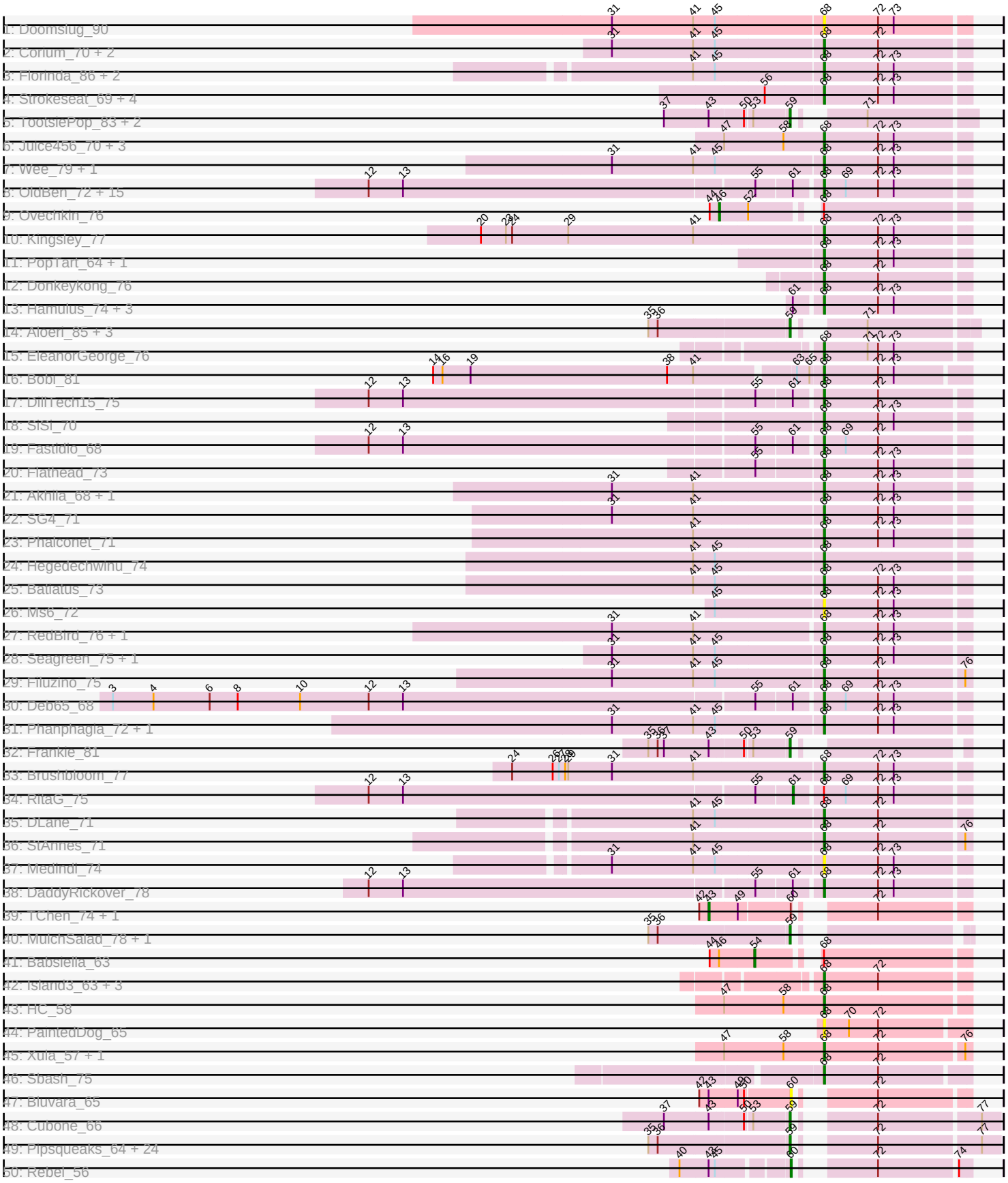
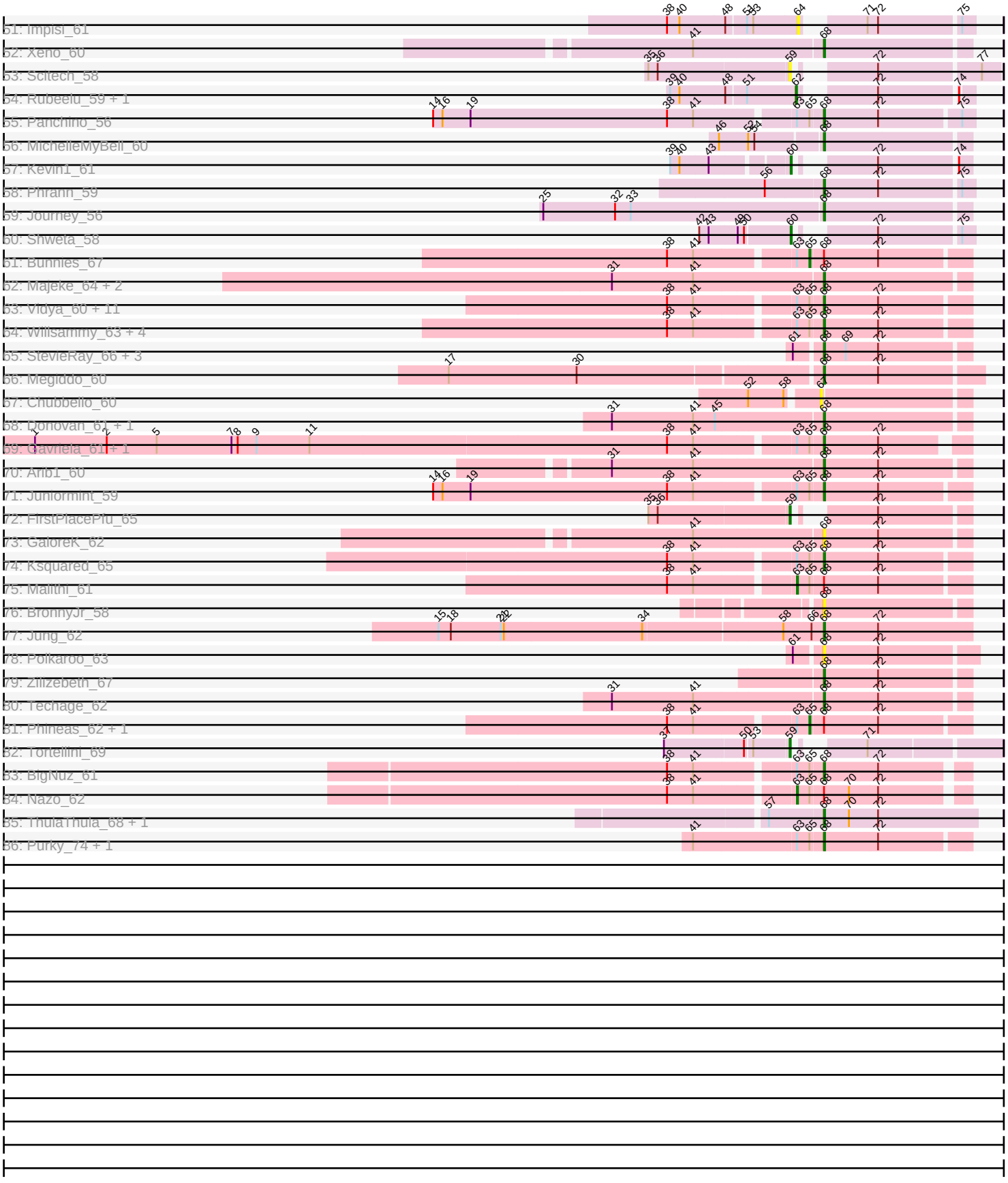
Pham 336428


