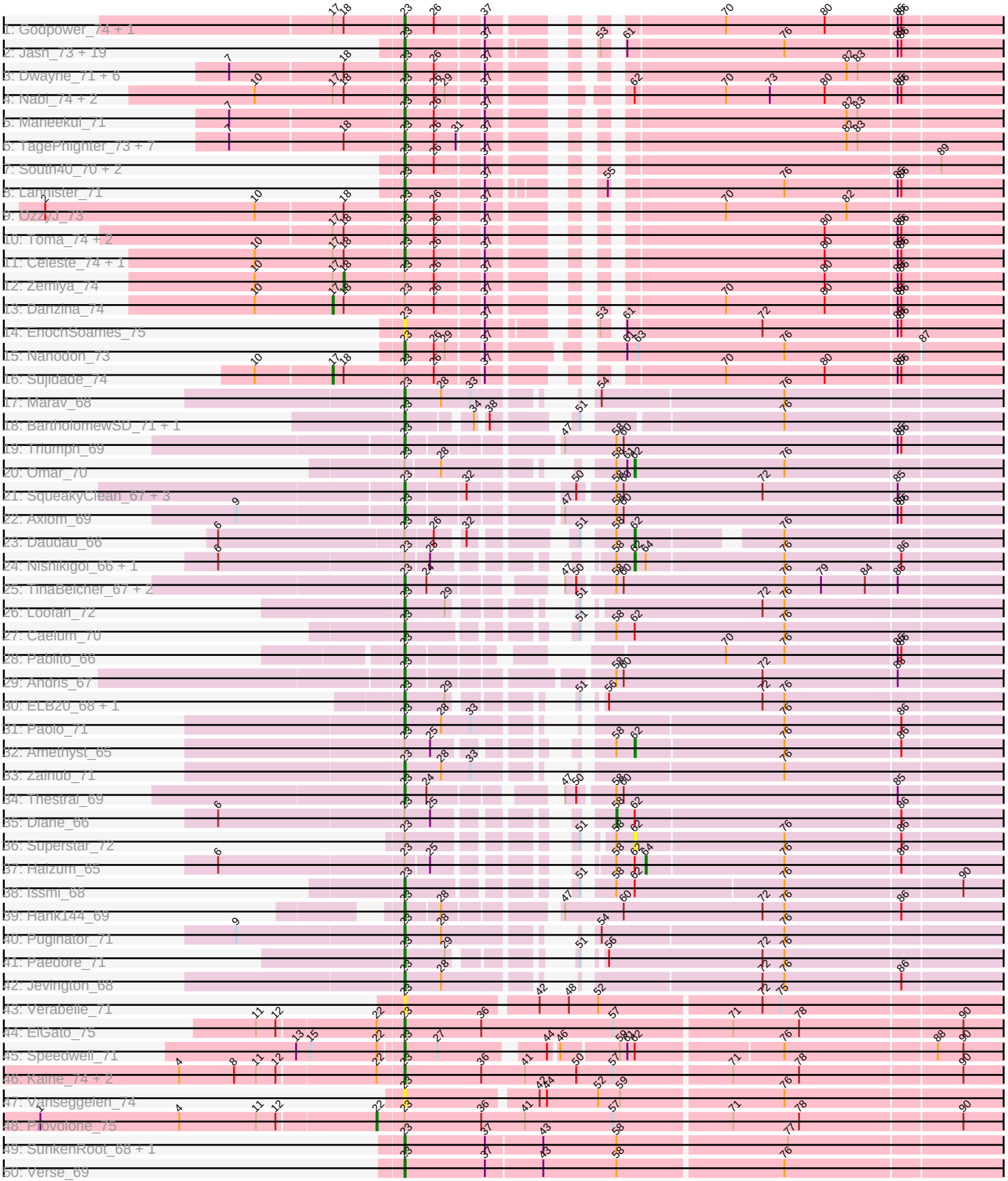
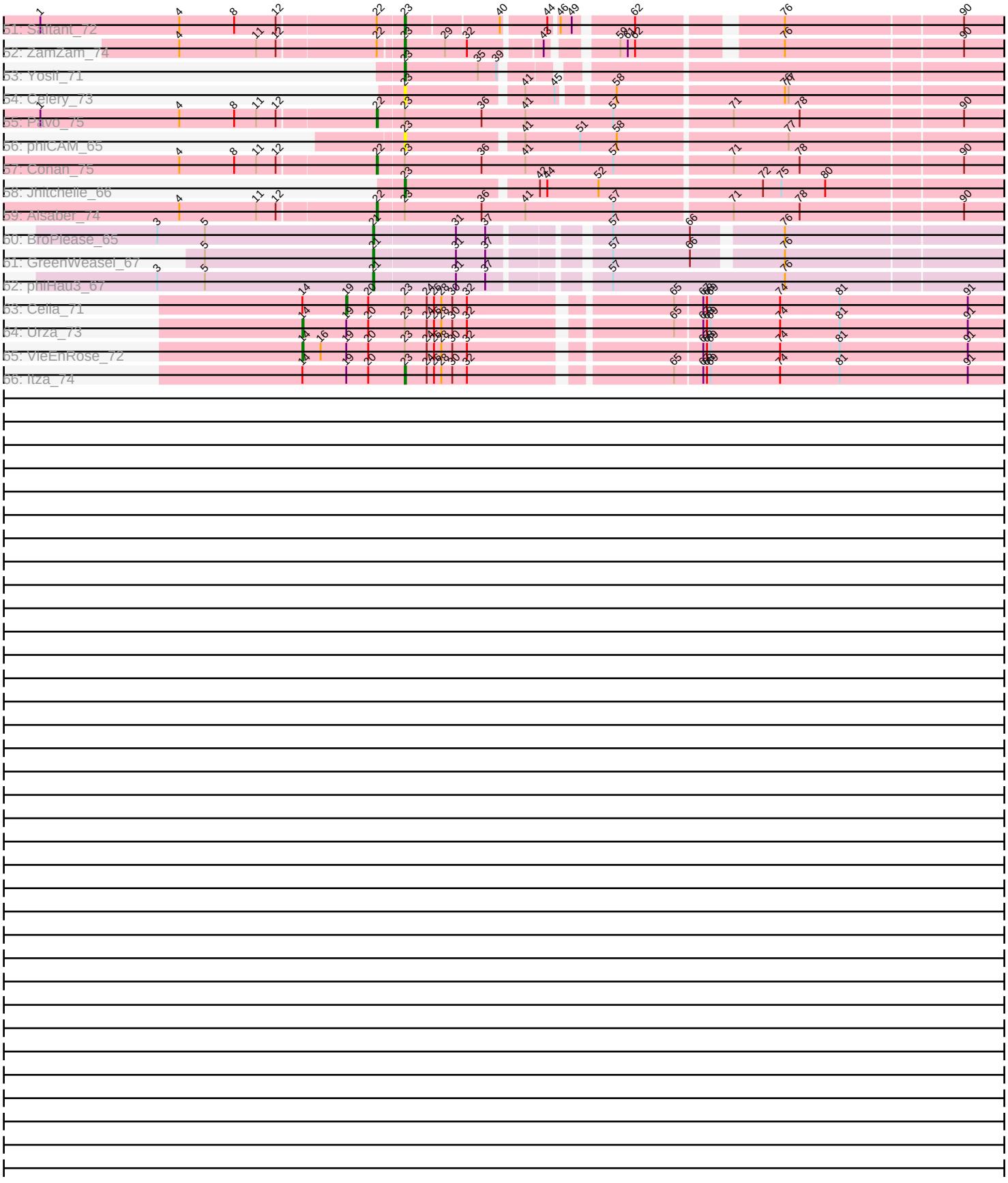
Pham 347411


