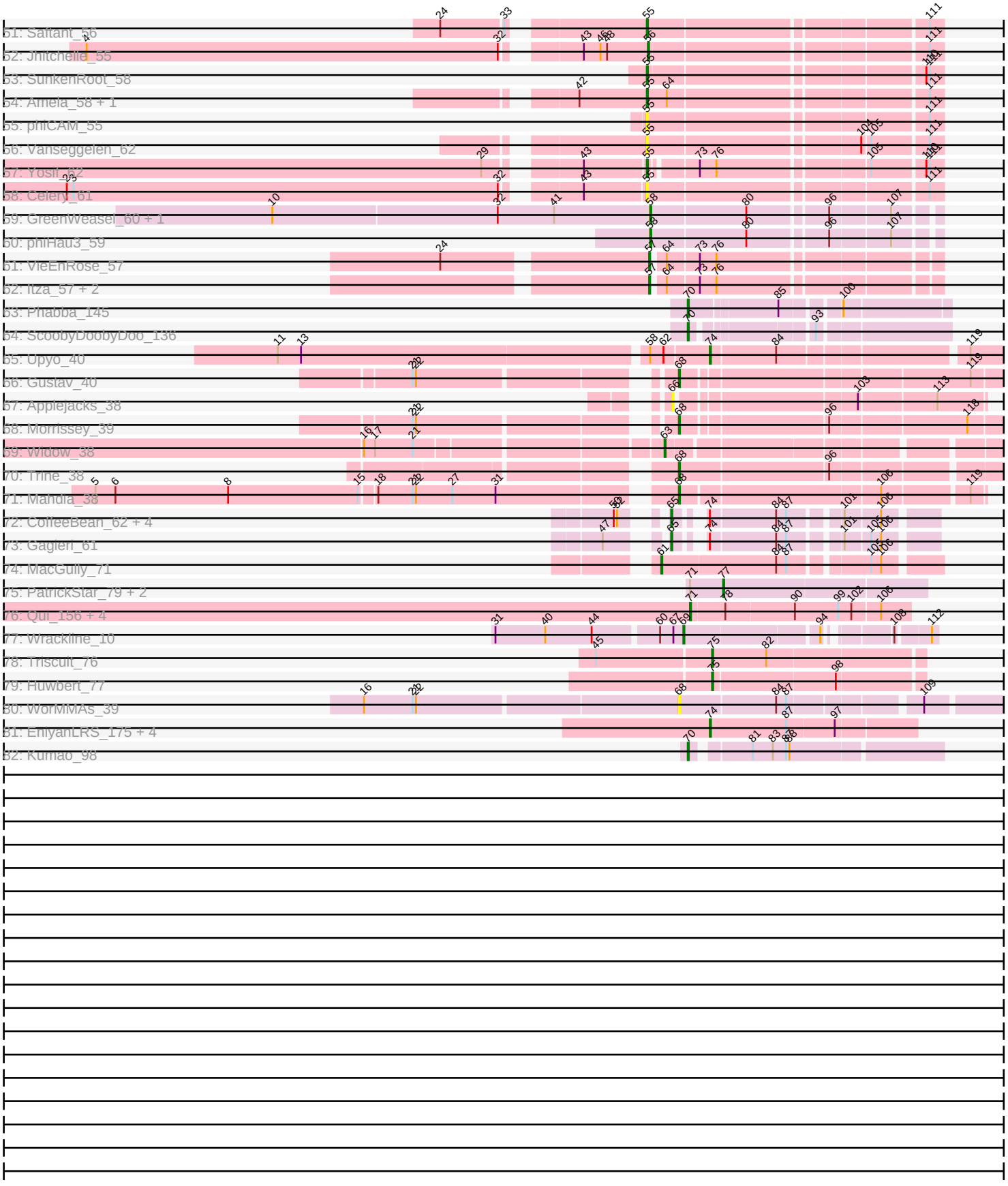
Pham 345463


1: Mao1_80
2: Nostromo_62
3: Sujidade_56
4: Leviticus_54 + 1
5: Lannister_55
6: Asten_55 + 17
7: Lika_56
8: Legacy_53 + 2
9: Toma_57 + 3
10: BeardedLady_54 + 7
11: Danzina_57
12: Celeste_57
13: EnochSoames_58 + 3
14: Izzy_56 + 5
15: Nanodon_57
16: Chucky_55
17: GizzyJ_57
18: Zemlya_57
19: Nabi_56
20: Hydra_55
21: Triumph_60
22: Omar_61
23: GinDinner_58 + 3
24: BartholomewSD_61 + 1
25: Haizum_58 + 2
26: Amethyst_58
27: Jevington_57
28: Paedore_59
29: R4_58
30: Issmi_59
31: TinaBelcher_58
32: Loofah_60
33: Caelum_60
34: Pablito_56
35: Bowden_58
36: Diane_58
37: Andris_58
38: TrvxScott_57 + 1
39: Marav_59
40: Puginator_60
41: Paolo_60 + 1
42: Hank144_60
43: Superstar_65
44: Axiom_59
45: Daudau_58
46: ELB20_57
47: Provolone_58 + 1
48: Verabelle_61
49: Alsaber_58 + 6
50: Speedwell_61

Pham 345463


51: Saltant_56
52: Jnitchelle_55
53: SunkenRoot_58
54: Amela_58 + 1
55: phiCAM_55
56: Vanseggelen_62
57: Yosif_62
58: Celery_61
59: GreenWeasel_60 + 1
60: phiHau3_59
61: VieEnRose_57
62: Itza_57 + 2
63: Phabba_145
64: ScoobyDoobyDoo_136
65: Upyo_40
66: Gustav_40
67: Applejacks_38
68: Morrissey_39
69: Widow_38
70: Trine_38
71: Mandia_38
72: CoffeeBean_62 + 4
73: Gaglen_61
74: MacGully_71
75: PatrickStar_79 + 2
76: Qui_156 + 4
77: Wrackline_10
78: Triscuit_76
79: Huwbert_77
80: WorMMAs_39
81: EnlyanLRS_175 + 4
82: Kumao_98

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 345463 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 345463 has 153 members, 9 are drafts.

Phages represented in each track:
- Track 1 : Mao1_80
- Track 2 : Nostromo_62
- Track 3 : Sujidade_56
- Track 4 : Leviticus_54, Esperer_54
- Track 5 : Lannister_55
- Track 6 : Asten_55, Ejemplo_53, Dwayne_55, Maneekul_55, Yasdnil_55, Werner_55, Brataylor_58, Whatever_55, Emaanora_58, Hippo_55, Lorelei_56, Snorlax_55, BarryBee_58, Triste_56, SarahRose_55, TuanPN_53, Rana_57, TagePhighter_57
- Track 7 : Lika_56
- Track 8 : Legacy_53, SunsetPointe_53, Ozzie_53
- Track 9 : Toma_57, Goby_57, Dattran_58, Godpower_57
- Track 10 : BeardedLady_54, Caliburn_53, Phettuccine_54, Indigo_53, Bovely_54, Nerdos_53, Unstoppable_54, Aaronocolus_54
- Track 11 : Danzina_57
- Track 12 : Celeste_57
- Track 13 : EnochSoames_58, South40_55, Katalie_55, RedBear_56
- Track 14 : Izzy_56, Jash_56, BryanRecycles_56, Eddasa_57, Oliynyk_56, Rusticus_56
- Track 15 : Nanodon_57
- Track 16 : Chucky_55
- Track 17 : OzzyJ_57
- Track 18 : Zemlya_57
- Track 19 : Nabi_56
- Track 20 : Hydra_55
- Track 21 : Triumph_60
- Track 22 : Omar_61
- Track 23 : GirlDinner_58, SqueakyClean_59, Janus_59, Animus_58
- Track 24 : BartholomewSD_61, Alvy_61
- Track 25 : Haizum_58, Tefunt_58, Nishikigoi_59
- Track 26 : Amethyst_58
- Track 27 : Jevington_57
- Track 28 : Paedore_59