1: Doomslug_90
2: Corium_70 + 2
3: Florinda_86 + 2
4: Strokeseat_69 + 4
5: TootsiePop_83 + 2
6: Juice456_70 + 3
7: Wee_79 + 1
8: OldBen_72 + 15
9: Ovechkin_76
10: Kingsley_77
11: PopTart_64 + 1
12: Donkeykong_76
13: Hamulus_74 + 3
14: Aiden_85 + 3
15: EleanorGeorge_76
16: Bobi_81
17: DimTech15_75
18: SiSi_70
19: Fastidio_68
20: Flathead_73
21: Akhila_68 + 1
22: SG4_71
23: Phalconet_71
24: Hegedechwinu_74
25: Batiatus_73
26: MS6_72
27: RedBird_76 + 1
28: Seagreen_75 + 1
29: Fluzino_75
30: Deb65_68
31: Phanphagia_72 + 1
32: Frankie_81
33: Brushbloom_77
34: RitaG_75
35: DLane_71
36: StAnnes_71
37: Medindi_74
38: DaddyRickover_78
39: TChen_74 + 1
40: MulchSalad_78 + 1
41: Babsiella_63
42: Island3_63 + 3
43: HC_58
44: PaintedDog_65
45: Xula_57 + 1
46: Sbash_75
47: Bluvara_65
48: Cubone_66
49: Pipsqueaks_64 + 24
50: Rebel_56

Pham 336428


51: Impisi_61
52: Xeno_60
53: Scitech_58
54: Rubeelu_59 + 1
55: Panchino_56
56: MichelleMyBell_60
57: Kevin1_61
58: Phrann_59
59: Journey_56
60: Shweta_58
61: Bunnies_67
62: Majeke_64 + 2
63: Vidya_60 + 11
64: Willsammy_63 + 4
65: StevieRay_66 + 3
66: Megiddo_60
67: Chubbello_60
68: Donovan_61 + 1
69: Gavriela_61 + 1
70: Arib1_60
71: Juniormint_59
72: FirstPlacePlu_65
73: GaloreK_62
74: Ksquared_65
75: Mallihi_61
76: BronnyJr_58
77: Jung_62
78: Polkaroo_63
79: Zilizebeth_67
80: Techage_62
81: Phineas_62 + 1
82: Tortellini_69
83: BigNuz_61
84: Nazo_62
85: ThulaThula_68 + 1
86: Purky_74 + 1

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

Pham 336428 Report

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

Pham number 336428 has 182 members, 16 are drafts.

Phages represented in each track:
- Track 1 : Doomslug_90
- Track 2 : Corium_70, KingJulian_76, PatoPoderoso_70
- Track 3 : Florinda_86, Quico_83, Girafales_83
- Track 4 : Strokeseat_69, Minnie_71, Sandalphon_69, Hlubikazi_69, Mandlovu_69
- Track 5 : TootsiePop_83, Misha28_83, Awesomesauce_84
- Track 6 : Juice456_70, JalFarm20_82, KristaRAM_72, DeadP_75
- Track 7 : Wee_79, Taj_80
- Track 8 : OldBen_72, JoeyJr_75, Ogopogo_79, Nimbo_67, Doomphist_78, KingMidas_74, PHappiness_75, Poenanya_78, Geralt_68, Daenerys_74, Inventum_73, Polka14_79, Empress_73, Leperchaun_73, Scottish_73, Sassafras_76
- Track 9 : Ovechkin_76
- Track 10 : Kingsley_77
- Track 11 : PopTart_64, SassyB_64
- Track 12 : Donkeykong_76
- Track 13 : Hamulus_74, LittleShirley_74, PhesterPhotato_77, IMpilo_64
- Track 14 : Aloeri_85, LordVader_77, ChickenDinner_84, DocMcStuffins_81
- Track 15 : EleanorGeorge_76
- Track 16 : Bobi_81
- Track 17 : DillTech15_75
- Track 18 : SiSi_70
- Track 19 : Fastidio_68
- Track 20 : Flathead_73
- Track 21 : Akhila_68, MilanaBonita_67
- Track 22 : SG4_71
- Track 23 : Phalconet_71
- Track 24 : Hegedechwinu_74
- Track 25 : Batiatus_73
- Track 26 : Ms6_72
- Track 27 : RedBird_76, Dorothy_76
- Track 28 : Seagreen_75, Bipolar_77
- Track 29 : Filuzino_75
- Track 30 : Deb65_68
- Track 31 : Phanphagia_72, Shauna1_73
- Track 32 : Frankie_81
- Track 33 : Brushbloom_77
- Track 34 : RitaG_75
- Track 35 : DLane_71