1: Godpower_74 + 1
2: Jash_73 + 19
3: Dwayne_71 + 6
4: Nabi_74 + 2
5: Maneekul_71
6: TagePhighter_73 + 7
7: South40_70 + 2
8: Lannister_71
9: OzzyJ_73
10: Toma_74 + 2
11: Celeste_74 + 1
12: Zemlya_74
13: Danzina_74
14: EnochSoames_75
15: Nanodon_73
16: Sujidade_74
17: Marav_68
18: BartholomewSD_71 + 1
19: Triumph_69
20: Omar_70
21: SqueakyClean_67 + 3
22: Axiom_69
23: Daudau_66
24: Nishikigoi_66 + 1
25: TinaBelcher_67 + 2
26: Loolah_72
27: Caelum_70
28: Pablito_66
29: Andris_67
30: ELB20_68 + 1
31: Paolo_71
32: Amethyst_65
33: Zainub_71
34: Thestral_69
35: Diane_66
36: Superstar_72
37: Haizum_65
38: Issmi_68
39: HankI44_69
40: Puginator_71
41: Paedore_71
42: Jevington_68
43: Verabelle_71
44: ElGato_75
45: Speedwell_71
46: Kaine_74 + 2
47: Vanseggelen_74
48: Provolone_75
49: SunkenRoot_68 + 1
50: Verse_69

Pham 347411


51: Sultant_72
52: ZamZam_74
53: Yosif_71
54: Celery_73
55: Pavo_75
56: phiCAM_65
57: Conan_75
58: Jhitchelle_66
59: Alsaber_74
60: BroPlease_65
61: GreenWeasel_67
62: phiHau3_67
63: Celia_71
64: Orza_73
65: VieEnRose_72
66: Itza_74

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 347411 Report

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

Pham number 347411 has 117 members, 6 are drafts.

Phages represented in each track:
• Track 1 : Godpower_74, Lika_73
• Track 2 : Jash_73, Leviticus_72, Ozzie_71, Hydra_74, Phettuccine_71, Bovely_71, Unstoppable_71, BryanRecycles_73, Izzy_73, Eddasa_74, Aaronocolus_71, Indigo_70, Oliynyk_73, Legacy_71, Rusticus_73, Nerdos_70, Caliburn_70, BeardedLady_72, Esperer_72, SunsetPointe_71
• Track 3 : Dwayne_71, BarryBee_74, Ejemplo_69, Asten_71, TuanPN_69, Yasdnil_71, Hippo_71
• Track 4 : Nabi_74, Rana_74, Lorelei_73
• Track 5 : Maneekul_71
• Track 6 : TagePhighter_73, SarahRose_71, Triste_72, Whatever_71, Emaanora_74, Snorlax_71, Werner_71, Chucky_71
• Track 7 : South40_70, Katalie_70, RedBear_71
• Track 8 : Lannister_71
• Track 9 : OzzyJ_73
• Track 10 : Toma_74, Goby_74, Dattran_75
• Track 11 : Celeste_74, Brataylor_75
• Track 12 : Zemlya_74
• Track 13 : Danzina_74
• Track 14 : EnochSoames_75
• Track 15 : Nanodon_73
• Track 16 : Sujidade_74
• Track 17 : Marav_68
• Track 18 : BartholomewSD_71, Alvy_71
• Track 19 : Triumph_69
• Track 20 : Omar_70
• Track 21 : SqueakyClean_67, GirlDinner_66, Janus_67, Animus_66
• Track 22 : Axiom_69
• Track 23 : Daudau_66
• Track 24 : Nishikigoi_66, Tefunt_65
• Track 25 : TinaBelcher_67, Bowden_67, TrvxScott_66
• Track 26 : Loofah_72
• Track 27 : Caelum_70
• Track 28 : Pablito_66
• Track 29 : Andris_67
• Track 30 : ELB20_68, R4_69
• Track 31 : Paolo_71
• Track 32 : Amethyst_65

• Track 33 : Zainub_71
• Track 34 : Thestral_69
• Track 35 : Diane_66
• Track 36 : Superstar_72
• Track 37 : Haizum_65
• Track 38 : Issmi_68
• Track 39 : Hank144_69
• Track 40 : Puginator_71
• Track 41 : Paedore_71
• Track 42 : Jevington_68
• Track 43 : Verabelle_71
• Track 44 : ElGato_75
• Track 45 : Speedwell_71
• Track 46 : Kaine_74, Dexers_72, Sudan_74
• Track 47 : Vanseggelen_74
• Track 48 : Provolone_75
• Track 49 : SunkenRoot_68, Amela_68
• Track 50 : Verse_69
• Track 51 : Saftant_72
• Track 52 : ZamZam_74
• Track 53 : Yosif_71
• Track 54 : Celery_73
• Track 55 : Pavo_75
• Track 56 : phiCAM_65
• Track 57 : Conan_75
• Track 58 : Jhitchelle_66
• Track 59 : Alsaber_74
• Track 60 : BroPlease_65
• Track 61 : GreenWeasel_67
• Track 62 : phiHau3_67
• Track 63 : Celia_71
• Track 64 : Urza_73
• Track 65 : VieEnRose_72
• Track 66 : Itza_74

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

The start number called the most often in the published annotations is 23, it was called in 91 of the 111 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aaronocolus_71, Alvy_71, Amela_68, Andris_67, Animus_66, Asten_71, Axiom_69, BarryBee_74, BartholomewSD_71, BeardedLady_72, Bovely_71, Bowden_67, Brataylor_75, BryanRecycles_73, Caelum_70, Caliburn_70, Celery_73, Celeste_74, Chucky_71, Dattran_75, Dexers_72, Dwayne_71, ELB20_68, Eddasa_74, Ejemplo_69, ElGato_75, Emaanora_74, EnochSoames_75, Esperer_72, GirlDinner_66, Goby_74, Godpower_74, Hank144_69, Hippo_71, Hydra_74, Indigo_70, Issmi_68, Itza_74, Izzy_73, Janus_67, Jash_73, Jevington_68, Jhitchelle_66, Kaine_74, Katalie_70, Lannister_71, Legacy_71, Leviticus_72, Lika_73, Loofah_72, Lorelei_73, Maneekul_71, Marav_68, Nabi_74, Nanodon_73,

Nerdos_70, Oliynyk_73, Ozzie_71, OzzyJ_73, Pablito_66, Paedore_71, Paolo_71, Phettuccine_71, Puginator_71, R4_69, Rana_74, RedBear_71, Rusticus_73, Saftant_72, SarahRose_71, Snorlax_71, South40_70, Speedwell_71, SqueakyClean_67, Sudan_74, SunkenRoot_68, SunsetPointe_71, TagePhighter_73, Thestral_69, TinaBelcher_67, Toma_74, Triste_72, Triumph_69, TrvxScott_66, TuanPN_69, Unstoppable_71, Vanseggelen_74, Verabelle_71, Verse_69, Werner_71, Whatever_71, Yasdnil_71, Yosif_71, Zainub_71, ZamZam_74, phiCAM_65,