• Track 29 : R4_58
• Track 30 : Issmi_59
• Track 31 : TinaBelcher_58
• Track 32 : Loofah_60
• Track 33 : Caelum_60
• Track 34 : Pablito_56
• Track 35 : Bowden_58
• Track 36 : Diane_58
• Track 37 : Andris_58
• Track 38 : TrvxScott_57, Thestral_60
• Track 39 : Marav_59
• Track 40 : Puginator_60
• Track 41 : Paolo_60, Zainub_60
• Track 42 : Hank144_60
• Track 43 : Superstar_65
• Track 44 : Axiom_59
• Track 45 : Daudau_58
• Track 46 : ELB20_57
• Track 47 : Provolone_58, ElGato_58
• Track 48 : Verabelle_61
• Track 49 : Alsaber_58, Sudan_58, ZamZam_58, Dexers_56, Pavo_59, Kaine_58, Conan_58
• Track 50 : Speedwell_61
• Track 51 : Saftant_56
• Track 52 : Jhitchelle_55
• Track 53 : SunkenRoot_58
• Track 54 : Amela_58, Verse_59
• Track 55 : phiCAM_55
• Track 56 : Vanseggelen_62
• Track 57 : Yosif_62
• Track 58 : Celery_61
• Track 59 : GreenWeasel_60, BroPlease_58
• Track 60 : phiHau3_59
• Track 61 : VieEnRose_57
• Track 62 : Itza_57, Celia_55, Urza_56
• Track 63 : Phabba_145
• Track 64 : ScoobyDoobyDoo_136
• Track 65 : Upyo_40
• Track 66 : Gustav_40
• Track 67 : Applejacks_38
• Track 68 : Morrissey_39
• Track 69 : Widow_38
• Track 70 : Trine_38
• Track 71 : Mahdia_38
• Track 72 : CoffeeBean_62, Maselop_62, Apiary_62, Braxoaddie_62, Polyyuki_62
• Track 73 : Gagieri_61
• Track 74 : MacGully_71
• Track 75 : PatrickStar_79, Orchid_78, Kampe_79
• Track 76 : Qui_156, JeNeSaisPas_155, Elver_156, Gandionco_152, Paella_156
• Track 77 : Wrackline_10
• Track 78 : Triscuit_76
• Track 79 : Huwbert_77
• Track 80 : WorMMAs_39

• Track 81 : EniyanLRS_175, Azrael100_136, MaryV_129, Cosmo_143, Wildcat_143
• Track 82 : Kumao_98

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

The start number called the most often in the published annotations is 57, it was called in 58 of the 144 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaronocolus_54, Asten_55, BarryBee_58, BeardedLady_54, Bovely_54, Brataylor_58, BryanRecycles_56, Caliburn_53, Celeste_57, Celia_55, Danzina_57, Dattran_58, Dwayne_55, Eddasa_57, Ejemplo_53, Emaanora_58, EnochSoames_58, Esperer_54, Goby_57, Godpower_57, Hippo_55, Hydra_55, Indigo_53, Itza_57, Izzy_56, Jash_56, Katalie_55, Lannister_55, Legacy_53, Leviticus_54, Lika_56, Lorelei_56, Maneekul_55, Nabi_56, Nanodon_57, Nerdos_53, Oliynyk_56, Ozzie_53, OzzyJ_57, Phettuccine_54, Rana_57, RedBear_56, Rusticus_56, SarahRose_55, Snorlax_55, South40_55, Sujidade_56, SunsetPointe_53, TagePhighter_57, Toma_57, Triste_56, TuanPN_53, Unstoppable_54, Urza_56, VieEnRose_57, Werner_55, Whatever_55, Yasdnil_55, Zemlya_57,

Genes that have the "Most Annotated" start but do not call it:
• Chucky_55,

Genes that do not have the "Most Annotated" start:
• Alsaber_58, Alvy_61, Amela_58, Amethyst_58, Andris_58, Animus_58, Apiary_62, Applejacks_38, Axiom_59, Azrael100_136, BartholomewSD_61, Bowden_58, Braxoaddie_62, BroPlease_58, Caelum_60, Celery_61, CoffeeBean_62, Conan_58, Cosmo_143, Daudau_58, Dexers_56, Diane_58, ELB20_57, ElGato_58, Elver_156, EniyanLRS_175, Gagieri_61, Gandionco_152, GirlDinner_58, GreenWeasel_60, Gustav_40, Haizum_58, Hank144_60, Huwbert_77, Issmi_59, Janus_59, JeNeSaisPas_155, Jevington_57, Jhitchelle_55, Kaine_58, Kampe_79, Kumao_98, Loofah_60, MacGully_71, Mahdia_38, Mao1_80, Marav_59, MaryV_129, Maselop_62, Morrissey_39, Nishikigoi_59, Nostromo_62, Omar_61, Orchid_78, Pablito_56, Paedore_59, Paella_156, Paolo_60, PatrickStar_79, Pavo_59, Phabba_145, Polyyuki_62, Provolone_58, Puginator_60, Qui_156, R4_58, Saftant_56, ScoobyDoobyDoo_136, Speedwell_61, SqueakyClean_59, Sudan_58, SunkenRoot_58, Superstar_65, Tefunt_58, Thestral_60, TinaBelcher_58, Trine_38, Triscuit_76, Triumph_60, TrvxScott_57, Upyo_40, Vanseggelen_62, Verabelle_61, Verse_59, Widow_38, Wildcat_143, WorMMAs_39, Wrackline_10, Yosif_62, Zainub_60, ZamZam_58, phiCAM_55, phiHau3_59,

Summary by start number:

Start 54:
• Found in 2 of 153 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Issmi_59 (BD2),

Start 55:
• Found in 49 of 153 (32.0%) of genes in pham
• Manual Annotations of this start: 40 of 144
• Called 89.8% of time when present
• Phage (with cluster) where this start called: Alsaber_58 (BD3), Alvy_61 (BD2), Amela_58 (BD3), Amethyst_58 (BD2), Andris_58 (BD2), Animus_58 (BD2), Axiom_59 (BD2), BartholomewSD_61 (BD2), Bowden_58 (BD2), Caelum_60 (BD2), Celery_61 (BD3), Conan_58 (BD3), Daudau_58 (BD2), Dexers_56 (BD3), ELB20_57 (BD2), ElGato_58 (BD3), GirlDinner_58 (BD2), Janus_59 (BD2), Jevington_57 (BD2), Kaine_58 (BD3), Marav_59 (BD2), Pablito_56 (BD2), Paedore_59 (BD2), Paolo_60 (BD2), Pavo_59 (BD3), Provolone_58 (BD3), Puginator_60 (BD2), R4_58 (BD2), Saftant_56 (BD3), Speedwell_61 (BD3), SqueakyClean_59 (BD2), Sudan_58 (BD3), SunkenRoot_58 (BD3), Thestral_60 (BD2), TinaBelcher_58 (BD2), Triumph_60 (BD2), TrvxScott_57 (BD2), Vanseggelen_62 (BD3), Verabelle_61 (BD3), Verse_59 (BD3), Yosif_62 (BD3), Zainub_60 (BD2), ZamZam_58 (BD3), phiCAM_55 (BD3),