• Track 36 : StAnnes_71
• Track 37 : Medindi_74
• Track 38 : DaddyRickover_78
• Track 39 : TChen_74, LunaStella_72
• Track 40 : MulchSalad_78, Piper2020_87
• Track 41 : Babsiella_63
• Track 42 : Island3_63, Che9c_71, Brujita_62, Xavia_63
• Track 43 : HC_58
• Track 44 : PaintedDog_65
• Track 45 : Xula_57, QueenHazel_58
• Track 46 : Sbash_75
• Track 47 : Bluvara_65
• Track 48 : Cubone_66
• Track 49 : Pipsqueaks_64, SkinnyPete_60, EGUnicorn_58, Andies_57, Carcharodon_63, Magsby_62, Chewbacca_66, Schnauzer_64, Philonius_63, Fulbright_61, Xerxes_63, Silvy_59, Bosection6_58, Tessdabest_64, Parmesanjohn_63, Phloss_61, Gex_64, Smurph_63, Duplicity_61, Charlie_60, Melville_68, Aggie_59, Silvafighter_65, Tortoise12_63, Tapioca_61
• Track 50 : Rebel_56
• Track 51 : Impisi_61
• Track 52 : Xeno_60
• Track 53 : Scitech_58
• Track 54 : Rubeelu_59, Butters_59
• Track 55 : Panchino_56
• Track 56 : MichelleMyBell_60
• Track 57 : Kevin1_61
• Track 58 : Phrann_59
• Track 59 : Journey_56
• Track 60 : Shweta_58
• Track 61 : Bunnies_67
• Track 62 : Majeke_64, Phegasus_64, Mangethe_64
• Track 63 : Vidya_60, Jebeks_62, Bogie_64, HUHilltop_64, Camster_62, Sonah_62, Dynamo_61, Bhagsy_67, Necropolis_59, Shipwreck_64, PeanutPie_66, Pygmy_65
• Track 64 : Willsammy_63, CactusJack_62, Glaske_61, KilKor_62, Phalm_62
• Track 65 : StevieRay_66, Thespis_63, Atcoo_63, Brusacoram_63
• Track 66 : Megiddo_60
• Track 67 : Chubbello_60
• Track 68 : Donovan_61, Kari_61
• Track 69 : Gavriela_61, StressBall_61
• Track 70 : Arib1_60
• Track 71 : Juniormint_59
• Track 72 : FirstPlacePfu_65
• Track 73 : GaloreK_62
• Track 74 : Ksquared_65
• Track 75 : Malithi_61
• Track 76 : BronnyJr_58
• Track 77 : Jung_62
• Track 78 : Polkaroo_63
• Track 79 : Zilizebeth_67
• Track 80 : Techage_62
• Track 81 : Phineas_62, GreaseLightnin_66
• Track 82 : Tortellini_69
• Track 83 : BigNuz_61

• Track 84 : Nazo_62
• Track 85 : ThulaThula_68, Phayonce_64
• Track 86 : Purky_74, Stuck_72

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

The start number called the most often in the published annotations is 68, it was called in 114 of the 166 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Akhila_68, Arib1_60, Atcoo_63, Batiatus_73, Bhagsy_67, BigNuz_61, Bipolar_77, Bobi_81, Bogie_64, BronnyJr_58, Brujita_62, Brusacoram_63, Brushbloom_77, CactusJack_62, Camster_62, Che9c_71, Corium_70, DLane_71, DaddyRickover_78, Daenerys_74, DeadP_75, Deb65_68, DillTech15_75, Donkeykong_76, Donovan_61, Doomphist_78, Doomslug_90, Dorothy_76, Dynamo_61, EleanorGeorge_76, Empress_73, Fastidio_68, Filuzino_75, Flathead_73, Florinda_86, GaloreK_62, Gavriela_61, Geralt_68, Girafales_83, Glaske_61, HC_58, HUHilltop_64, Hamulus_74, Hegedechwinu_74, Hlubikazi_69, IMpilo_64, Inventum_73, Island3_63, JalFarm20_82, Jebeks_62, JoeyJr_75, Journey_56, Juice456_70, Jung_62, Juniormint_59, Kari_61, KilKor_62, KingJulian_76, KingMidas_74, Kingsley_77, KristaRAM_72, Ksquared_65, Leperchaun_73, LittleShirley_74, Majeke_64, Mandlovu_69, Mangethe_64, Medindi_74, Megiddo_60, MichelleMyBell_60, MilanaBonita_67, Minnie_71, Ms6_72, Necropolis_59, Nimbo_67, Ogopogo_79, OldBen_72, PHappiness_75, PaintedDog_65, Panchino_56, PatoPoderoso_70, PeanutPie_66, Phalconet_71, Phalm_62, Phanphagia_72, Phayonce_64, Phegasus_64, PhesterPhotato_77, Phrann_59, Poenanya_78, Polka14_79, Polkaroo_63, PopTart_64, Purky_74, Pygmy_65, QueenHazel_58, Quico_83, RedBird_76, SG4_71, Sandalphon_69, Sassafras_76, SassyB_64, Sbash_75, Scottish_73, Seagreen_75, Shauna1_73, Shipwreck_64, SiSi_70, Sonah_62, StAnnes_71, StevieRay_66, StressBall_61, Strokeseat_69, Stuck_72, Taj_80, Techage_62, Thespis_63, ThulaThula_68, Vidya_60, Wee_79, Willsammy_63, Xavia_63, Xeno_60, Xula_57, Zilizebeth_67,