Genes that have the "Most Annotated" start but do not call it:
• Alsaber_74, Amethyst_65, Celia_71, Conan_75, Danzina_74, Daudau_66, Diane_66, Haizum_65, Nishikigoi_66, Omar_70, Pavo_75, Provolone_75, Sujidade_74, Superstar_72, Tefunt_65, Urza_73, VieEnRose_72, Zemlya_74,

Genes that do not have the "Most Annotated" start:
• BroPlease_65, GreenWeasel_67, phiHau3_67,

Summary by start number:

Start 14:
• Found in 4 of 117 (3.4%) of genes in pham
• Manual Annotations of this start: 2 of 111
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Urza_73 (BD6), VieEnRose_72 (BD6),

Start 17:
• Found in 13 of 117 (11.1%) of genes in pham
• Manual Annotations of this start: 2 of 111
• Called 15.4% of time when present
• Phage (with cluster) where this start called: Danzina_74 (BD1), Sujidade_74 (BD1),

Start 18:
• Found in 29 of 117 (24.8%) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 3.4% of time when present
• Phage (with cluster) where this start called: Zemlya_74 (BD1),

Start 19:
• Found in 4 of 117 (3.4%) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Celia_71 (BD6),

Start 21:
• Found in 3 of 117 (2.6%) of genes in pham
• Manual Annotations of this start: 3 of 111
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BroPlease_65 (BD4), GreenWeasel_67 (BD4), phiHau3_67 (BD4),

Start 22:
• Found in 11 of 117 (9.4%) of genes in pham
• Manual Annotations of this start: 4 of 111

• Called 36.4% of time when present
• Phage (with cluster) where this start called: Alsaber_74 (BD3), Conan_75 (BD3), Pavo_75 (BD3), Provolone_75 (BD3),

Start 23:
• Found in 114 of 117 (97.4%) of genes in pham
• Manual Annotations of this start: 91 of 111
• Called 84.2% of time when present
• Phage (with cluster) where this start called: Aaronocolus_71 (BD1), Alvy_71 (BD2), Amela_68 (BD3), Andris_67 (BD2), Animus_66 (BD2), Asten_71 (BD1), Axiom_69 (BD2), BarryBee_74 (BD1), BartholomewSD_71 (BD2), BeardedLady_72 (BD1), Bovely_71 (BD1), Bowden_67 (BD2), Brataylor_75 (BD1), BryanRecycles_73 (BD1), Caelum_70 (BD2), Caliburn_70 (BD1), Celery_73 (BD3), Celeste_74 (BD1), Chucky_71 (BD1), Dattran_75 (BD1), Dexers_72 (BD3), Dwayne_71 (BD1), ELB20_68 (BD2), Eddasa_74 (BD1), Ejemplo_69 (BD1), ElGato_75 (BD3), Emaanora_74 (BD1), EnochSoames_75 (BD1), Esperer_72 (BD1), GirlDinner_66 (BD2), Goby_74 (BD1), Godpower_74 (BD1), Hank144_69 (BD2), Hippo_71 (BD1), Hydra_74 (BD1), Indigo_70 (BD1), Issmi_68 (BD2), Itza_74 (BD6), Izzy_73 (BD1), Janus_67 (BD2), Jash_73 (BD1), Jevington_68 (BD2), Jhitchelle_66 (BD3), Kaine_74 (BD3), Katalie_70 (BD1), Lannister_71 (BD1), Legacy_71 (BD1), Leviticus_72 (BD1), Lika_73 (BD1), Loofah_72 (BD2), Lorelei_73 (BD1), Maneekul_71 (BD1), Marav_68 (BD2), Nabi_74 (BD1), Nanodon_73 (BD1), Nerdos_70 (BD1), Oliynyk_73 (BD1), Ozzie_71 (BD1), OzzyJ_73 (BD1), Pablito_66 (BD2), Paedore_71 (BD2), Paolo_71 (BD2), Phettuccine_71 (BD1), Puginator_71 (BD2), R4_69 (BD2), Rana_74 (BD1), RedBear_71 (BD1), Rusticus_73 (BD1), Saftant_72 (BD3), SarahRose_71 (BD1), Snorlax_71 (BD1), South40_70 (BD1), Speedwell_71 (BD3), SqueakyClean_67 (BD2), Sudan_74 (BD3), SunkenRoot_68 (BD3), SunsetPointe_71 (BD1), TagePhighter_73 (BD1), Thestral_69 (BD2), TinaBelcher_67 (BD2), Toma_74 (BD1), Triste_72 (BD1), Triumph_69 (BD2), TrvxScott_66 (BD2), TuanPN_69 (BD1), Unstoppable_71 (BD1), Vanseggelen_74 (BD3), Verabelle_71 (BD3), Verse_69 (BD3), Werner_71 (BD1), Whatever_71 (BD1), Yasdnil_71 (BD1), Yosif_71 (BD3), Zainub_71 (BD2), ZamZam_74 (BD3), phiCAM_65 (BD3),

Start 58:
• Found in 26 of 117 (22.2%) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 3.8% of time when present
• Phage (with cluster) where this start called: Diane_66 (BD2),

Start 62:
• Found in 16 of 117 (13.7%) of genes in pham
• Manual Annotations of this start: 5 of 111
• Called 37.5% of time when present
• Phage (with cluster) where this start called: Amethyst_65 (BD2), Daudau_66 (BD2), Nishikigoi_66 (BD2), Omar_70 (BD2), Superstar_72 (BD2), Tefunt_65 (BD2),

Start 64:
• Found in 3 of 117 (2.6%) of genes in pham
• Manual Annotations of this start: 1 of 111
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Haizum_65 (BD2),

Summary by clusters:

There are 5 clusters represented in this pham: BD4, BD6, BD1, BD3, BD2,

Info for manual annotations of cluster BD1:
•Start number 17 was manually annotated 2 times for cluster BD1.
•Start number 18 was manually annotated 1 time for cluster BD1.
•Start number 23 was manually annotated 52 times for cluster BD1.

Info for manual annotations of cluster BD2:
•Start number 23 was manually annotated 26 times for cluster BD2.
•Start number 58 was manually annotated 1 time for cluster BD2.
•Start number 62 was manually annotated 5 times for cluster BD2.
•Start number 64 was manually annotated 1 time for cluster BD2.

Info for manual annotations of cluster BD3:
•Start number 22 was manually annotated 4 times for cluster BD3.
•Start number 23 was manually annotated 12 times for cluster BD3.

Info for manual annotations of cluster BD4:
•Start number 21 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:
•Start number 14 was manually annotated 2 times for cluster BD6.
•Start number 19 was manually annotated 1 time for cluster BD6.
•Start number 23 was manually annotated 1 time for cluster BD6.