Start 56:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Jhitchelle_55 (BD3),

Start 57:
• Found in 60 of 153 (39.2%) of genes in pham
• Manual Annotations of this start: 58 of 144
• Called 98.3% of time when present
• Phage (with cluster) where this start called: Aaronocolus_54 (BD1), Asten_55 (BD1), BarryBee_58 (BD1), BeardedLady_54 (BD1), Bovely_54 (BD1), Brataylor_58 (BD1), BryanRecycles_56 (BD1), Caliburn_53 (BD1), Celeste_57 (BD1), Celia_55 (BD6), Danzina_57 (BD1), Dattran_58 (BD1), Dwayne_55 (BD1), Eddasa_57 (BD1), Ejemplo_53 (BD1), Emaanora_58 (BD1), EnochSoames_58 (BD1), Esperer_54 (BD1), Goby_57 (BD1), Godpower_57 (BD1), Hippo_55 (BD1), Hydra_55 (BD1), Indigo_53 (BD1), Itza_57 (BD6), Izzy_56 (BD1), Jash_56 (BD1), Katalie_55 (BD1), Lannister_55 (BD1), Legacy_53 (BD1), Leviticus_54 (BD1), Lika_56 (BD1), Lorelei_56 (BD1), Maneekul_55 (BD1), Nabi_56 (BD1), Nanodon_57 (BD1), Nerdos_53 (BD1), Oliynyk_56 (BD1), Ozzie_53 (BD1), OzzyJ_57 (BD1), Phettuccine_54 (BD1), Rana_57 (BD1), RedBear_56 (BD1), Rusticus_56 (BD1), SarahRose_55 (BD1), Snorlax_55 (BD1), South40_55 (BD1), Sujidade_56 (BD1), SunsetPointe_53 (BD1), TagePhighter_57 (BD1), Toma_57 (BD1), Triste_56 (BD1), TuanPN_53 (BD1), Unstoppable_54 (BD1), Urza_56 (BD6), VieEnRose_57 (BD6), Werner_55 (BD1), Whatever_55 (BD1), Yasdnil_55 (BD1), Zemlya_57 (BD1),

Start 58:
• Found in 4 of 153 (2.6%) of genes in pham
• Manual Annotations of this start: 3 of 144
• Called 75.0% of time when present
• Phage (with cluster) where this start called: BroPlease_58 (BD4), GreenWeasel_60 (BD4), phiHau3_59 (BD4),

Start 59:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Loofah_60 (BD2),

Start 61:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MacGully_71 (CR7),

Start 62:
• Found in 2 of 153 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Hank144_60 (BD2),

Start 63:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Widow_38 (CD),

Start 65:
• Found in 6 of 153 (3.9%) of genes in pham
• Manual Annotations of this start: 6 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Apiary_62 (CR6), Braxoaddie_62 (CR6), CoffeeBean_62 (CR6), Gagieri_61 (CR6), Maselop_62 (CR6), Polyyuki_62 (CR6),

Start 66:
• Found in 1 of 153 (0.7%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Applejacks_38 (CD),

Start 68:
• Found in 5 of 153 (3.3%) of genes in pham
• Manual Annotations of this start: 4 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gustav_40 (CD), Mahdia_38 (CD), Morrissey_39 (CD), Trine_38 (CD), WorMMAs_39 (UNK),

Start 69:
• Found in 3 of 153 (2.0%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Wrackline_10 (GF),

Start 70:
• Found in 3 of 153 (2.0%) of genes in pham
• Manual Annotations of this start: 3 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kumao_98 (singleton), Phabba_145 (C2), ScoobyDoobyDoo_136 (C2),

Start 71:
• Found in 8 of 153 (5.2%) of genes in pham
• Manual Annotations of this start: 4 of 144
• Called 62.5% of time when present
• Phage (with cluster) where this start called: Elver_156 (FK), Gandionco_152 (FK), JeNeSaisPas_155 (FK), Paella_156 (FK), Qui_156 (FK),

Start 72:
• Found in 1 of 153 (0.7%) of genes in pham
• Manual Annotations of this start: 1 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Mao1_80 (AD),

Start 73:
• Found in 66 of 153 (43.1%) of genes in pham
• Manual Annotations of this start: 6 of 144
• Called 10.6% of time when present
• Phage (with cluster) where this start called: Chucky_55 (BD1), Diane_58 (BD2), Haizum_58 (BD2), Nishikigoi_59 (BD2), Omar_61 (BD2), Superstar_65 (BD2), Tefunt_58 (BD2),

Start 74:
• Found in 13 of 153 (8.5%) of genes in pham
• Manual Annotations of this start: 7 of 144
• Called 53.8% of time when present
• Phage (with cluster) where this start called: Azrael100_136 (V), Cosmo_143 (V), EniyanLRS_175 (V), MaryV_129 (V), Nostromo_62 (AO3), Upyo_40 (CD), Wildcat_143 (V),

Start 75:
• Found in 2 of 153 (1.3%) of genes in pham
• Manual Annotations of this start: 2 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Huwbert_77 (GG), Triscuit_76 (GG),

Start 77:
• Found in 3 of 153 (2.0%) of genes in pham
• Manual Annotations of this start: 3 of 144
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kampe_79 (CX), Orchid_78 (CX), PatrickStar_79 (CX),

Summary by clusters:

There are 18 clusters represented in this pham: singleton, UNK, CR6, CR7, GF, CX, BD2, CD, GG, BD4, BD6, BD1, BD3, V, C2, FK, AO3, AD,

Info for manual annotations of cluster AD:
•Start number 72 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AO3:
•Start number 74 was manually annotated 1 time for cluster AO3.

Info for manual annotations of cluster BD1:
•Start number 57 was manually annotated 54 times for cluster BD1.
•Start number 73 was manually annotated 1 time for cluster BD1.

Info for manual annotations of cluster BD2:
•Start number 54 was manually annotated 1 time for cluster BD2.
•Start number 55 was manually annotated 25 times for cluster BD2.
•Start number 59 was manually annotated 1 time for cluster BD2.
•Start number 62 was manually annotated 1 time for cluster BD2.
•Start number 73 was manually annotated 5 times for cluster BD2.

Info for manual annotations of cluster BD3:
•Start number 55 was manually annotated 15 times for cluster BD3.
•Start number 56 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BD4:
•Start number 58 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:
•Start number 57 was manually annotated 4 times for cluster BD6.

Info for manual annotations of cluster C2:
•Start number 70 was manually annotated 2 times for cluster C2.

Info for manual annotations of cluster CD:
•Start number 63 was manually annotated 1 time for cluster CD.
•Start number 68 was manually annotated 4 times for cluster CD.
•Start number 74 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CR6:
•Start number 65 was manually annotated 6 times for cluster CR6.

Info for manual annotations of cluster CR7:
•Start number 61 was manually annotated 1 time for cluster CR7.

Info for manual annotations of cluster CX:
•Start number 77 was manually annotated 3 times for cluster CX.

Info for manual annotations of cluster FK:
•Start number 71 was manually annotated 4 times for cluster FK.

Info for manual annotations of cluster GF:
•Start number 69 was manually annotated 1 time for cluster GF.

Info for manual annotations of cluster GG:
•Start number 75 was manually annotated 2 times for cluster GG.

Info for manual annotations of cluster V:
•Start number 74 was manually annotated 5 times for cluster V.