Genes that have the "Most Annotated" start but do not call it:
• Babsiella_63, Bunnies_67, GreaseLightnin_66, Malithi_61, Nazo_62, Ovechkin_76, Phineas_62, RitaG_75,

Genes that do not have the "Most Annotated" start:
• Aggie_59, Aloeri_85, Andies_57, Awesomesauce_84, Bluvara_65, Bosection6_58, Butters_59, Carcharodon_63, Charlie_60, Chewbacca_66, ChickenDinner_84, Chubbello_60, Cubone_66, DocMcStuffins_81, Duplicity_61, EGUnicorn_58, FirstPlacePfu_65, Frankie_81, Fulbright_61, Gex_64, Impisi_61, Kevin1_61, LordVader_77, LunaStella_72, Magsby_62, Melville_68, Misha28_83, MulchSalad_78, Parmesanjohn_63, Philonius_63, Phloss_61, Piper2020_87, Pipsqueaks_64, Rebel_56, Rubeelu_59, Schnauzer_64, Scitech_58, Shweta_58, Silvafighter_65, Silvy_59, SkinnyPete_60, Smurph_63, TChen_74, Tapioca_61, Tessdabest_64, TootsiePop_83, Tortellini_69, Tortoise12_63, Xerxes_63,

Summary by start number:

Start 43:
• Found in 11 of 182 (6.0%) of genes in pham
• Manual Annotations of this start: 2 of 166
• Called 18.2% of time when present
• Phage (with cluster) where this start called: LunaStella_72 (F4), TChen_74 (F4),

Start 46:
• Found in 3 of 182 (1.6%) of genes in pham
• Manual Annotations of this start: 1 of 166
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Ovechkin_76 (F1),

Start 54:
• Found in 2 of 182 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 166
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Babsiella_63 (I1),

Start 59:
• Found in 39 of 182 (21.4%) of genes in pham
• Manual Annotations of this start: 37 of 166
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aggie_59 (N), Aloeri_85 (F1), Andies_57 (N), Awesomesauce_84 (F1), Bosection6_58 (N), Carcharodon_63 (N), Charlie_60 (N), Chewbacca_66 (N), ChickenDinner_84 (F1), Cubone_66 (N), DocMcStuffins_81 (F1), Duplicity_61 (N), EGUnicorn_58 (N), FirstPlacePfu_65 (P1), Frankie_81 (F1), Fulbright_61 (N), Gex_64 (N), LordVader_77 (F), Magsby_62 (N), Melville_68 (N), Misha28_83 (F1), MulchSalad_78 (F7), Parmesanjohn_63 (N), Philonius_63 (N), Phloss_61 (N), Piper2020_87 (F1), Pipsqueaks_64 (N), Schnauzer_64 (N), Scitech_58 (N), Silvafighter_65 (N), Silvy_59 (N), SkinnyPete_60 (N), Smurph_63 (N), Tapioca_61 (N), Tessdabest_64 (N), TootsiePop_83 (F1), Tortellini_69 (P2), Tortoise12_63 (N), Xerxes_63 (N),

Start 60:
• Found in 6 of 182 (3.3%) of genes in pham
• Manual Annotations of this start: 3 of 166
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Bluvara_65 (I3), Kevin1_61 (N), Rebel_56 (N), Shweta_58 (N),

Start 61:
• Found in 30 of 182 (16.5%) of genes in pham
• Manual Annotations of this start: 1 of 166
• Called 3.3% of time when present
• Phage (with cluster) where this start called: RitaG_75 (F1),

Start 62:
• Found in 2 of 182 (1.1%) of genes in pham
• Manual Annotations of this start: 2 of 166
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Butters_59 (N), Rubeelu_59 (N),

Start 63:

• Found in 31 of 182 (17.0%) of genes in pham
• Manual Annotations of this start: 2 of 166
• Called 6.5% of time when present
• Phage (with cluster) where this start called: Malithi_61 (P1), Nazo_62 (P4),

Start 64:
• Found in 1 of 182 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Impisi_61 (N),

Start 65:
• Found in 31 of 182 (17.0%) of genes in pham
• Manual Annotations of this start: 3 of 166
• Called 9.7% of time when present
• Phage (with cluster) where this start called: Bunnies_67 (P1), GreaseLightnin_66 (P1), Phineas_62 (P1),

Start 67:
• Found in 1 of 182 (0.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chubbello_60 (P1),

