene: Gorpy_74 Start: 42930, Stop: 43331, Start Num: 44
Candidate Starts for Gorpy_74:
(12, 42684), (Start: 44 @42930 has 19 MA's), (75, 43098), (83, 43167),

Gene: HamCheese_30 Start: 21194, Stop: 20853, Start Num: 47
Candidate Starts for HamCheese_30:

(Start: 47 @21194 has 7 MA's), (Start: 50 @21176 has 1 MA's),

Gene: Hashim76_90 Start: 66062, Stop: 65649, Start Num: 30
Candidate Starts for Hashim76_90:
(Start: 30 @66062 has 3 MA's), (54, 65981), (69, 65894), (75, 65852), (78, 65819), (88, 65744),

Gene: Hestia_70 Start: 39954, Stop: 40355, Start Num: 44
Candidate Starts for Hestia_70:
(Start: 44 @39954 has 19 MA's), (75, 40122), (83, 40191),

Gene: Hillester_80 Start: 42975, Stop: 43364, Start Num: 44
Candidate Starts for Hillester_80:
(1, 41406), (2, 41541), (3, 41652), (4, 41688), (5, 41751), (6, 42429), (8, 42645), (Start: 44 @42975 has 19 MA's), (70, 43098), (75, 43131), (76, 43146), (83, 43200), (97, 43290),

Gene: Hortus1_71 Start: 44930, Stop: 44580, Start Num: 45
Candidate Starts for Hortus1_71:
(19, 45071), (27, 44987), (Start: 45 @44930 has 6 MA's), (53, 44903), (56, 44894), (57, 44891), (67, 44828), (70, 44804), (93, 44627), (95, 44612), (100, 44591),

Gene: Isolde_74 Start: 41800, Stop: 42201, Start Num: 44
Candidate Starts for Isolde_74:
(22, 41689), (Start: 44 @41800 has 19 MA's), (75, 41968), (83, 42037),

Gene: Juno112_30 Start: 21210, Stop: 20869, Start Num: 47
Candidate Starts for Juno112_30:
(Start: 47 @21210 has 7 MA's), (Start: 50 @21192 has 1 MA's),

Gene: KHumphrey_31 Start: 21190, Stop: 20867, Start Num: 50
Candidate Starts for KHumphrey_31:
(Start: 47 @21208 has 7 MA's), (Start: 50 @21190 has 1 MA's),

Gene: Lawnathon_76 Start: 42050, Stop: 42439, Start Num: 44
Candidate Starts for Lawnathon_76:
(Start: 44 @42050 has 19 MA's), (70, 42173), (75, 42206), (76, 42221), (83, 42275),

Gene: Leona_30 Start: 21281, Stop: 20940, Start Num: 47
Candidate Starts for Leona_30:
(Start: 47 @21281 has 7 MA's), (68, 21173), (71, 21152),

Gene: Ligma_48 Start: 41091, Stop: 40741, Start Num: 33
Candidate Starts for Ligma_48:
(Start: 33 @41091 has 9 MA's), (54, 41046), (57, 41037), (58, 41022), (66, 40974), (78, 40893),

Gene: LittleMunchkin_50 Start: 44298, Stop: 43924, Start Num: 33
Candidate Starts for LittleMunchkin_50:
(10, 44523), (Start: 33 @44298 has 9 MA's), (57, 44229), (65, 44175), (69, 44151), (94, 43965),

Gene: LittleTokyo_33 Start: 21980, Stop: 21597, Start Num: 47
Candidate Starts for LittleTokyo_33:
(Start: 47 @21980 has 7 MA's), (81, 21776),

Gene: Mariokart_48 Start: 41216, Stop: 40896, Start Num: 43

Candidate Starts for Mariokart_48:
(Start: 33 @41234 has 9 MA's), (Start: 43 @41216 has 3 MA's), (65, 41138), (66, 41129), (83, 41012), (85, 41000),