Gene Information:

Gene: Aaronocolus_54 Start: 40469, Stop: 40233, Start Num: 57
Candidate Starts for Aaronocolus_54:
(Start: 57 @40469 has 58 MA's), (64, 40460), (Start: 73 @40433 has 6 MA's),

Gene: Alsaber_58 Start: 40437, Stop: 40192, Start Num: 55
Candidate Starts for Alsaber_58:
(Start: 55 @40437 has 40 MA's), (111, 40203),

Gene: Alvy_61 Start: 42035, Stop: 41802, Start Num: 55
Candidate Starts for Alvy_61:
(23, 42197), (30, 42146), (37, 42125), (Start: 55 @42035 has 40 MA's), (76, 41984),

Gene: Amela_58 Start: 41420, Stop: 41175, Start Num: 55
Candidate Starts for Amela_58:
(42, 41480), (Start: 55 @41420 has 40 MA's), (64, 41402), (111, 41186),

Gene: Amethyst_58 Start: 40610, Stop: 40371, Start Num: 55
Candidate Starts for Amethyst_58:
(Start: 55 @40610 has 40 MA's), (92, 40478), (96, 40463),

Gene: Andris_58 Start: 40956, Stop: 40702, Start Num: 55
Candidate Starts for Andris_58:
(Start: 55 @40956 has 40 MA's),

Gene: Animus_58 Start: 41572, Stop: 41315, Start Num: 55
Candidate Starts for Animus_58:
(Start: 55 @41572 has 40 MA's), (114, 41332),

Gene: Apiary_62 Start: 46584, Stop: 46390, Start Num: 65
Candidate Starts for Apiary_62:
(50, 46605), (52, 46602), (Start: 65 @46584 has 6 MA's), (Start: 74 @46569 has 7 MA's), (84, 46512), (87, 46503), (101, 46464), (106, 46434),

Gene: Applejacks_38 Start: 30621, Stop: 30367, Start Num: 66
Candidate Starts for Applejacks_38:
(66, 30621), (103, 30474), (113, 30408),

Gene: Asten_55 Start: 42688, Stop: 42452, Start Num: 57
Candidate Starts for Asten_55:
(33, 42793), (42, 42748), (Start: 57 @42688 has 58 MA's), (Start: 73 @42652 has 6 MA's),

Gene: Axiom_59 Start: 41223, Stop: 40963, Start Num: 55
Candidate Starts for Axiom_59:
(34, 41337), (Start: 55 @41223 has 40 MA's), (114, 40983), (117, 40971),

Gene: Azrael100_136 Start: 67289, Stop: 67110, Start Num: 74
Candidate Starts for Azrael100_136:
(Start: 74 @67289 has 7 MA's), (87, 67220), (97, 67178),

Gene: BarryBee_58 Start: 42710, Stop: 42474, Start Num: 57
Candidate Starts for BarryBee_58:

(33, 42815), (42, 42770), (Start: 57 @42710 has 58 MA's), (Start: 73 @42674 has 6 MA's),

Gene: BartholomewSD_61 Start: 41154, Stop: 40921, Start Num: 55
Candidate Starts for BartholomewSD_61:
(23, 41316), (30, 41265), (37, 41244), (Start: 55 @41154 has 40 MA's), (76, 41103),

Gene: BeardedLady_54 Start: 40843, Stop: 40607, Start Num: 57
Candidate Starts for BeardedLady_54:
(Start: 57 @40843 has 58 MA's), (64, 40834), (Start: 73 @40807 has 6 MA's),

Gene: Bovely_54 Start: 40472, Stop: 40236, Start Num: 57
Candidate Starts for Bovely_54:
(Start: 57 @40472 has 58 MA's), (64, 40463), (Start: 73 @40436 has 6 MA's),

Gene: Bowden_58 Start: 41991, Stop: 41758, Start Num: 55
Candidate Starts for Bowden_58:
(30, 42102), (Start: 55 @41991 has 40 MA's), (76, 41940),

Gene: Brataylor_58 Start: 42252, Stop: 42016, Start Num: 57
Candidate Starts for Brataylor_58:
(33, 42357), (42, 42312), (Start: 57 @42252 has 58 MA's), (Start: 73 @42216 has 6 MA's),

Gene: Braxoaddie_62 Start: 46573, Stop: 46379, Start Num: 65
Candidate Starts for Braxoaddie_62:
(50, 46594), (52, 46591), (Start: 65 @46573 has 6 MA's), (Start: 74 @46558 has 7 MA's), (84, 46501), (87, 46492), (101, 46453), (106, 46423),

Gene: BroPlease_58 Start: 40749, Stop: 40513, Start Num: 58
Candidate Starts for BroPlease_58:
(10, 41088), (32, 40887), (41, 40836), (Start: 58 @40749 has 3 MA's), (80, 40665), (96, 40599), (107, 40548),

Gene: BryanRecycles_56 Start: 40959, Stop: 40723, Start Num: 57
Candidate Starts for BryanRecycles_56:
(36, 41058), (Start: 57 @40959 has 58 MA's), (Start: 73 @40923 has 6 MA's), (110, 40734),

Gene: Caelum_60 Start: 40694, Stop: 40458, Start Num: 55
Candidate Starts for Caelum_60:
(Start: 55 @40694 has 40 MA's),

Gene: Caliburn_53 Start: 40573, Stop: 40337, Start Num: 57
Candidate Starts for Caliburn_53:
(Start: 57 @40573 has 58 MA's), (64, 40564), (Start: 73 @40537 has 6 MA's),

Gene: Celery_61 Start: 40408, Stop: 40163, Start Num: 55
Candidate Starts for Celery_61:
(2, 40903), (3, 40897), (32, 40513), (43, 40462), (Start: 55 @40408 has 40 MA's), (111, 40174),

Gene: Celeste_57 Start: 41721, Stop: 41485, Start Num: 57
Candidate Starts for Celeste_57:
(33, 41826), (42, 41781), (Start: 57 @41721 has 58 MA's), (110, 41496),

Gene: Celia_55 Start: 40296, Stop: 40063, Start Num: 57

Candidate Starts for Celia_55:
(Start: 57 @40296 has 58 MA's), (64, 40287), (Start: 73 @40260 has 6 MA's), (76, 40245),

Gene: Chucky_55 Start: 42691, Stop: 42491, Start Num: 73
Candidate Starts for Chucky_55:
(33, 42832), (42, 42787), (Start: 57 @42727 has 58 MA's), (Start: 73 @42691 has 6 MA's),

Gene: CoffeeBean_62 Start: 46531, Stop: 46337, Start Num: 65
Candidate Starts for CoffeeBean_62:
(50, 46552), (52, 46549), (Start: 65 @46531 has 6 MA's), (Start: 74 @46516 has 7 MA's), (84, 46459), (87, 46450), (101, 46411), (106, 46381),

Gene: Conan_58 Start: 40397, Stop: 40152, Start Num: 55
Candidate Starts for Conan_58:
(Start: 55 @40397 has 40 MA's), (111, 40163),

Gene: Cosmo_143 Start: 67452, Stop: 67273, Start Num: 74
Candidate Starts for Cosmo_143:
(Start: 74 @67452 has 7 MA's), (87, 67383), (97, 67341),

Gene: Danzina_57 Start: 41966, Stop: 41730, Start Num: 57
Candidate Starts for Danzina_57:
(33, 42071), (39, 42056), (42, 42026), (Start: 57 @41966 has 58 MA's), (Start: 73 @41930 has 6 MA's),

Gene: Dattran_58 Start: 42112, Stop: 41876, Start Num: 57
Candidate Starts for Dattran_58:
(33, 42217), (42, 42172), (Start: 57 @42112 has 58 MA's), (Start: 73 @42076 has 6 MA's), (110, 41887),