Start 68:
• Found in 133 of 182 (73.1%) of genes in pham
• Manual Annotations of this start: 114 of 166
• Called 94.0% of time when present
• Phage (with cluster) where this start called: Akhila_68 (F1), Arib1_60 (P1), Atcoo_63 (P1), Batiatus_73 (F1), Bhagsy_67 (P1), BigNuz_61 (P4), Bipolar_77 (F1), Bobi_81 (F1), Bogie_64 (P1), BronnyJr_58 (P1), Brujita_62 (I1), Brusacoram_63 (P1), Brushbloom_77 (F1), CactusJack_62 (P1), Camster_62 (P1), Che9c_71 (I2), Corium_70 (F1), DLane_71 (F1), DaddyRickover_78 (F1), Daenerys_74 (F1), DeadP_75 (F1), Deb65_68 (F1), DillTech15_75 (F1), Donkeykong_76 (F1), Donovan_61 (P1), Doomphist_78 (F1), Doomslug_90 (F), Dorothy_76 (F1), Dynamo_61 (P1), EleanorGeorge_76 (F1), Empress_73 (F1), Fastidio_68 (F1), Filuzino_75 (F1), Flathead_73 (F1), Florinda_86 (F1), GaloreK_62 (P1), Gavriela_61 (P1), Geralt_68 (F1), Girafales_83 (F1), Glaske_61 (P1), HC_58 (I1), HUHilltop_64 (P1), Hamulus_74 (F1), Hegedechwinu_74 (F1), Hlubikazi_69 (F1), IMpilo_64 (F1), Inventum_73 (F1), Island3_63 (I1), JalFarm20_82 (F1), Jebeks_62 (P1), JoeyJr_75 (F1), Journey_56 (N), Juice456_70 (F1), Jung_62 (P1), Juniormint_59 (P1), Kari_61 (P1), KilKor_62 (P1), KingJulian_76 (F1), KingMidas_74 (F1), Kingsley_77 (F1), KristaRAM_72 (F1), Ksquared_65 (P1), Leperchaun_73 (F1), LittleShirley_74 (F1), Majeke_64 (P1), Mandlovu_69 (F1), Mangethe_64 (P1), Medindi_74 (F1), Megiddo_60 (P1), MichelleMyBell_60 (N), MilanaBonita_67 (F1), Minnie_71 (F1), Ms6_72 (F1), Necropolis_59 (P1), Nimbo_67 (F1), Ogopogo_79 (F1), OldBen_72 (F1), PHappiness_75 (F1), PaintedDog_65 (I1), Panchino_56 (N), PatoPoderoso_70 (F1), PeanutPie_66 (P1), Phalconet_71 (F1), Phalm_62 (P1), Phanphagia_72 (F1), Phayonce_64 (P5), Phegasus_64 (P1), PhesterPhotato_77 (F1), Phrann_59 (N), Poenanya_78 (F1), Polka14_79 (F1), Polkaroo_63 (P1), PopTart_64 (F1), Purky_74 (P6), Pygmy_65 (P1), QueenHazel_58 (I1), Quico_83 (F1), RedBird_76 (F1), SG4_71 (F1), Sandalphon_69 (F1), Sassafras_76 (F1), SassyB_64 (F1), Sbash_75 (I2), Scottish_73 (F1), Seagreen_75 (F1), Shauna1_73 (F1), Shipwreck_64 (P1), SiSi_70

(F1), Sonah_62 (P1), StAnnes_71 (F1), StevieRay_66 (P1), StressBall_61 (P1), Strokeseat_69 (F1), Stuck_72 (I2), Taj_80 (F1), Techage_62 (P1), Thespis_63 (P1), ThulaThula_68 (P5), Vidya_60 (P1), Wee_79 (F1), Willsammy_63 (P1), Xavia_63 (P3), Xeno_60 (N), Xula_57 (I1), Zilizebeth_67 (P1),

Summary by clusters:

There are 14 clusters represented in this pham: P2, F1, F, P1, P6, P4, P5, I1, I3, I2, F7, N, F4, P3,

Info for manual annotations of cluster F:
•Start number 59 was manually annotated 1 time for cluster F.

Info for manual annotations of cluster F1:
•Start number 46 was manually annotated 1 time for cluster F1.
•Start number 59 was manually annotated 8 times for cluster F1.
•Start number 61 was manually annotated 1 time for cluster F1.
•Start number 68 was manually annotated 62 times for cluster F1.

Info for manual annotations of cluster F4:
•Start number 43 was manually annotated 2 times for cluster F4.

Info for manual annotations of cluster F7:
•Start number 59 was manually annotated 1 time for cluster F7.

Info for manual annotations of cluster I1:
•Start number 54 was manually annotated 1 time for cluster I1.
•Start number 68 was manually annotated 5 times for cluster I1.

Info for manual annotations of cluster I2:
•Start number 68 was manually annotated 3 times for cluster I2.

Info for manual annotations of cluster N:
•Start number 59 was manually annotated 25 times for cluster N.
•Start number 60 was manually annotated 3 times for cluster N.
•Start number 62 was manually annotated 2 times for cluster N.
•Start number 68 was manually annotated 5 times for cluster N.

Info for manual annotations of cluster P1:
•Start number 59 was manually annotated 1 time for cluster P1.
•Start number 63 was manually annotated 1 time for cluster P1.
•Start number 65 was manually annotated 3 times for cluster P1.
•Start number 68 was manually annotated 34 times for cluster P1.

Info for manual annotations of cluster P2:
•Start number 59 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P3:
•Start number 68 was manually annotated 1 time for cluster P3.

Info for manual annotations of cluster P4:
•Start number 63 was manually annotated 1 time for cluster P4.

•Start number 68 was manually annotated 1 time for cluster P4.

Info for manual annotations of cluster P5:
•Start number 68 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster P6:
•Start number 68 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Aggie_59 Start: 39996, Stop: 40157, Start Num: 59
Candidate Starts for Aggie_59:
(35, 39867), (36, 39876), (Start: 59 @39996 has 37 MA's), (72, 40047), (77, 40140),

Gene: Akhila_68 Start: 45011, Stop: 45145, Start Num: 68
Candidate Starts for Akhila_68:
(31, 44813), (41, 44891), (Start: 68 @45011 has 114 MA's), (72, 45062), (73, 45077),

Gene: Aloeri_85 Start: 50386, Stop: 50526, Start Num: 59
Candidate Starts for Aloeri_85:
(35, 50257), (36, 50266), (Start: 59 @50386 has 37 MA's), (71, 50428),

Gene: Andies_57 Start: 39441, Stop: 39602, Start Num: 59
Candidate Starts for Andies_57:
(35, 39312), (36, 39321), (Start: 59 @39441 has 37 MA's), (72, 39492), (77, 39585),