Gene: Maruru_66 Start: 44640, Stop: 45053, Start Num: 36
Candidate Starts for Maruru_66:
(18, 44490), (Start: 36 @44640 has 1 MA's), (60, 44730), (64, 44748), (80, 44871), (84, 44895),

Gene: MaterMagnus_76 Start: 42682, Stop: 43083, Start Num: 44
Candidate Starts for MaterMagnus_76:
(12, 42436), (Start: 44 @42682 has 19 MA's), (75, 42850), (83, 42919),

Gene: MidnightRain_81 Start: 43270, Stop: 43659, Start Num: 44
Candidate Starts for MidnightRain_81:
(Start: 44 @43270 has 19 MA's), (70, 43393), (75, 43426), (76, 43441), (83, 43495),

Gene: Mufasa8_70 Start: 44952, Stop: 45344, Start Num: 43
Candidate Starts for Mufasa8_70:
(20, 44829), (28, 44901), (Start: 43 @44952 has 3 MA's), (63, 45045),

Gene: OlinDD_71 Start: 44929, Stop: 44579, Start Num: 45
Candidate Starts for OlinDD_71:
(19, 45070), (27, 44986), (Start: 45 @44929 has 6 MA's), (53, 44902), (56, 44893), (57, 44890), (67, 44827), (70, 44803), (93, 44626), (95, 44611), (100, 44590),

Gene: Persistence_70 Start: 40343, Stop: 40708, Start Num: 44
Candidate Starts for Persistence_70:
(Start: 44 @40343 has 19 MA's), (57, 40376), (58, 40391), (66, 40439), (75, 40499), (82, 40562),

Gene: PhluffyCoco_31 Start: 21194, Stop: 20853, Start Num: 47
Candidate Starts for PhluffyCoco_31:
(Start: 47 @21194 has 7 MA's), (Start: 50 @21176 has 1 MA's),

Gene: Phrank15_80 Start: 42781, Stop: 43146, Start Num: 44
Candidate Starts for Phrank15_80:
(24, 42679), (Start: 44 @42781 has 19 MA's), (57, 42814), (63, 42856), (66, 42877), (75, 42937), (82, 43000),

Gene: Pioneer3_71 Start: 44751, Stop: 44401, Start Num: 45
Candidate Starts for Pioneer3_71:
(19, 44892), (27, 44808), (Start: 45 @44751 has 6 MA's), (53, 44724), (56, 44715), (57, 44712), (67, 44649), (70, 44625), (93, 44448), (95, 44433), (100, 44412),

Gene: Platte_71 Start: 44704, Stop: 44354, Start Num: 45
Candidate Starts for Platte_71:
(27, 44761), (Start: 45 @44704 has 6 MA's), (53, 44677), (56, 44668), (57, 44665), (67, 44602), (70, 44578), (93, 44401), (95, 44386), (100, 44365),

Gene: Pupper_45 Start: 15769, Stop: 16101, Start Num: 46
Candidate Starts for Pupper_45:
(11, 15514), (35, 15742), (Start: 46 @15769 has 3 MA's), (58, 15823), (59, 15832), (66, 15871), (78, 15955), (91, 16045),

Gene: RadFad_81 Start: 42975, Stop: 43364, Start Num: 44
Candidate Starts for RadFad_81:
(1, 41406), (2, 41541), (3, 41652), (4, 41688), (5, 41751), (6, 42429), (8, 42645), (Start: 44 @42975 has 19 MA's), (70, 43098), (75, 43131), (76, 43146), (83, 43200), (97, 43290),

Gene: Raphaella_77 Start: 41746, Stop: 42147, Start Num: 44
Candidate Starts for Raphaella_77:
(Start: 44 @41746 has 19 MA's), (75, 41914), (83, 41983),