Gene: Daudau_58 Start: 40574, Stop: 40341, Start Num: 55
Candidate Starts for Daudau_58:
(19, 40763), (23, 40736), (30, 40685), (Start: 55 @40574 has 40 MA's), (92, 40445),

Gene: Dexers_56 Start: 40679, Stop: 40434, Start Num: 55
Candidate Starts for Dexers_56:
(Start: 55 @40679 has 40 MA's), (111, 40445),

Gene: Diane_58 Start: 41306, Stop: 41106, Start Num: 73
Candidate Starts for Diane_58:
(23, 41507), (30, 41456), (35, 41441), (Start: 55 @41342 has 40 MA's), (Start: 73 @41306 has 6 MA's), (92, 41213), (96, 41198),

Gene: Dwayne_55 Start: 42715, Stop: 42479, Start Num: 57
Candidate Starts for Dwayne_55:
(33, 42820), (42, 42775), (Start: 57 @42715 has 58 MA's), (Start: 73 @42679 has 6 MA's),

Gene: ELB20_57 Start: 40920, Stop: 40693, Start Num: 55
Candidate Starts for ELB20_57:
(23, 41079), (30, 41028), (35, 41013), (Start: 55 @40920 has 40 MA's), (76, 40869), (110, 40704),

Gene: Eddasa_57 Start: 41498, Stop: 41262, Start Num: 57
Candidate Starts for Eddasa_57:
(36, 41597), (Start: 57 @41498 has 58 MA's), (Start: 73 @41462 has 6 MA's), (110, 41273),

Gene: Ejemplo_53 Start: 42653, Stop: 42417, Start Num: 57
Candidate Starts for Ejemplo_53:
(33, 42758), (42, 42713), (Start: 57 @42653 has 58 MA's), (Start: 73 @42617 has 6 MA's),

Gene: ElGato_58 Start: 40268, Stop: 40023, Start Num: 55
Candidate Starts for ElGato_58:
(49, 40301), (Start: 55 @40268 has 40 MA's), (111, 40034),

Gene: Elver_156 Start: 79104, Stop: 79295, Start Num: 71
Candidate Starts for Elver_156:
(Start: 71 @79104 has 4 MA's), (78, 79134), (90, 79194), (99, 79233), (102, 79245), (106, 79269),

Gene: Emaanora_58 Start: 42638, Stop: 42402, Start Num: 57
Candidate Starts for Emaanora_58:
(33, 42743), (42, 42698), (Start: 57 @42638 has 58 MA's), (Start: 73 @42602 has 6 MA's),

Gene: EniyanLRS_175 Start: 67797, Stop: 67618, Start Num: 74
Candidate Starts for EniyanLRS_175:
(Start: 74 @67797 has 7 MA's), (87, 67728), (97, 67686),

Gene: EnochSoames_58 Start: 40755, Stop: 40519, Start Num: 57
Candidate Starts for EnochSoames_58:
(Start: 57 @40755 has 58 MA's), (Start: 73 @40719 has 6 MA's), (110, 40530),

Gene: Esperer_54 Start: 40288, Stop: 40049, Start Num: 57
Candidate Starts for Esperer_54:
(Start: 57 @40288 has 58 MA's), (64, 40279), (Start: 73 @40249 has 6 MA's),

Gene: Gagieri_61 Start: 46767, Stop: 46573, Start Num: 65
Candidate Starts for Gagieri_61:
(47, 46800), (Start: 65 @46767 has 6 MA's), (Start: 74 @46752 has 7 MA's), (84, 46695), (87, 46686), (101, 46647), (105, 46626), (106, 46617),

Gene: Gandionco_152 Start: 78184, Stop: 78375, Start Num: 71
Candidate Starts for Gandionco_152:
(Start: 71 @78184 has 4 MA's), (78, 78214), (90, 78274), (99, 78313), (102, 78325), (106, 78349),

Gene: GirlDinner_58 Start: 41073, Stop: 40816, Start Num: 55
Candidate Starts for GirlDinner_58:
(Start: 55 @41073 has 40 MA's), (114, 40833),

Gene: Goby_57 Start: 42538, Stop: 42302, Start Num: 57
Candidate Starts for Goby_57:
(33, 42643), (42, 42598), (Start: 57 @42538 has 58 MA's), (Start: 73 @42502 has 6 MA's), (110, 42313),

Gene: Godpower_57 Start: 41991, Stop: 41755, Start Num: 57
Candidate Starts for Godpower_57:
(33, 42096), (42, 42051), (Start: 57 @41991 has 58 MA's), (Start: 73 @41955 has 6 MA's), (110, 41766),

Gene: GreenWeasel_60 Start: 40754, Stop: 40518, Start Num: 58

Candidate Starts for GreenWeasel_60:
(10, 41093), (32, 40892), (41, 40841), (Start: 58 @40754 has 3 MA's), (80, 40670), (96, 40604), (107, 40553),

Gene: Gustav_40 Start: 31883, Stop: 31605, Start Num: 68
Candidate Starts for Gustav_40:
(21, 32087), (22, 32084), (Start: 68 @31883 has 4 MA's), (119, 31640),

Gene: Haizum_58 Start: 41371, Stop: 41171, Start Num: 73
Candidate Starts for Haizum_58:
(23, 41572), (30, 41521), (35, 41506), (Start: 55 @41407 has 40 MA's), (Start: 73 @41371 has 6 MA's), (92, 41278), (96, 41263),

Gene: Hank144_60 Start: 41455, Stop: 41225, Start Num: 62
Candidate Starts for Hank144_60:
(51, 41491), (Start: 62 @41455 has 1 MA's), (Start: 69 @41440 has 1 MA's), (101, 41305),

Gene: Hippo_55 Start: 42701, Stop: 42465, Start Num: 57
Candidate Starts for Hippo_55:
(33, 42806), (42, 42761), (Start: 57 @42701 has 58 MA's), (Start: 73 @42665 has 6 MA's),

Gene: Huwbert_77 Start: 47906, Stop: 48085, Start Num: 75
Candidate Starts for Huwbert_77:
(Start: 75 @47906 has 2 MA's), (98, 48011),

Gene: Hydra_55 Start: 41124, Stop: 40885, Start Num: 57
Candidate Starts for Hydra_55:
(Start: 57 @41124 has 58 MA's), (64, 41115), (Start: 73 @41085 has 6 MA's), (110, 40896),

Gene: Indigo_53 Start: 40465, Stop: 40229, Start Num: 57
Candidate Starts for Indigo_53:
(Start: 57 @40465 has 58 MA's), (64, 40456), (Start: 73 @40429 has 6 MA's),

Gene: Issmi_59 Start: 40976, Stop: 40734, Start Num: 54
Candidate Starts for Issmi_59:
(38, 41057), (Start: 54 @40976 has 1 MA's), (76, 40928), (92, 40850), (116, 40745),

Gene: Itza_57 Start: 40229, Stop: 39996, Start Num: 57
Candidate Starts for Itza_57:
(Start: 57 @40229 has 58 MA's), (64, 40220), (Start: 73 @40193 has 6 MA's), (76, 40178),

Gene: Izzy_56 Start: 41006, Stop: 40770, Start Num: 57
Candidate Starts for Izzy_56:
(36, 41105), (Start: 57 @41006 has 58 MA's), (Start: 73 @40970 has 6 MA's), (110, 40781),

Gene: Janus_59 Start: 41413, Stop: 41156, Start Num: 55
Candidate Starts for Janus_59:
(Start: 55 @41413 has 40 MA's), (114, 41173),