Gene: Arib1_60 Start: 39157, Stop: 39291, Start Num: 68
Candidate Starts for Arib1_60:
(31, 38959), (41, 39037), (Start: 68 @39157 has 114 MA's), (72, 39208),

Gene: Atcoo_63 Start: 42534, Stop: 42668, Start Num: 68
Candidate Starts for Atcoo_63:
(Start: 61 @42510 has 1 MA's), (Start: 68 @42534 has 114 MA's), (69, 42555), (72, 42585),

Gene: Awesomesauce_84 Start: 50622, Stop: 50762, Start Num: 59
Candidate Starts for Awesomesauce_84:
(37, 50511), (Start: 43 @50553 has 2 MA's), (50, 50583), (53, 50589), (Start: 59 @50622 has 37 MA's), (71, 50664),

Gene: Babsiella_63 Start: 40488, Stop: 40664, Start Num: 54
Candidate Starts for Babsiella_63:
(44, 40446), (Start: 46 @40455 has 1 MA's), (Start: 54 @40488 has 1 MA's), (Start: 68 @40530 has 114 MA's),

Gene: Batiatus_73 Start: 46749, Stop: 46883, Start Num: 68
Candidate Starts for Batiatus_73:
(41, 46629), (45, 46650), (Start: 68 @46749 has 114 MA's), (72, 46800), (73, 46815),

Gene: Bhagsy_67 Start: 41639, Stop: 41773, Start Num: 68
Candidate Starts for Bhagsy_67:

(38, 41504), (41, 41528), (Start: 63 @41615 has 2 MA's), (Start: 65 @41627 has 3 MA's), (Start: 68 @41639 has 114 MA's), (72, 41690),

Gene: BigNuz_61 Start: 40925, Stop: 41053, Start Num: 68
Candidate Starts for BigNuz_61:
(38, 40790), (41, 40814), (Start: 63 @40901 has 2 MA's), (Start: 65 @40913 has 3 MA's), (Start: 68 @40925 has 114 MA's), (72, 40976),

Gene: Bipolar_77 Start: 48393, Stop: 48527, Start Num: 68
Candidate Starts for Bipolar_77:
(31, 48195), (41, 48273), (45, 48294), (Start: 68 @48393 has 114 MA's), (72, 48444), (73, 48459),

Gene: Bluvara_65 Start: 43152, Stop: 43286, Start Num: 60
Candidate Starts for Bluvara_65:
(42, 43068), (Start: 43 @43077 has 2 MA's), (49, 43104), (50, 43110), (Start: 60 @43152 has 3 MA's), (72, 43203),

Gene: Bobi_81 Start: 49048, Stop: 49182, Start Num: 68
Candidate Starts for Bobi_81:
(14, 48688), (16, 48697), (19, 48724), (38, 48913), (41, 48937), (Start: 63 @49024 has 2 MA's), (Start: 65 @49036 has 3 MA's), (Start: 68 @49048 has 114 MA's), (72, 49099), (73, 49114),

Gene: Bogie_64 Start: 41516, Stop: 41650, Start Num: 68
Candidate Starts for Bogie_64:
(38, 41381), (41, 41405), (Start: 63 @41492 has 2 MA's), (Start: 65 @41504 has 3 MA's), (Start: 68 @41516 has 114 MA's), (72, 41567),

Gene: Bosection6_58 Start: 39045, Stop: 39206, Start Num: 59
Candidate Starts for Bosection6_58:
(35, 38916), (36, 38925), (Start: 59 @39045 has 37 MA's), (72, 39096), (77, 39189),

Gene: BronnyJr_58 Start: 40476, Stop: 40610, Start Num: 68
Candidate Starts for BronnyJr_58:
(Start: 68 @40476 has 114 MA's),

Gene: Brujita_62 Start: 40659, Stop: 40793, Start Num: 68
Candidate Starts for Brujita_62:
(Start: 68 @40659 has 114 MA's), (72, 40710),

Gene: Brusacoram_63 Start: 41077, Stop: 41211, Start Num: 68
Candidate Starts for Brusacoram_63:
(Start: 61 @41053 has 1 MA's), (Start: 68 @41077 has 114 MA's), (69, 41098), (72, 41128),

Gene: Brushbloom_77 Start: 48189, Stop: 48323, Start Num: 68
Candidate Starts for Brushbloom_77:
(24, 47895), (26, 47934), (27, 47940), (28, 47946), (29, 47949), (31, 47991), (41, 48069), (Start: 68 @48189 has 114 MA's), (72, 48240), (73, 48255),

Gene: Bunnies_67 Start: 42398, Stop: 42544, Start Num: 65
Candidate Starts for Bunnies_67:
(38, 42275), (41, 42299), (Start: 63 @42386 has 2 MA's), (Start: 65 @42398 has 3 MA's), (Start: 68 @42410 has 114 MA's), (72, 42461),

Gene: Butters_59 Start: 37429, Stop: 37563, Start Num: 62
Candidate Starts for Butters_59:
(39, 37315), (40, 37324), (48, 37366), (51, 37384), (Start: 62 @37429 has 2 MA's), (72, 37480), (74, 37552),

Gene: CactusJack_62 Start: 41278, Stop: 41412, Start Num: 68
Candidate Starts for CactusJack_62:
(38, 41143), (41, 41167), (Start: 63 @41254 has 2 MA's), (Start: 65 @41266 has 3 MA's), (Start: 68 @41278 has 114 MA's), (72, 41329),

Gene: Camster_62 Start: 39977, Stop: 40111, Start Num: 68
Candidate Starts for Camster_62:
(38, 39842), (41, 39866), (Start: 63 @39953 has 2 MA's), (Start: 65 @39965 has 3 MA's), (Start: 68 @39977 has 114 MA's), (72, 40028),