Gene: Raqqa_74 Start: 42460, Stop: 42840, Start Num: 49
Candidate Starts for Raqqa_74:
(Start: 44 @42436 has 19 MA's), (Start: 49 @42460 has 1 MA's), (56, 42481), (70, 42574), (75, 42607), (87, 42703),

Gene: Rattail_31 Start: 21290, Stop: 20949, Start Num: 47
Candidate Starts for Rattail_31:
(Start: 47 @21290 has 7 MA's), (Start: 50 @21272 has 1 MA's),

Gene: RedFox_31 Start: 21207, Stop: 20866, Start Num: 47
Candidate Starts for RedFox_31:
(Start: 47 @21207 has 7 MA's), (Start: 50 @21189 has 1 MA's),

Gene: Renna12_30 Start: 21228, Stop: 20887, Start Num: 47
Candidate Starts for Renna12_30:
(Start: 47 @21228 has 7 MA's), (51, 21207),

Gene: Richie_79 Start: 43614, Stop: 44015, Start Num: 44
Candidate Starts for Richie_79:
(12, 43368), (Start: 44 @43614 has 19 MA's), (75, 43782), (83, 43851),

Gene: Ruchi_30 Start: 22625, Stop: 22281, Start Num: 37
Candidate Starts for Ruchi_30:
(Start: 37 @22625 has 5 MA's), (Start: 49 @22604 has 1 MA's), (57, 22580), (64, 22532), (97, 22298),

Gene: SCentae_45 Start: 15768, Stop: 16100, Start Num: 46
Candidate Starts for SCentae_45:
(11, 15513), (35, 15741), (Start: 46 @15768 has 3 MA's), (58, 15822), (59, 15831), (66, 15870), (78, 15954), (91, 16044),

Gene: Sakai_73 Start: 41641, Stop: 42042, Start Num: 44
Candidate Starts for Sakai_73:
(12, 41395), (Start: 44 @41641 has 19 MA's), (75, 41809), (83, 41878),

Gene: Sashimi_76 Start: 42326, Stop: 42715, Start Num: 44
Candidate Starts for Sashimi_76:
(Start: 44 @42326 has 19 MA's), (70, 42449), (83, 42551), (97, 42641),

Gene: Seahorse_84 Start: 47304, Stop: 47699, Start Num: 44
Candidate Starts for Seahorse_84:
(Start: 44 @47304 has 19 MA's), (56, 47349), (75, 47475), (87, 47571), (102, 47673),

Gene: Shatter_48 Start: 41091, Stop: 40741, Start Num: 33
Candidate Starts for Shatter_48:

(Start: 33 @41091 has 9 MA's), (54, 41046), (57, 41037), (58, 41022), (66, 40974), (78, 40893),

Gene: Shukran_73 Start: 41223, Stop: 41588, Start Num: 44
Candidate Starts for Shukran_73:
(16, 41013), (23, 41118), (39, 41211), (Start: 44 @41223 has 19 MA's), (57, 41256), (66, 41319), (75, 41379),

Gene: Sisko_47 Start: 41439, Stop: 41065, Start Num: 33
Candidate Starts for Sisko_47:
(Start: 33 @41439 has 9 MA's), (54, 41379), (65, 41316), (66, 41307), (83, 41187),

Gene: Sonali_65 Start: 45108, Stop: 45521, Start Num: 36
Candidate Starts for Sonali_65:
(18, 44958), (Start: 36 @45108 has 1 MA's), (60, 45198), (64, 45216), (80, 45339), (84, 45363),

Gene: SpicyFrank_78 Start: 42043, Stop: 42432, Start Num: 44
Candidate Starts for SpicyFrank_78:
(Start: 44 @42043 has 19 MA's), (70, 42166), (75, 42199), (76, 42214), (83, 42268),

Gene: StAugustine_149 Start: 84499, Stop: 84137, Start Num: 42
Candidate Starts for StAugustine_149:
(34, 84514), (42, 84499), (Start: 46 @84490 has 3 MA's), (48, 84475), (60, 84418), (62, 84409), (92, 84211),