Gene: Jash_56 Start: 40959, Stop: 40723, Start Num: 57
Candidate Starts for Jash_56:
(36, 41058), (Start: 57 @40959 has 58 MA's), (Start: 73 @40923 has 6 MA's), (110, 40734),

Gene: JeNeSaisPas_155 Start: 78780, Stop: 78971, Start Num: 71
Candidate Starts for JeNeSaisPas_155:
(Start: 71 @78780 has 4 MA's), (78, 78810), (90, 78870), (99, 78909), (102, 78921), (106, 78945),

Gene: Jevington_57 Start: 39340, Stop: 39107, Start Num: 55
Candidate Starts for Jevington_57:
(Start: 55 @39340 has 40 MA's), (76, 39289),

Gene: Jhitchelle_55 Start: 40061, Stop: 39819, Start Num: 56
Candidate Starts for Jhitchelle_55:
(4, 40541), (32, 40169), (43, 40118), (46, 40103), (48, 40097), (Start: 56 @40061 has 1 MA's), (111, 39830),

Gene: Kaine_58 Start: 40589, Stop: 40344, Start Num: 55
Candidate Starts for Kaine_58:
(Start: 55 @40589 has 40 MA's), (111, 40355),

Gene: Kampe_79 Start: 59645, Stop: 59466, Start Num: 77
Candidate Starts for Kampe_79:
(Start: 71 @59675 has 4 MA's), (Start: 77 @59645 has 3 MA's),

Gene: Katalie_55 Start: 42970, Stop: 42737, Start Num: 57
Candidate Starts for Katalie_55:
(Start: 57 @42970 has 58 MA's), (Start: 73 @42934 has 6 MA's), (110, 42748),

Gene: Kumao_98 Start: 61160, Stop: 60951, Start Num: 70
Candidate Starts for Kumao_98:
(Start: 70 @61160 has 3 MA's), (81, 61115), (83, 61097), (87, 61085), (88, 61082),

Gene: Lannister_55 Start: 41666, Stop: 41430, Start Num: 57
Candidate Starts for Lannister_55:
(12, 41960), (32, 41774), (48, 41702), (53, 41681), (Start: 57 @41666 has 58 MA's), (Start: 73 @41630 has 6 MA's), (86, 41555),

Gene: Legacy_53 Start: 40564, Stop: 40328, Start Num: 57
Candidate Starts for Legacy_53:
(Start: 57 @40564 has 58 MA's), (Start: 73 @40528 has 6 MA's),

Gene: Leviticus_54 Start: 40475, Stop: 40236, Start Num: 57
Candidate Starts for Leviticus_54:
(Start: 57 @40475 has 58 MA's), (64, 40466), (Start: 73 @40436 has 6 MA's),

Gene: Lika_56 Start: 42546, Stop: 42313, Start Num: 57
Candidate Starts for Lika_56:
(32, 42651), (48, 42579), (Start: 57 @42546 has 58 MA's), (Start: 73 @42510 has 6 MA's), (105, 42369),

Gene: Loofah_60 Start: 41340, Stop: 41113, Start Num: 59
Candidate Starts for Loofah_60:
(7, 41775), (9, 41688), (14, 41649), (26, 41514), (46, 41385), (Start: 54 @41355 has 1 MA's), (Start: 59 @41340 has 1 MA's), (76, 41289), (110, 41124),

Gene: Lorelei_56 Start: 41728, Stop: 41492, Start Num: 57

Candidate Starts for Lorelei_56:
(33, 41833), (42, 41788), (Start: 57 @41728 has 58 MA's), (Start: 73 @41692 has 6 MA's),

Gene: MacGully_71 Start: 49770, Stop: 49540, Start Num: 61
Candidate Starts for MacGully_71:
(Start: 61 @49770 has 1 MA's), (84, 49668), (87, 49659), (105, 49596), (106, 49587),

Gene: Mahdia_38 Start: 31109, Stop: 30855, Start Num: 68
Candidate Starts for Mahdia_38:
(5, 31604), (6, 31586), (8, 31484), (15, 31367), (18, 31355), (21, 31325), (22, 31322), (27, 31289), (31, 31250), (Start: 68 @31109 has 4 MA's), (106, 30938), (119, 30866),

Gene: Maneekul_55 Start: 42731, Stop: 42495, Start Num: 57
Candidate Starts for Maneekul_55:
(33, 42836), (42, 42791), (Start: 57 @42731 has 58 MA's), (Start: 73 @42695 has 6 MA's),

Gene: Mao1_80 Start: 55699, Stop: 55893, Start Num: 72
Candidate Starts for Mao1_80:
(Start: 72 @55699 has 1 MA's), (79, 55738), (89, 55783), (91, 55792), (103, 55831),

Gene: Marav_59 Start: 39879, Stop: 39634, Start Num: 55
Candidate Starts for Marav_59:
(23, 40041), (30, 39990), (37, 39969), (Start: 55 @39879 has 40 MA's), (Start: 73 @39846 has 6 MA's), (76, 39831), (95, 39744), (110, 39660),

Gene: MaryV_129 Start: 65640, Stop: 65461, Start Num: 74
Candidate Starts for MaryV_129:
(Start: 74 @65640 has 7 MA's), (87, 65571), (97, 65529),

Gene: Maselop_62 Start: 46607, Stop: 46413, Start Num: 65
Candidate Starts for Maselop_62:
(50, 46628), (52, 46625), (Start: 65 @46607 has 6 MA's), (Start: 74 @46592 has 7 MA's), (84, 46535), (87, 46526), (101, 46487), (106, 46457),

Gene: Morrissey_39 Start: 31553, Stop: 31275, Start Num: 68
Candidate Starts for Morrissey_39:
(21, 31757), (22, 31754), (Start: 68 @31553 has 4 MA's), (96, 31430), (118, 31313),

Gene: Nabi_56 Start: 41728, Stop: 41489, Start Num: 57
Candidate Starts for Nabi_56:
(Start: 57 @41728 has 58 MA's), (64, 41719),

Gene: Nanodon_57 Start: 41658, Stop: 41422, Start Num: 57
Candidate Starts for Nanodon_57:
(42, 41718), (Start: 57 @41658 has 58 MA's),

Gene: Nerdos_53 Start: 40464, Stop: 40228, Start Num: 57
Candidate Starts for Nerdos_53:
(Start: 57 @40464 has 58 MA's), (64, 40455), (Start: 73 @40428 has 6 MA's),

Gene: Nishikigoi_59 Start: 41371, Stop: 41171, Start Num: 73
Candidate Starts for Nishikigoi_59:

(23, 41572), (30, 41521), (35, 41506), (Start: 55 @41407 has 40 MA's), (Start: 73 @41371 has 6 MA's), (92, 41278), (96, 41263),

Gene: Nostromo_62 Start: 41307, Stop: 41489, Start Num: 74
Candidate Starts for Nostromo_62:
(Start: 74 @41307 has 7 MA's), (83, 41358),

Gene: Oliynyk_56 Start: 40959, Stop: 40723, Start Num: 57
Candidate Starts for Oliynyk_56:
(36, 41058), (Start: 57 @40959 has 58 MA's), (Start: 73 @40923 has 6 MA's), (110, 40734),

Gene: Omar_61 Start: 39650, Stop: 39450, Start Num: 73
Candidate Starts for Omar_61:
(30, 39800), (35, 39785), (Start: 55 @39686 has 40 MA's), (Start: 73 @39650 has 6 MA's), (76, 39635), (92, 39557),