Gene: Carcharodon_63 Start: 39343, Stop: 39504, Start Num: 59
Candidate Starts for Carcharodon_63:
(35, 39214), (36, 39223), (Start: 59 @39343 has 37 MA's), (72, 39394), (77, 39487),

Gene: Charlie_60 Start: 38669, Stop: 38830, Start Num: 59
Candidate Starts for Charlie_60:
(35, 38540), (36, 38549), (Start: 59 @38669 has 37 MA's), (72, 38720), (77, 38813),

Gene: Che9c_71 Start: 50371, Stop: 50505, Start Num: 68
Candidate Starts for Che9c_71:
(Start: 68 @50371 has 114 MA's), (72, 50422),

Gene: Chewbacca_66 Start: 39238, Stop: 39399, Start Num: 59
Candidate Starts for Chewbacca_66:
(35, 39109), (36, 39118), (Start: 59 @39238 has 37 MA's), (72, 39289), (77, 39382),

Gene: ChickenDinner_84 Start: 50386, Stop: 50526, Start Num: 59
Candidate Starts for ChickenDinner_84:
(35, 50257), (36, 50266), (Start: 59 @50386 has 37 MA's), (71, 50428),

Gene: Chubbello_60 Start: 39283, Stop: 39417, Start Num: 67
Candidate Starts for Chubbello_60:
(52, 39226), (58, 39259), (67, 39283),

Gene: Corium_70 Start: 47202, Stop: 47336, Start Num: 68
Candidate Starts for Corium_70:
(31, 47004), (41, 47082), (45, 47103), (Start: 68 @47202 has 114 MA's), (72, 47253),

Gene: Cubone_66 Start: 39965, Stop: 40126, Start Num: 59
Candidate Starts for Cubone_66:
(37, 39854), (Start: 43 @39896 has 2 MA's), (50, 39926), (53, 39932), (Start: 59 @39965 has 37 MA's), (72, 40016), (77, 40109),

Gene: DLane_71 Start: 46327, Stop: 46461, Start Num: 68
Candidate Starts for DLane_71:
(41, 46207), (45, 46228), (Start: 68 @46327 has 114 MA's), (72, 46378),

Gene: DaddyRickover_78 Start: 48359, Stop: 48493, Start Num: 68

Candidate Starts for DaddyRickover_78:
(12, 47939), (13, 47972), (55, 48302), (Start: 61 @48335 has 1 MA's), (Start: 68 @48359 has 114 MA's), (72, 48410), (73, 48425),

Gene: Daenerys_74 Start: 47956, Stop: 48090, Start Num: 68
Candidate Starts for Daenerys_74:
(12, 47536), (13, 47569), (55, 47899), (Start: 61 @47932 has 1 MA's), (Start: 68 @47956 has 114 MA's), (69, 47977), (72, 48007), (73, 48022),

Gene: DeadP_75 Start: 45575, Stop: 45709, Start Num: 68
Candidate Starts for DeadP_75:
(47, 45479), (58, 45536), (Start: 68 @45575 has 114 MA's), (72, 45626), (73, 45641),

Gene: Deb65_68 Start: 45678, Stop: 45812, Start Num: 68
Candidate Starts for Deb65_68:
(3, 45012), (4, 45051), (6, 45105), (8, 45132), (10, 45192), (12, 45258), (13, 45291), (55, 45621), (Start: 61 @45654 has 1 MA's), (Start: 68 @45678 has 114 MA's), (69, 45699), (72, 45729), (73, 45744),

Gene: DillTech15_75 Start: 45272, Stop: 45406, Start Num: 68
Candidate Starts for DillTech15_75:
(12, 44852), (13, 44885), (55, 45215), (Start: 61 @45248 has 1 MA's), (Start: 68 @45272 has 114 MA's), (72, 45323),

Gene: DocMcStuffins_81 Start: 52016, Stop: 52156, Start Num: 59
Candidate Starts for DocMcStuffins_81:
(35, 51887), (36, 51896), (Start: 59 @52016 has 37 MA's), (71, 52058),

Gene: Donkeykong_76 Start: 47467, Stop: 47601, Start Num: 68
Candidate Starts for Donkeykong_76:
(Start: 68 @47467 has 114 MA's), (72, 47518),

Gene: Donovan_61 Start: 40222, Stop: 40356, Start Num: 68
Candidate Starts for Donovan_61:
(31, 40024), (41, 40102), (45, 40123), (Start: 68 @40222 has 114 MA's),

Gene: Doomphist_78 Start: 47769, Stop: 47903, Start Num: 68
Candidate Starts for Doomphist_78:
(12, 47349), (13, 47382), (55, 47712), (Start: 61 @47745 has 1 MA's), (Start: 68 @47769 has 114 MA's), (69, 47790), (72, 47820), (73, 47835),

Gene: Doomslug_90 Start: 49187, Stop: 49321, Start Num: 68
Candidate Starts for Doomslug_90:
(31, 48989), (41, 49067), (45, 49088), (Start: 68 @49187 has 114 MA's), (72, 49238), (73, 49253),

Gene: Dorothy_76 Start: 48407, Stop: 48541, Start Num: 68
Candidate Starts for Dorothy_76:
(31, 48212), (41, 48290), (Start: 68 @48407 has 114 MA's), (72, 48458), (73, 48473),

Gene: Duplicity_61 Start: 38600, Stop: 38761, Start Num: 59
Candidate Starts for Duplicity_61:
(35, 38471), (36, 38480), (Start: 59 @38600 has 37 MA's), (72, 38651), (77, 38744),

Gene: Dynamo_61 Start: 39550, Stop: 39684, Start Num: 68
Candidate Starts for Dynamo_61:
(38, 39415), (41, 39439), (Start: 63 @39526 has 2 MA's), (Start: 65 @39538 has 3 MA's), (Start: 68 @39550 has 114 MA's), (72, 39601),