Gene Information:

Gene: Aaronocolus_71 Start: 47892, Stop: 47467, Start Num: 23
Candidate Starts for Aaronocolus_71:
(Start: 23 @47892 has 91 MA's), (37, 47832), (53, 47778), (61, 47769), (76, 47643), (85, 47553), (86, 47550),

Gene: Alsaber_74 Start: 47086, Stop: 46583, Start Num: 22
Candidate Starts for Alsaber_74:
(4, 47242), (11, 47179), (12, 47164), (Start: 22 @47086 has 4 MA's), (Start: 23 @47065 has 91 MA's), (36, 47002), (41, 46966), (57, 46894), (71, 46801), (78, 46747), (90, 46618),

Gene: Alvy_71 Start: 46255, Stop: 45833, Start Num: 23
Candidate Starts for Alvy_71:
(Start: 23 @46255 has 91 MA's), (34, 46210), (38, 46204), (51, 46156), (76, 46009),

Gene: Amela_68 Start: 45690, Stop: 45211, Start Num: 23
Candidate Starts for Amela_68:
(Start: 23 @45690 has 91 MA's), (37, 45624), (43, 45579), (Start: 58 @45519 has 1 MA's), (77, 45384),

Gene: Amethyst_65 Start: 43154, Stop: 42858, Start Num: 62
Candidate Starts for Amethyst_65:
(Start: 23 @43286 has 91 MA's), (25, 43265), (Start: 58 @43169 has 1 MA's), (Start: 62 @43154 has 5 MA's), (76, 43034), (86, 42941),

Gene: Andris_67 Start: 44165, Stop: 43704, Start Num: 23
Candidate Starts for Andris_67:
(Start: 23 @44165 has 91 MA's), (Start: 58 @44018 has 1 MA's), (60, 44012), (72, 43898), (85, 43790),

Gene: Animus_66 Start: 45219, Stop: 44758, Start Num: 23
Candidate Starts for Animus_66:
(Start: 23 @45219 has 91 MA's), (32, 45174), (50, 45099), (Start: 58 @45072 has 1 MA's), (60, 45066), (72, 44952), (85, 44844),

Gene: Asten_71 Start: 50036, Stop: 49608, Start Num: 23
Candidate Starts for Asten_71:
(7, 50174), (Start: 18 @50084 has 1 MA's), (Start: 23 @50036 has 91 MA's), (26, 50012), (37, 49976), (82, 49733), (83, 49724),

Gene: Axiom_69 Start: 44914, Stop: 44447, Start Num: 23
Candidate Starts for Axiom_69:
(9, 45043), (Start: 23 @44914 has 91 MA's), (47, 44803), (Start: 58 @44761 has 1 MA's), (60, 44755), (85, 44533), (86, 44530),

Gene: BarryBee_74 Start: 50009, Stop: 49581, Start Num: 23
Candidate Starts for BarryBee_74:
(7, 50147), (Start: 18 @50057 has 1 MA's), (Start: 23 @50009 has 91 MA's), (26, 49985), (37, 49949), (82, 49706), (83, 49697),

Gene: BartholomewSD_71 Start: 45374, Stop: 44952, Start Num: 23
Candidate Starts for BartholomewSD_71:
(Start: 23 @45374 has 91 MA's), (34, 45329), (38, 45323), (51, 45275), (76, 45128),

Gene: BeardedLady_72 Start: 48272, Stop: 47847, Start Num: 23
Candidate Starts for BeardedLady_72:
(Start: 23 @48272 has 91 MA's), (37, 48212), (53, 48158), (61, 48149), (76, 48023), (85, 47933), (86, 47930),

Gene: Bovely_71 Start: 47895, Stop: 47470, Start Num: 23
Candidate Starts for Bovely_71:
(Start: 23 @47895 has 91 MA's), (37, 47835), (53, 47781), (61, 47772), (76, 47646), (85, 47556), (86, 47553),

Gene: Bowden_67 Start: 45935, Stop: 45486, Start Num: 23
Candidate Starts for Bowden_67:
(Start: 23 @45935 has 91 MA's), (24, 45917), (47, 45836), (50, 45827), (Start: 58 @45800 has 1 MA's), (60, 45794), (76, 45662), (79, 45632), (84, 45596), (85, 45572),

Gene: Brataylor_75 Start: 49554, Stop: 49126, Start Num: 23
Candidate Starts for Brataylor_75:
(10, 49674), (Start: 17 @49611 has 2 MA's), (Start: 18 @49602 has 1 MA's), (Start: 23 @49554 has 91 MA's), (26, 49530), (37, 49494), (80, 49269), (85, 49212), (86, 49209),

Gene: BroPlease_65 Start: 43699, Stop: 43223, Start Num: 21
Candidate Starts for BroPlease_65:
(3, 43876), (5, 43837), (Start: 21 @43699 has 3 MA's), (31, 43633), (37, 43609), (57, 43528), (66, 43465), (76, 43399),

Gene: BryanRecycles_73 Start: 48398, Stop: 47973, Start Num: 23
Candidate Starts for BryanRecycles_73:
(Start: 23 @48398 has 91 MA's), (37, 48338), (53, 48284), (61, 48275), (76, 48149), (85, 48059), (86, 48056),

Gene: Caelum_70 Start: 44242, Stop: 43811, Start Num: 23
Candidate Starts for Caelum_70:
(Start: 23 @44242 has 91 MA's), (51, 44143), (Start: 58 @44125 has 1 MA's), (Start: 62 @44110 has 5 MA's), (76, 43987),

Gene: Caliburn_70 Start: 48280, Stop: 47855, Start Num: 23
Candidate Starts for Caliburn_70:
(Start: 23 @48280 has 91 MA's), (37, 48220), (53, 48166), (61, 48157), (76, 48031), (85, 47941), (86, 47938),

Gene: Celery_73 Start: 44746, Stop: 44285, Start Num: 23
Candidate Starts for Celery_73:
(Start: 23 @44746 has 91 MA's), (41, 44656), (45, 44632), (Start: 58 @44593 has 1 MA's), (76, 44461), (77, 44458),

Gene: Celeste_74 Start: 49022, Stop: 48594, Start Num: 23
Candidate Starts for Celeste_74:
(10, 49142), (Start: 17 @49079 has 2 MA's), (Start: 18 @49070 has 1 MA's), (Start: 23 @49022 has 91 MA's), (26, 48998), (37, 48962), (80, 48737), (85, 48680), (86, 48677),

Gene: Celia_71 Start: 46426, Stop: 45908, Start Num: 19
Candidate Starts for Celia_71:
(Start: 14 @46462 has 2 MA's), (Start: 19 @46426 has 1 MA's), (20, 46408), (Start: 23 @46378 has 91 MA's), (24, 46360), (26, 46354), (28, 46348), (30, 46339), (32, 46327), (65, 46177), (67, 46156), (68, 46153), (69, 46150), (74, 46093), (81, 46045), (91, 45940),

Gene: Chucky_71 Start: 50071, Stop: 49643, Start Num: 23
Candidate Starts for Chucky_71:
(7, 50209), (Start: 18 @50119 has 1 MA's), (Start: 23 @50071 has 91 MA's), (26, 50047), (31, 50029), (37, 50011), (82, 49768), (83, 49759),

Gene: Conan_75 Start: 47338, Stop: 46835, Start Num: 22
Candidate Starts for Conan_75:
(4, 47494), (8, 47449), (11, 47431), (12, 47416), (Start: 22 @47338 has 4 MA's), (Start: 23 @47317 has 91 MA's), (36, 47254), (41, 47218), (57, 47146), (71, 47053), (78, 46999), (90, 46870),

Gene: Danzina_74 Start: 49317, Stop: 48832, Start Num: 17
Candidate Starts for Danzina_74:
(10, 49380), (Start: 17 @49317 has 2 MA's), (Start: 18 @49308 has 1 MA's), (Start: 23 @49260 has 91 MA's), (26, 49236), (37, 49200), (70, 49056), (80, 48975), (85, 48918), (86, 48915),