Gene: Orchid_78 Start: 59646, Stop: 59467, Start Num: 77
Candidate Starts for Orchid_78:
(Start: 71 @59676 has 4 MA's), (Start: 77 @59646 has 3 MA's),

Gene: Ozzie_53 Start: 40573, Stop: 40337, Start Num: 57
Candidate Starts for Ozzie_53:
(Start: 57 @40573 has 58 MA's), (Start: 73 @40537 has 6 MA's),

Gene: OzzyJ_57 Start: 42627, Stop: 42391, Start Num: 57
Candidate Starts for OzzyJ_57:
(1, 43152), (3, 43119), (32, 42735), (48, 42663), (Start: 57 @42627 has 58 MA's), (Start: 73 @42591 has 6 MA's),

Gene: Pablito_56 Start: 39942, Stop: 39703, Start Num: 55
Candidate Starts for Pablito_56:
(Start: 55 @39942 has 40 MA's), (Start: 69 @39921 has 1 MA's),

Gene: Paedore_59 Start: 41325, Stop: 41098, Start Num: 55
Candidate Starts for Paedore_59:
(23, 41484), (25, 41469), (30, 41433), (35, 41418), (Start: 55 @41325 has 40 MA's), (76, 41274), (110, 41109),

Gene: Paella_156 Start: 79971, Stop: 80162, Start Num: 71
Candidate Starts for Paella_156:
(Start: 71 @79971 has 4 MA's), (78, 80001), (90, 80061), (99, 80100), (102, 80112), (106, 80136),

Gene: Paolo_60 Start: 41043, Stop: 40813, Start Num: 55
Candidate Starts for Paolo_60:
(Start: 55 @41043 has 40 MA's), (76, 40995),

Gene: PatrickStar_79 Start: 59645, Stop: 59466, Start Num: 77
Candidate Starts for PatrickStar_79:
(Start: 71 @59675 has 4 MA's), (Start: 77 @59645 has 3 MA's),

Gene: Pavo_59 Start: 40640, Stop: 40395, Start Num: 55
Candidate Starts for Pavo_59:
(Start: 55 @40640 has 40 MA's), (111, 40406),

Gene: Phabba_145 Start: 88454, Stop: 88248, Start Num: 70
Candidate Starts for Phabba_145:
(Start: 70 @88454 has 3 MA's), (85, 88382), (100, 88337),

Gene: Phettuccine_54 Start: 40465, Stop: 40229, Start Num: 57
Candidate Starts for Phettuccine_54:
(Start: 57 @40465 has 58 MA's), (64, 40456), (Start: 73 @40429 has 6 MA's),

Gene: Polyyuki_62 Start: 46596, Stop: 46402, Start Num: 65
Candidate Starts for Polyyuki_62:
(50, 46617), (52, 46614), (Start: 65 @46596 has 6 MA's), (Start: 74 @46581 has 7 MA's), (84, 46524), (87, 46515), (101, 46476), (106, 46446),

Gene: Provolone_58 Start: 40480, Stop: 40235, Start Num: 55
Candidate Starts for Provolone_58:
(49, 40513), (Start: 55 @40480 has 40 MA's), (111, 40246),

Gene: Puginator_60 Start: 41089, Stop: 40859, Start Num: 55
Candidate Starts for Puginator_60:
(Start: 55 @41089 has 40 MA's), (Start: 73 @41056 has 6 MA's), (76, 41041),

Gene: Qui_156 Start: 79971, Stop: 80162, Start Num: 71
Candidate Starts for Qui_156:
(Start: 71 @79971 has 4 MA's), (78, 80001), (90, 80061), (99, 80100), (102, 80112), (106, 80136),

Gene: R4_58 Start: 41080, Stop: 40853, Start Num: 55
Candidate Starts for R4_58:
(23, 41239), (30, 41188), (35, 41173), (Start: 55 @41080 has 40 MA's), (76, 41029), (110, 40864),

Gene: Rana_57 Start: 42150, Stop: 41905, Start Num: 57
Candidate Starts for Rana_57:
(33, 42255), (42, 42210), (Start: 57 @42150 has 58 MA's), (Start: 73 @42114 has 6 MA's),

Gene: RedBear_56 Start: 42970, Stop: 42737, Start Num: 57
Candidate Starts for RedBear_56:
(Start: 57 @42970 has 58 MA's), (Start: 73 @42934 has 6 MA's), (110, 42748),

Gene: Rusticus_56 Start: 40959, Stop: 40723, Start Num: 57
Candidate Starts for Rusticus_56:
(36, 41058), (Start: 57 @40959 has 58 MA's), (Start: 73 @40923 has 6 MA's), (110, 40734),

Gene: Saftant_56 Start: 40553, Stop: 40308, Start Num: 55
Candidate Starts for Saftant_56:
(24, 40712), (33, 40658), (Start: 55 @40553 has 40 MA's), (111, 40319),

Gene: SarahRose_55 Start: 42700, Stop: 42464, Start Num: 57
Candidate Starts for SarahRose_55:
(33, 42805), (42, 42760), (Start: 57 @42700 has 58 MA's), (Start: 73 @42664 has 6 MA's),

Gene: ScoobyDoobyDoo_136 Start: 88103, Stop: 87900, Start Num: 70
Candidate Starts for ScoobyDoobyDoo_136:
(Start: 70 @88103 has 3 MA's), (93, 88010),

Gene: Snorlax_55 Start: 42725, Stop: 42489, Start Num: 57
Candidate Starts for Snorlax_55:
(33, 42830), (42, 42785), (Start: 57 @42725 has 58 MA's), (Start: 73 @42689 has 6 MA's),

Gene: South40_55 Start: 42970, Stop: 42737, Start Num: 57
Candidate Starts for South40_55:
(Start: 57 @42970 has 58 MA's), (Start: 73 @42934 has 6 MA's), (110, 42748),

Gene: Speedwell_61 Start: 41596, Stop: 41351, Start Num: 55
Candidate Starts for Speedwell_61:
(33, 41701), (Start: 55 @41596 has 40 MA's), (111, 41362),

Gene: SqueakyClean_59 Start: 41591, Stop: 41334, Start Num: 55
Candidate Starts for SqueakyClean_59:
(Start: 55 @41591 has 40 MA's), (114, 41351),

Gene: Sudan_58 Start: 40444, Stop: 40199, Start Num: 55
Candidate Starts for Sudan_58:
(Start: 55 @40444 has 40 MA's), (111, 40210),

Gene: Sujidade_56 Start: 42279, Stop: 42043, Start Num: 57
Candidate Starts for Sujidade_56:
(Start: 57 @42279 has 58 MA's), (Start: 73 @42243 has 6 MA's),

Gene: SunkenRoot_58 Start: 41146, Stop: 40904, Start Num: 55
Candidate Starts for SunkenRoot_58:
(Start: 55 @41146 has 40 MA's), (110, 40918), (111, 40915),

Gene: SunsetPointe_53 Start: 40580, Stop: 40344, Start Num: 57
Candidate Starts for SunsetPointe_53:
(Start: 57 @40580 has 58 MA's), (Start: 73 @40544 has 6 MA's),

Gene: Superstar_65 Start: 41700, Stop: 41482, Start Num: 73
Candidate Starts for Superstar_65:
(Start: 73 @41700 has 6 MA's), (76, 41685), (96, 41592), (115, 41502),

Gene: TagePhighter_57 Start: 42701, Stop: 42465, Start Num: 57
Candidate Starts for TagePhighter_57:
(33, 42806), (42, 42761), (Start: 57 @42701 has 58 MA's), (Start: 73 @42665 has 6 MA's),