Gene: Sunshine23_66 Start: 44762, Stop: 45172, Start Num: 36
Candidate Starts for Sunshine23_66:
(18, 44612), (Start: 36 @44762 has 1 MA's), (52, 44810), (60, 44852), (64, 44870), (75, 44945), (80, 44993), (84, 45017),

Gene: Tandem_71 Start: 44831, Stop: 44481, Start Num: 45
Candidate Starts for Tandem_71:
(19, 44972), (27, 44888), (Start: 45 @44831 has 6 MA's), (53, 44804), (56, 44795), (57, 44792), (67, 44729), (70, 44705), (93, 44528), (95, 44513), (100, 44492),

Gene: ThayneTheZag_81 Start: 42670, Stop: 43059, Start Num: 44
Candidate Starts for ThayneTheZag_81:
(Start: 44 @42670 has 19 MA's), (70, 42793), (75, 42826), (76, 42841), (83, 42895),

Gene: Thonko_86 Start: 63155, Stop: 62742, Start Num: 32
Candidate Starts for Thonko_86:
(7, 63593), (9, 63440), (13, 63365), (15, 63338), (25, 63224), (26, 63218), (Start: 32 @63155 has 1 MA's), (Start: 47 @63116 has 7 MA's), (54, 63086), (57, 63077), (66, 63014), (87, 62858), (88, 62846), (91, 62831), (99, 62783),

Gene: Tiff81_77 Start: 40921, Stop: 41316, Start Num: 44
Candidate Starts for Tiff81_77:
(Start: 44 @40921 has 19 MA's), (56, 40966), (75, 41092), (87, 41188), (102, 41290),

Gene: Vulpecula_30 Start: 22301, Stop: 21957, Start Num: 37
Candidate Starts for Vulpecula_30:
(Start: 37 @22301 has 5 MA's), (Start: 49 @22280 has 1 MA's), (57, 22256), (64, 22208),

Gene: Windest_79 Start: 41108, Stop: 41497, Start Num: 44

Candidate Starts for Windest_79:
(Start: 44 @41108 has 19 MA's), (70, 41231), (75, 41264), (76, 41279), (83, 41333),

Gene: Wolfstar_76 Start: 46237, Stop: 45881, Start Num: 45
Candidate Starts for Wolfstar_76:
(19, 46384), (27, 46300), (Start: 45 @46237 has 6 MA's), (55, 46201), (56, 46198), (59, 46171), (72, 46102), (74, 46081), (78, 46036), (84, 45997), (85, 45988), (93, 45928), (95, 45913), (98, 45904),

Gene: Yago84_47 Start: 41514, Stop: 41140, Start Num: 33
Candidate Starts for Yago84_47:
(Start: 33 @41514 has 9 MA's), (54, 41454), (65, 41391), (66, 41382), (83, 41262),

Gene: YoungHarleezy_74 Start: 42016, Stop: 42417, Start Num: 44
Candidate Starts for YoungHarleezy_74:
(Start: 44 @42016 has 19 MA's), (75, 42184), (83, 42253),

Gene: Zenteno07_93 Start: 66203, Stop: 65790, Start Num: 30
Candidate Starts for Zenteno07_93:
(Start: 30 @66203 has 3 MA's), (54, 66122), (69, 66035), (75, 65993), (78, 65960), (88, 65885), (101, 65795),

Gene: Zhuangyuan_36 Start: 22960, Stop: 22577, Start Num: 33
Candidate Starts for Zhuangyuan_36:
(17, 23122), (Start: 33 @22960 has 9 MA's), (77, 22747), (96, 22615),

Gene: Zucker_73 Start: 43088, Stop: 43483, Start Num: 44
Candidate Starts for Zucker_73:
(14, 42881), (Start: 44 @43088 has 19 MA's), (56, 43133), (70, 43226), (75, 43259), (102, 43457),