Gene: Dattran_75 Start: 49475, Stop: 49047, Start Num: 23
Candidate Starts for Dattran_75:
(Start: 17 @49532 has 2 MA's), (Start: 18 @49523 has 1 MA's), (Start: 23 @49475 has 91 MA's), (26, 49451), (37, 49415), (80, 49190), (85, 49133), (86, 49130),

Gene: Daudau_66 Start: 43674, Stop: 43396, Start Num: 62
Candidate Starts for Daudau_66:

(6, 43956), (Start: 23 @43809 has 91 MA's), (26, 43788), (32, 43770), (51, 43707), (Start: 58 @43689 has 1 MA's), (Start: 62 @43674 has 5 MA's), (76, 43572),

Gene: Dexers_72 Start: 47283, Stop: 46801, Start Num: 23
Candidate Starts for Dexers_72:
(4, 47460), (8, 47415), (11, 47397), (12, 47382), (Start: 22 @47304 has 4 MA's), (Start: 23 @47283 has 91 MA's), (36, 47220), (41, 47184), (50, 47142), (57, 47112), (71, 47019), (78, 46965), (90, 46836),

Gene: Diane_66 Start: 44254, Stop: 43943, Start Num: 58
Candidate Starts for Diane_66:
(6, 44518), (Start: 23 @44371 has 91 MA's), (25, 44350), (Start: 58 @44254 has 1 MA's), (Start: 62 @44239 has 5 MA's), (86, 44026),

Gene: Dwayne_71 Start: 50059, Stop: 49631, Start Num: 23
Candidate Starts for Dwayne_71:
(7, 50197), (Start: 18 @50107 has 1 MA's), (Start: 23 @50059 has 91 MA's), (26, 50035), (37, 49999), (82, 49756), (83, 49747),

Gene: ELB20_68 Start: 44653, Stop: 44234, Start Num: 23
Candidate Starts for ELB20_68:
(Start: 23 @44653 has 91 MA's), (29, 44620), (51, 44560), (56, 44554), (72, 44428), (76, 44410),

Gene: Eddasa_74 Start: 48937, Stop: 48512, Start Num: 23
Candidate Starts for Eddasa_74:
(Start: 23 @48937 has 91 MA's), (37, 48877), (53, 48823), (61, 48814), (76, 48688), (85, 48598), (86, 48595),

Gene: Ejemplo_69 Start: 49997, Stop: 49569, Start Num: 23
Candidate Starts for Ejemplo_69:
(7, 50135), (Start: 18 @50045 has 1 MA's), (Start: 23 @49997 has 91 MA's), (26, 49973), (37, 49937), (82, 49694), (83, 49685),

Gene: ElGato_75 Start: 47177, Stop: 46695, Start Num: 23
Candidate Starts for ElGato_75:
(11, 47291), (12, 47276), (Start: 22 @47198 has 4 MA's), (Start: 23 @47177 has 91 MA's), (36, 47114), (57, 47006), (71, 46913), (78, 46859), (90, 46730),

Gene: Emaanora_74 Start: 49983, Stop: 49555, Start Num: 23
Candidate Starts for Emaanora_74:
(7, 50121), (Start: 18 @50031 has 1 MA's), (Start: 23 @49983 has 91 MA's), (26, 49959), (31, 49941), (37, 49923), (82, 49680), (83, 49671),

Gene: EnochSoames_75 Start: 48104, Stop: 47679, Start Num: 23
Candidate Starts for EnochSoames_75:
(Start: 23 @48104 has 91 MA's), (37, 48044), (53, 47990), (61, 47981), (72, 47873), (85, 47765), (86, 47762),

Gene: Esperer_72 Start: 48238, Stop: 47813, Start Num: 23
Candidate Starts for Esperer_72:
(Start: 23 @48238 has 91 MA's), (37, 48178), (53, 48124), (61, 48115), (76, 47989), (85, 47899), (86, 47896),

Gene: GirlDinner_66 Start: 44711, Stop: 44250, Start Num: 23

Candidate Starts for GirlDinner_66:
(Start: 23 @44711 has 91 MA's), (32, 44666), (50, 44591), (Start: 58 @44564 has 1 MA's), (60, 44558), (72, 44444), (85, 44336),

Gene: Goby_74 Start: 49892, Stop: 49464, Start Num: 23
Candidate Starts for Goby_74:
(Start: 17 @49949 has 2 MA's), (Start: 18 @49940 has 1 MA's), (Start: 23 @49892 has 91 MA's), (26, 49868), (37, 49832), (80, 49607), (85, 49550), (86, 49547),

Gene: Godpower_74 Start: 49186, Stop: 48758, Start Num: 23
Candidate Starts for Godpower_74:
(Start: 17 @49243 has 2 MA's), (Start: 18 @49234 has 1 MA's), (Start: 23 @49186 has 91 MA's), (26, 49162), (37, 49126), (70, 48982), (80, 48901), (85, 48844), (86, 48841),

Gene: GreenWeasel_67 Start: 43704, Stop: 43228, Start Num: 21
Candidate Starts for GreenWeasel_67:
(5, 43842), (Start: 21 @43704 has 3 MA's), (31, 43638), (37, 43614), (57, 43533), (66, 43470), (76, 43404),

Gene: Haizum_65 Start: 43959, Stop: 43672, Start Num: 64
Candidate Starts for Haizum_65:
(6, 44241), (Start: 23 @44094 has 91 MA's), (25, 44076), (Start: 58 @43983 has 1 MA's), (Start: 62 @43968 has 5 MA's), (Start: 64 @43959 has 1 MA's), (76, 43848), (86, 43755),

Gene: Hank144_69 Start: 44919, Stop: 44458, Start Num: 23
Candidate Starts for Hank144_69:
(Start: 23 @44919 has 91 MA's), (28, 44892), (47, 44814), (60, 44766), (72, 44652), (76, 44634), (86, 44541),

Gene: Hippo_71 Start: 50045, Stop: 49617, Start Num: 23
Candidate Starts for Hippo_71:
(7, 50183), (Start: 18 @50093 has 1 MA's), (Start: 23 @50045 has 91 MA's), (26, 50021), (37, 49985), (82, 49742), (83, 49733),

Gene: Hydra_74 Start: 49052, Stop: 48627, Start Num: 23
Candidate Starts for Hydra_74:
(Start: 23 @49052 has 91 MA's), (37, 48992), (53, 48938), (61, 48929), (76, 48803), (85, 48713), (86, 48710),

Gene: Indigo_70 Start: 47888, Stop: 47463, Start Num: 23
Candidate Starts for Indigo_70:
(Start: 23 @47888 has 91 MA's), (37, 47828), (53, 47774), (61, 47765), (76, 47639), (85, 47549), (86, 47546),

Gene: Issmi_68 Start: 44876, Stop: 44448, Start Num: 23
Candidate Starts for Issmi_68:
(Start: 23 @44876 has 91 MA's), (51, 44777), (Start: 58 @44759 has 1 MA's), (Start: 62 @44744 has 5 MA's), (76, 44624), (90, 44483),

Gene: Itza_74 Start: 46311, Stop: 45841, Start Num: 23
Candidate Starts for Itza_74:
(Start: 14 @46395 has 2 MA's), (Start: 19 @46359 has 1 MA's), (20, 46341), (Start: 23 @46311 has 91 MA's), (24, 46293), (26, 46287), (28, 46281), (30, 46272), (32, 46260), (65, 46110), (67, 46089), (68,