Gene: Tefunt_58 Start: 41285, Stop: 41085, Start Num: 73
Candidate Starts for Tefunt_58:
(23, 41486), (30, 41435), (35, 41420), (Start: 55 @41321 has 40 MA's), (Start: 73 @41285 has 6 MA's),
(92, 41192), (96, 41177),

Gene: Thestral_60 Start: 41982, Stop: 41749, Start Num: 55
Candidate Starts for Thestral_60:
(30, 42093), (Start: 55 @41982 has 40 MA's), (76, 41931),

Gene: TinaBelcher_58 Start: 41930, Stop: 41697, Start Num: 55
Candidate Starts for TinaBelcher_58:
(30, 42041), (Start: 55 @41930 has 40 MA's), (76, 41879),

Gene: Toma_57 Start: 42541, Stop: 42305, Start Num: 57
Candidate Starts for Toma_57:
(33, 42646), (42, 42601), (Start: 57 @42541 has 58 MA's), (Start: 73 @42505 has 6 MA's), (110, 42316),

Gene: Trine_38 Start: 31043, Stop: 30771, Start Num: 68
Candidate Starts for Trine_38:
(Start: 68 @31043 has 4 MA's), (96, 30914),

Gene: Triscuit_76 Start: 47863, Stop: 48045, Start Num: 75
Candidate Starts for Triscuit_76:
(45, 47764), (Start: 75 @47863 has 2 MA's), (82, 47911),

Gene: Triste_56 Start: 42700, Stop: 42464, Start Num: 57
Candidate Starts for Triste_56:
(33, 42805), (42, 42760), (Start: 57 @42700 has 58 MA's), (Start: 73 @42664 has 6 MA's),

Gene: Triumph_60 Start: 41299, Stop: 41039, Start Num: 55
Candidate Starts for Triumph_60:
(34, 41413), (Start: 55 @41299 has 40 MA's), (114, 41059),

Gene: TrvxScott_57 Start: 41976, Stop: 41743, Start Num: 55
Candidate Starts for TrvxScott_57:
(30, 42087), (Start: 55 @41976 has 40 MA's), (76, 41925),

Gene: TuanPN_53 Start: 42653, Stop: 42417, Start Num: 57
Candidate Starts for TuanPN_53:
(33, 42758), (42, 42713), (Start: 57 @42653 has 58 MA's), (Start: 73 @42617 has 6 MA's),

Gene: Unstoppable_54 Start: 40463, Stop: 40227, Start Num: 57
Candidate Starts for Unstoppable_54:
(Start: 57 @40463 has 58 MA's), (64, 40454), (Start: 73 @40427 has 6 MA's),

Gene: Upyo_40 Start: 32017, Stop: 31766, Start Num: 74
Candidate Starts for Upyo_40:
(11, 32392), (13, 32371), (Start: 58 @32068 has 3 MA's), (Start: 62 @32056 has 1 MA's), (Start: 74 @32017 has 7 MA's), (84, 31960), (119, 31804),

Gene: Urza_56 Start: 40250, Stop: 40017, Start Num: 57
Candidate Starts for Urza_56:
(Start: 57 @40250 has 58 MA's), (64, 40241), (Start: 73 @40214 has 6 MA's), (76, 40199),

Gene: Vanseggelen_62 Start: 40293, Stop: 40048, Start Num: 55
Candidate Starts for Vanseggelen_62:
(Start: 55 @40293 has 40 MA's), (104, 40113), (105, 40107), (111, 40059),

Gene: Verabelle_61 Start: 40129, Stop: 39887, Start Num: 55
Candidate Starts for Verabelle_61:
(20, 40327), (28, 40255), (29, 40252), (32, 40237), (43, 40186), (48, 40165), (Start: 55 @40129 has 40 MA's), (95, 39985), (111, 39898),

Gene: Verse_59 Start: 41411, Stop: 41166, Start Num: 55

Candidate Starts for Verse_59:
(42, 41471), (Start: 55 @41411 has 40 MA's), (64, 41393), (111, 41177),

Gene: VieEnRose_57 Start: 40308, Stop: 40075, Start Num: 57
Candidate Starts for VieEnRose_57:
(24, 40479), (Start: 57 @40308 has 58 MA's), (64, 40299), (Start: 73 @40272 has 6 MA's), (76, 40257),

Gene: Werner_55 Start: 42698, Stop: 42462, Start Num: 57
Candidate Starts for Werner_55:
(33, 42803), (42, 42758), (Start: 57 @42698 has 58 MA's), (Start: 73 @42662 has 6 MA's),

Gene: Whatever_55 Start: 42724, Stop: 42488, Start Num: 57
Candidate Starts for Whatever_55:
(33, 42829), (42, 42784), (Start: 57 @42724 has 58 MA's), (Start: 73 @42688 has 6 MA's),

Gene: Widow_38 Start: 31430, Stop: 31161, Start Num: 63
Candidate Starts for Widow_38:
(16, 31676), (17, 31667), (21, 31634), (Start: 63 @31430 has 1 MA's),

Gene: Wildcat_143 Start: 67533, Stop: 67354, Start Num: 74
Candidate Starts for Wildcat_143:
(Start: 74 @67533 has 7 MA's), (87, 67464), (97, 67422),

Gene: WorMMAs_39 Start: 30761, Stop: 30495, Start Num: 68
Candidate Starts for WorMMAs_39:
(16, 31034), (21, 30992), (22, 30989), (Start: 68 @30761 has 4 MA's), (84, 30677), (87, 30668), (109, 30563),

Gene: Wrackline_10 Start: 2288, Stop: 2479, Start Num: 69
Candidate Starts for Wrackline_10:
(31, 2126), (40, 2171), (44, 2213), (60, 2267), (67, 2279), (Start: 69 @2288 has 1 MA's), (94, 2402), (108, 2447), (112, 2474),

Gene: Yasdnil_55 Start: 42750, Stop: 42514, Start Num: 57
Candidate Starts for Yasdnil_55:
(33, 42855), (42, 42810), (Start: 57 @42750 has 58 MA's), (Start: 73 @42714 has 6 MA's),

Gene: Yosif_62 Start: 41552, Stop: 41316, Start Num: 55
Candidate Starts for Yosif_62:
(29, 41672), (43, 41606), (Start: 55 @41552 has 40 MA's), (Start: 73 @41516 has 6 MA's), (76, 41501), (105, 41375), (110, 41330), (111, 41327),

Gene: Zainub_60 Start: 41018, Stop: 40788, Start Num: 55
Candidate Starts for Zainub_60:
(Start: 55 @41018 has 40 MA's), (76, 40970),

Gene: ZamZam_58 Start: 40867, Stop: 40622, Start Num: 55
Candidate Starts for ZamZam_58:
(Start: 55 @40867 has 40 MA's), (111, 40633),

Gene: Zemlya_57 Start: 42273, Stop: 42040, Start Num: 57
Candidate Starts for Zemlya_57:

(32, 42378), (43, 42327), (46, 42312), (Start: 57 @42273 has 58 MA's), (Start: 73 @42237 has 6 MA's), (105, 42096),

Gene: phiCAM_55 Start: 42218, Stop: 41973, Start Num: 55
Candidate Starts for phiCAM_55:
(Start: 55 @42218 has 40 MA's), (111, 41984),

Gene: phiHau3_59 Start: 40712, Stop: 40476, Start Num: 58
Candidate Starts for phiHau3_59:
(Start: 58 @40712 has 3 MA's), (80, 40628), (96, 40562), (107, 40511),