46086), (69, 46083), (74, 46026), (81, 45978), (91, 45873),

Gene: Izzy_73 Start: 48445, Stop: 48020, Start Num: 23
Candidate Starts for Izzy_73:
(Start: 23 @48445 has 91 MA's), (37, 48385), (53, 48331), (61, 48322), (76, 48196), (85, 48106), (86, 48103),

Gene: Janus_67 Start: 45051, Stop: 44590, Start Num: 23
Candidate Starts for Janus_67:
(Start: 23 @45051 has 91 MA's), (32, 45006), (50, 44931), (Start: 58 @44904 has 1 MA's), (60, 44898), (72, 44784), (85, 44676),

Gene: Jash_73 Start: 48398, Stop: 47973, Start Num: 23
Candidate Starts for Jash_73:
(Start: 23 @48398 has 91 MA's), (37, 48338), (53, 48284), (61, 48275), (76, 48149), (85, 48059), (86, 48056),

Gene: Jevington_68 Start: 43253, Stop: 42822, Start Num: 23
Candidate Starts for Jevington_68:
(Start: 23 @43253 has 91 MA's), (28, 43223), (72, 43016), (76, 42998), (86, 42905),

Gene: Jhitchelle_66 Start: 44361, Stop: 43888, Start Num: 23
Candidate Starts for Jhitchelle_66:
(Start: 23 @44361 has 91 MA's), (42, 44259), (44, 44253), (52, 44211), (72, 44082), (75, 44067), (80, 44031),

Gene: Kaine_74 Start: 47089, Stop: 46607, Start Num: 23
Candidate Starts for Kaine_74:
(4, 47266), (8, 47221), (11, 47203), (12, 47188), (Start: 22 @47110 has 4 MA's), (Start: 23 @47089 has 91 MA's), (36, 47026), (41, 46990), (50, 46948), (57, 46918), (71, 46825), (78, 46771), (90, 46642),

Gene: Katalie_70 Start: 49765, Stop: 49337, Start Num: 23
Candidate Starts for Katalie_70:
(Start: 23 @49765 has 91 MA's), (26, 49741), (37, 49705), (89, 49390),

Gene: Lannister_71 Start: 48622, Stop: 48200, Start Num: 23
Candidate Starts for Lannister_71:
(Start: 23 @48622 has 91 MA's), (37, 48562), (55, 48505), (76, 48376), (85, 48286), (86, 48283),

Gene: Legacy_71 Start: 48271, Stop: 47846, Start Num: 23
Candidate Starts for Legacy_71:
(Start: 23 @48271 has 91 MA's), (37, 48211), (53, 48157), (61, 48148), (76, 48022), (85, 47932), (86, 47929),

Gene: Leviticus_72 Start: 48425, Stop: 48000, Start Num: 23
Candidate Starts for Leviticus_72:
(Start: 23 @48425 has 91 MA's), (37, 48365), (53, 48311), (61, 48302), (76, 48176), (85, 48086), (86, 48083),

Gene: Lika_73 Start: 49739, Stop: 49311, Start Num: 23
Candidate Starts for Lika_73:
(Start: 17 @49796 has 2 MA's), (Start: 18 @49787 has 1 MA's), (Start: 23 @49739 has 91 MA's), (26, 49715), (37, 49679), (70, 49535), (80, 49454), (85, 49397), (86, 49394),

Gene: Loofah_72 Start: 45637, Stop: 45218, Start Num: 23
Candidate Starts for Loofah_72:
(Start: 23 @45637 has 91 MA's), (29, 45604), (51, 45544), (72, 45412), (76, 45394),

Gene: Lorelei_73 Start: 49033, Stop: 48599, Start Num: 23
Candidate Starts for Lorelei_73:
(10, 49153), (Start: 17 @49090 has 2 MA's), (Start: 18 @49081 has 1 MA's), (Start: 23 @49033 has 91 MA's), (26, 49009), (29, 49000), (37, 48973), (Start: 62 @48895 has 5 MA's), (70, 48823), (73, 48787), (80, 48742), (85, 48685), (86, 48682),

Gene: Maneekul_71 Start: 50076, Stop: 49648, Start Num: 23
Candidate Starts for Maneekul_71:
(7, 50214), (Start: 23 @50076 has 91 MA's), (26, 50052), (37, 50016), (82, 49773), (83, 49764),

Gene: Marav_68 Start: 43240, Stop: 42809, Start Num: 23
Candidate Starts for Marav_68:
(Start: 23 @43240 has 91 MA's), (28, 43210), (33, 43186), (54, 43132), (76, 42985),

Gene: Nabi_74 Start: 49602, Stop: 49168, Start Num: 23
Candidate Starts for Nabi_74:
(10, 49722), (Start: 17 @49659 has 2 MA's), (Start: 18 @49650 has 1 MA's), (Start: 23 @49602 has 91 MA's), (26, 49578), (29, 49569), (37, 49542), (Start: 62 @49464 has 5 MA's), (70, 49392), (73, 49356), (80, 49311), (85, 49254), (86, 49251),

Gene: Nanodon_73 Start: 48586, Stop: 48134, Start Num: 23
Candidate Starts for Nanodon_73:
(Start: 23 @48586 has 91 MA's), (26, 48562), (29, 48553), (37, 48526), (61, 48439), (63, 48430), (76, 48310), (87, 48202),

Gene: Nerdos_70 Start: 47887, Stop: 47462, Start Num: 23
Candidate Starts for Nerdos_70:
(Start: 23 @47887 has 91 MA's), (37, 47827), (53, 47773), (61, 47764), (76, 47638), (85, 47548), (86, 47545),

Gene: Nishikigoi_66 Start: 43968, Stop: 43672, Start Num: 62
Candidate Starts for Nishikigoi_66:
(6, 44241), (Start: 23 @44094 has 91 MA's), (25, 44076), (Start: 58 @43983 has 1 MA's), (Start: 62 @43968 has 5 MA's), (Start: 64 @43959 has 1 MA's), (76, 43848), (86, 43755),

Gene: Oliynyk_73 Start: 48307, Stop: 47882, Start Num: 23
Candidate Starts for Oliynyk_73:
(Start: 23 @48307 has 91 MA's), (37, 48247), (53, 48193), (61, 48184), (76, 48058), (85, 47968), (86, 47965),

Gene: Omar_70 Start: 42892, Stop: 42593, Start Num: 62
Candidate Starts for Omar_70:
(Start: 23 @43027 has 91 MA's), (28, 43000), (Start: 58 @42907 has 1 MA's), (61, 42898), (Start: 62 @42892 has 5 MA's), (76, 42769),

Gene: Ozzie_71 Start: 48280, Stop: 47855, Start Num: 23
Candidate Starts for Ozzie_71:

(Start: 23 @48280 has 91 MA's), (37, 48220), (53, 48166), (61, 48157), (76, 48031), (85, 47941), (86, 47938),

Gene: OzzyJ_73 Start: 49963, Stop: 49535, Start Num: 23
Candidate Starts for OzzyJ_73:
(2, 50251), (10, 50080), (Start: 18 @50011 has 1 MA's), (Start: 23 @49963 has 91 MA's), (26, 49939), (37, 49903), (70, 49759), (82, 49660),

Gene: Pablito_66 Start: 43502, Stop: 43080, Start Num: 23
Candidate Starts for Pablito_66:
(Start: 23 @43502 has 91 MA's), (70, 43304), (76, 43256), (85, 43166), (86, 43163),

Gene: Paedore_71 Start: 46003, Stop: 45584, Start Num: 23
Candidate Starts for Paedore_71:
(Start: 23 @46003 has 91 MA's), (29, 45970), (51, 45910), (56, 45904), (72, 45778), (76, 45760),

Gene: Paolo_71 Start: 44940, Stop: 44509, Start Num: 23
Candidate Starts for Paolo_71:
(Start: 23 @44940 has 91 MA's), (28, 44910), (33, 44886), (76, 44685), (86, 44592),

Gene: Pavo_75 Start: 47286, Stop: 46783, Start Num: 22
Candidate Starts for Pavo_75:
(1, 47556), (4, 47442), (8, 47397), (11, 47379), (12, 47364), (Start: 22 @47286 has 4 MA's), (Start: 23 @47265 has 91 MA's), (36, 47202), (41, 47166), (57, 47094), (71, 47001), (78, 46947), (90, 46818),

Gene: Phettuccine_71 Start: 47858, Stop: 47433, Start Num: 23
Candidate Starts for Phettuccine_71:
(Start: 23 @47858 has 91 MA's), (37, 47798), (53, 47744), (61, 47735), (76, 47609), (85, 47519), (86, 47516),

Gene: Provolone_75 Start: 47427, Stop: 46924, Start Num: 22
Candidate Starts for Provolone_75:
(1, 47697), (4, 47583), (11, 47520), (12, 47505), (Start: 22 @47427 has 4 MA's), (Start: 23 @47406 has 91 MA's), (36, 47343), (41, 47307), (57, 47235), (71, 47142), (78, 47088), (90, 46959),

Gene: Puginator_71 Start: 44987, Stop: 44556, Start Num: 23
Candidate Starts for Puginator_71:
(9, 45119), (Start: 23 @44987 has 91 MA's), (28, 44957), (54, 44879), (76, 44732),

Gene: R4_69 Start: 44813, Stop: 44394, Start Num: 23
Candidate Starts for R4_69:
(Start: 23 @44813 has 91 MA's), (29, 44780), (51, 44720), (56, 44714), (72, 44588), (76, 44570),

Gene: Rana_74 Start: 49455, Stop: 49021, Start Num: 23
Candidate Starts for Rana_74:
(10, 49575), (Start: 17 @49512 has 2 MA's), (Start: 18 @49503 has 1 MA's), (Start: 23 @49455 has 91 MA's), (26, 49431), (29, 49422), (37, 49395), (Start: 62 @49317 has 5 MA's), (70, 49245), (73, 49209), (80, 49164), (85, 49107), (86, 49104),

Gene: RedBear_71 Start: 49765, Stop: 49337, Start Num: 23
Candidate Starts for RedBear_71:
(Start: 23 @49765 has 91 MA's), (26, 49741), (37, 49705), (89, 49390),

Gene: Rusticus_73 Start: 48398, Stop: 47973, Start Num: 23
Candidate Starts for Rusticus_73:
(Start: 23 @48398 has 91 MA's), (37, 48338), (53, 48284), (61, 48275), (76, 48149), (85, 48059), (86, 48056),

Gene: Saftant_72 Start: 47099, Stop: 46659, Start Num: 23
Candidate Starts for Saftant_72:
(1, 47390), (4, 47276), (8, 47231), (12, 47198), (Start: 22 @47120 has 4 MA's), (Start: 23 @47099 has 91 MA's), (40, 47027), (44, 46994), (46, 46988), (49, 46979), (Start: 62 @46937 has 5 MA's), (76, 46835), (90, 46694),

Gene: SarahRose_71 Start: 50046, Stop: 49618, Start Num: 23
Candidate Starts for SarahRose_71:
(7, 50184), (Start: 18 @50094 has 1 MA's), (Start: 23 @50046 has 91 MA's), (26, 50022), (31, 50004), (37, 49986), (82, 49743), (83, 49734),

Gene: Snorlax_71 Start: 50071, Stop: 49643, Start Num: 23
Candidate Starts for Snorlax_71:
(7, 50209), (Start: 18 @50119 has 1 MA's), (Start: 23 @50071 has 91 MA's), (26, 50047), (31, 50029), (37, 50011), (82, 49768), (83, 49759),

Gene: South40_70 Start: 49765, Stop: 49337, Start Num: 23
Candidate Starts for South40_70:
(Start: 23 @49765 has 91 MA's), (26, 49741), (37, 49705), (89, 49390),

Gene: Speedwell_71 Start: 45822, Stop: 45367, Start Num: 23
Candidate Starts for Speedwell_71:
(13, 45906), (15, 45894), (Start: 22 @45840 has 4 MA's), (Start: 23 @45822 has 91 MA's), (27, 45795), (44, 45720), (46, 45714), (59, 45669), (61, 45663), (Start: 62 @45657 has 5 MA's), (76, 45543), (88, 45423), (90, 45402),

Gene: SqueakyClean_67 Start: 45229, Stop: 44768, Start Num: 23
Candidate Starts for SqueakyClean_67:
(Start: 23 @45229 has 91 MA's), (32, 45184), (50, 45109), (Start: 58 @45082 has 1 MA's), (60, 45076), (72, 44962), (85, 44854),

Gene: Sudan_74 Start: 47072, Stop: 46590, Start Num: 23
Candidate Starts for Sudan_74:
(4, 47249), (8, 47204), (11, 47186), (12, 47171), (Start: 22 @47093 has 4 MA's), (Start: 23 @47072 has 91 MA's), (36, 47009), (41, 46973), (50, 46931), (57, 46901), (71, 46808), (78, 46754), (90, 46625),

Gene: Sujidade_74 Start: 50093, Stop: 49608, Start Num: 17
Candidate Starts for Sujidade_74:
(10, 50153), (Start: 17 @50093 has 2 MA's), (Start: 18 @50084 has 1 MA's), (Start: 23 @50036 has 91 MA's), (26, 50012), (37, 49976), (70, 49832), (80, 49751), (85, 49694), (86, 49691),

Gene: SunkenRoot_68 Start: 45417, Stop: 44938, Start Num: 23
Candidate Starts for SunkenRoot_68:
(Start: 23 @45417 has 91 MA's), (37, 45351), (43, 45306), (Start: 58 @45246 has 1 MA's), (77, 45111),

Gene: SunsetPointe_71 Start: 48287, Stop: 47862, Start Num: 23
Candidate Starts for SunsetPointe_71:

(Start: 23 @48287 has 91 MA's), (37, 48227), (53, 48173), (61, 48164), (76, 48038), (85, 47948), (86, 47945),

Gene: Superstar_72 Start: 44145, Stop: 43849, Start Num: 62
Candidate Starts for Superstar_72:
(Start: 23 @44271 has 91 MA's), (51, 44172), (Start: 58 @44160 has 1 MA's), (Start: 62 @44145 has 5 MA's), (76, 44025), (86, 43932),

Gene: TagePhighter_73 Start: 50046, Stop: 49618, Start Num: 23
Candidate Starts for TagePhighter_73:
(7, 50184), (Start: 18 @50094 has 1 MA's), (Start: 23 @50046 has 91 MA's), (26, 50022), (31, 50004), (37, 49986), (82, 49743), (83, 49734),

Gene: Tefunt_65 Start: 43882, Stop: 43586, Start Num: 62
Candidate Starts for Tefunt_65:
(6, 44155), (Start: 23 @44008 has 91 MA's), (25, 43990), (Start: 58 @43897 has 1 MA's), (Start: 62 @43882 has 5 MA's), (Start: 64 @43873 has 1 MA's), (76, 43762), (86, 43669),

Gene: Thestral_69 Start: 45962, Stop: 45513, Start Num: 23
Candidate Starts for Thestral_69:
(Start: 23 @45962 has 91 MA's), (24, 45944), (47, 45863), (50, 45854), (Start: 58 @45827 has 1 MA's), (60, 45821), (85, 45599),

Gene: TinaBelcher_67 Start: 45824, Stop: 45375, Start Num: 23
Candidate Starts for TinaBelcher_67:
(Start: 23 @45824 has 91 MA's), (24, 45806), (47, 45725), (50, 45716), (Start: 58 @45689 has 1 MA's), (60, 45683), (76, 45551), (79, 45521), (84, 45485), (85, 45461),

Gene: Toma_74 Start: 49895, Stop: 49467, Start Num: 23
Candidate Starts for Toma_74:
(Start: 17 @49952 has 2 MA's), (Start: 18 @49943 has 1 MA's), (Start: 23 @49895 has 91 MA's), (26, 49871), (37, 49835), (80, 49610), (85, 49553), (86, 49550),

Gene: Triste_72 Start: 50045, Stop: 49617, Start Num: 23
Candidate Starts for Triste_72:
(7, 50183), (Start: 18 @50093 has 1 MA's), (Start: 23 @50045 has 91 MA's), (26, 50021), (31, 50003), (37, 49985), (82, 49742), (83, 49733),

Gene: Triumph_69 Start: 44652, Stop: 44185, Start Num: 23
Candidate Starts for Triumph_69:
(Start: 23 @44652 has 91 MA's), (47, 44541), (Start: 58 @44499 has 1 MA's), (60, 44493), (85, 44271), (86, 44268),

Gene: TrvxScott_66 Start: 45929, Stop: 45480, Start Num: 23
Candidate Starts for TrvxScott_66:
(Start: 23 @45929 has 91 MA's), (24, 45911), (47, 45830), (50, 45821), (Start: 58 @45794 has 1 MA's), (60, 45788), (76, 45656), (79, 45626), (84, 45590), (85, 45566),

Gene: TuanPN_69 Start: 49997, Stop: 49569, Start Num: 23
Candidate Starts for TuanPN_69:
(7, 50135), (Start: 18 @50045 has 1 MA's), (Start: 23 @49997 has 91 MA's), (26, 49973), (37, 49937), (82, 49694), (83, 49685),

Gene: Unstoppable_71 Start: 47886, Stop: 47461, Start Num: 23
Candidate Starts for Unstoppable_71:
(Start: 23 @47886 has 91 MA's), (37, 47826), (53, 47772), (61, 47763), (76, 47637), (85, 47547), (86, 47544),

Gene: Urza_73 Start: 46416, Stop: 45862, Start Num: 14
Candidate Starts for Urza_73:
(Start: 14 @46416 has 2 MA's), (Start: 19 @46380 has 1 MA's), (20, 46362), (Start: 23 @46332 has 91 MA's), (24, 46314), (26, 46308), (28, 46302), (30, 46293), (32, 46281), (65, 46131), (67, 46110), (68, 46107), (69, 46104), (74, 46047), (81, 45999), (91, 45894),

Gene: Vanseggelen_74 Start: 44923, Stop: 44450, Start Num: 23
Candidate Starts for Vanseggelen_74:
(Start: 23 @44923 has 91 MA's), (42, 44821), (44, 44815), (52, 44773), (59, 44755), (76, 44626),

Gene: Verabelle_71 Start: 44363, Stop: 43890, Start Num: 23
Candidate Starts for Verabelle_71:
(Start: 23 @44363 has 91 MA's), (42, 44261), (48, 44237), (52, 44213), (72, 44084), (75, 44069),

Gene: Verse_69 Start: 45681, Stop: 45202, Start Num: 23
Candidate Starts for Verse_69:
(Start: 23 @45681 has 91 MA's), (37, 45615), (43, 45570), (Start: 58 @45510 has 1 MA's), (76, 45378),

Gene: VieEnRose_72 Start: 46184, Stop: 45630, Start Num: 14
Candidate Starts for VieEnRose_72:
(Start: 14 @46184 has 2 MA's), (16, 46169), (Start: 19 @46148 has 1 MA's), (20, 46130), (Start: 23 @46100 has 91 MA's), (24, 46082), (26, 46076), (28, 46070), (30, 46061), (32, 46049), (67, 45878), (68, 45875), (69, 45872), (74, 45815), (81, 45767), (91, 45662),

Gene: Werner_71 Start: 50043, Stop: 49615, Start Num: 23
Candidate Starts for Werner_71:
(7, 50181), (Start: 18 @50091 has 1 MA's), (Start: 23 @50043 has 91 MA's), (26, 50019), (31, 50001), (37, 49983), (82, 49740), (83, 49731),

Gene: Whatever_71 Start: 50068, Stop: 49640, Start Num: 23
Candidate Starts for Whatever_71:
(7, 50206), (Start: 18 @50116 has 1 MA's), (Start: 23 @50068 has 91 MA's), (26, 50044), (31, 50026), (37, 50008), (82, 49765), (83, 49756),

Gene: Yasdnil_71 Start: 50095, Stop: 49667, Start Num: 23
Candidate Starts for Yasdnil_71:
(7, 50233), (Start: 18 @50143 has 1 MA's), (Start: 23 @50095 has 91 MA's), (26, 50071), (37, 50035), (82, 49792), (83, 49783),

Gene: Yosif_71 Start: 45888, Stop: 45436, Start Num: 23
Candidate Starts for Yosif_71:
(Start: 23 @45888 has 91 MA's), (35, 45828), (39, 45813),

Gene: Zainub_71 Start: 44914, Stop: 44483, Start Num: 23
Candidate Starts for Zainub_71:
(Start: 23 @44914 has 91 MA's), (28, 44884), (33, 44860), (76, 44659),

Gene: ZamZam_74 Start: 47412, Stop: 46972, Start Num: 23

Candidate Starts for ZamZam_74:
(4, 47586), (11, 47523), (12, 47508), (Start: 22 @47430 has 4 MA's), (Start: 23 @47412 has 91 MA's), (29, 47379), (32, 47361), (43, 47307), (59, 47262), (61, 47256), (Start: 62 @47250 has 5 MA's), (76, 47148), (90, 47007),

Gene: Zemlya_74 Start: 49611, Stop: 49135, Start Num: 18
Candidate Starts for Zemlya_74:
(10, 49683), (Start: 17 @49620 has 2 MA's), (Start: 18 @49611 has 1 MA's), (Start: 23 @49563 has 91 MA's), (26, 49539), (37, 49503), (80, 49278), (85, 49221), (86, 49218),

Gene: phiCAM_65 Start: 46443, Stop: 45970, Start Num: 23
Candidate Starts for phiCAM_65:
(Start: 23 @46443 has 91 MA's), (41, 46353), (51, 46308), (Start: 58 @46278 has 1 MA's), (77, 46143),

Gene: phiHau3_67 Start: 44132, Stop: 43644, Start Num: 21
Candidate Starts for phiHau3_67:
(3, 44309), (5, 44270), (Start: 21 @44132 has 3 MA's), (31, 44066), (37, 44042), (57, 43961), (76, 43820),