Gene: EGUnicorn_58 Start: 37666, Stop: 37827, Start Num: 59
Candidate Starts for EGUnicorn_58:
(35, 37537), (36, 37546), (Start: 59 @37666 has 37 MA's), (72, 37717), (77, 37810),

Gene: EleanorGeorge_76 Start: 47362, Stop: 47496, Start Num: 68
Candidate Starts for EleanorGeorge_76:
(Start: 68 @47362 has 114 MA's), (71, 47404), (72, 47413), (73, 47428),

Gene: Empress_73 Start: 46580, Stop: 46714, Start Num: 68
Candidate Starts for Empress_73:
(12, 46160), (13, 46193), (55, 46523), (Start: 61 @46556 has 1 MA's), (Start: 68 @46580 has 114 MA's), (69, 46601), (72, 46631), (73, 46646),

Gene: Fastidio_68 Start: 42078, Stop: 42212, Start Num: 68
Candidate Starts for Fastidio_68:
(12, 41658), (13, 41691), (55, 42021), (Start: 61 @42054 has 1 MA's), (Start: 68 @42078 has 114 MA's), (69, 42099), (72, 42129),

Gene: Filuzino_75 Start: 48306, Stop: 48440, Start Num: 68
Candidate Starts for Filuzino_75:
(31, 48108), (41, 48186), (45, 48207), (Start: 68 @48306 has 114 MA's), (72, 48357), (76, 48435),

Gene: FirstPlacePfu_65 Start: 39143, Stop: 39277, Start Num: 59
Candidate Starts for FirstPlacePfu_65:
(35, 39014), (36, 39023), (Start: 59 @39143 has 37 MA's), (72, 39194),

Gene: Flathead_73 Start: 46020, Stop: 46154, Start Num: 68
Candidate Starts for Flathead_73:
(55, 45960), (Start: 68 @46020 has 114 MA's), (72, 46071), (73, 46086),

Gene: Florinda_86 Start: 49222, Stop: 49356, Start Num: 68
Candidate Starts for Florinda_86:
(41, 49102), (45, 49123), (Start: 68 @49222 has 114 MA's), (72, 49273), (73, 49288),

Gene: Frankie_81 Start: 47698, Stop: 47826, Start Num: 59
Candidate Starts for Frankie_81:
(35, 47572), (36, 47581), (37, 47587), (Start: 43 @47629 has 2 MA's), (50, 47659), (53, 47665), (Start: 59 @47698 has 37 MA's),

Gene: Fulbright_61 Start: 38037, Stop: 38198, Start Num: 59
Candidate Starts for Fulbright_61:
(35, 37908), (36, 37917), (Start: 59 @38037 has 37 MA's), (72, 38088), (77, 38181),

Gene: GaloreK_62 Start: 40602, Stop: 40736, Start Num: 68
Candidate Starts for GaloreK_62:
(41, 40482), (Start: 68 @40602 has 114 MA's), (72, 40653),

Gene: Gavriela_61 Start: 40980, Stop: 41105, Start Num: 68

Candidate Starts for Gavriela_61:
(1, 40242), (2, 40311), (5, 40359), (7, 40431), (8, 40437), (9, 40455), (11, 40506), (38, 40845), (41, 40869), (Start: 63 @40956 has 2 MA's), (Start: 65 @40968 has 3 MA's), (Start: 68 @40980 has 114 MA's), (72, 41031),

Gene: Geralt_68 Start: 45676, Stop: 45810, Start Num: 68
Candidate Starts for Geralt_68:
(12, 45256), (13, 45289), (55, 45619), (Start: 61 @45652 has 1 MA's), (Start: 68 @45676 has 114 MA's), (69, 45697), (72, 45727), (73, 45742),

Gene: Gex_64 Start: 39359, Stop: 39520, Start Num: 59
Candidate Starts for Gex_64:
(35, 39230), (36, 39239), (Start: 59 @39359 has 37 MA's), (72, 39410), (77, 39503),

Gene: Girafales_83 Start: 48827, Stop: 48961, Start Num: 68
Candidate Starts for Girafales_83:
(41, 48707), (45, 48728), (Start: 68 @48827 has 114 MA's), (72, 48878), (73, 48893),

Gene: Glaske_61 Start: 41278, Stop: 41412, Start Num: 68
Candidate Starts for Glaske_61:
(38, 41143), (41, 41167), (Start: 63 @41254 has 2 MA's), (Start: 65 @41266 has 3 MA's), (Start: 68 @41278 has 114 MA's), (72, 41329),

Gene: GreaseLightnin_66 Start: 41919, Stop: 42065, Start Num: 65
Candidate Starts for GreaseLightnin_66:
(38, 41796), (41, 41820), (Start: 63 @41907 has 2 MA's), (Start: 65 @41919 has 3 MA's), (Start: 68 @41931 has 114 MA's), (72, 41982),

Gene: HC_58 Start: 38076, Stop: 38210, Start Num: 68
Candidate Starts for HC_58:
(47, 37980), (58, 38037), (Start: 68 @38076 has 114 MA's),

Gene: HUHilltop_64 Start: 39773, Stop: 39907, Start Num: 68
Candidate Starts for HUHilltop_64:
(38, 39638), (41, 39662), (Start: 63 @39749 has 2 MA's), (Start: 65 @39761 has 3 MA's), (Start: 68 @39773 has 114 MA's), (72, 39824),

Gene: Hamulus_74 Start: 46705, Stop: 46839, Start Num: 68
Candidate Starts for Hamulus_74:
(Start: 61 @46681 has 1 MA's), (Start: 68 @46705 has 114 MA's), (72, 46756), (73, 46771),

Gene: Hegedechwinu_74 Start: 44915, Stop: 45049, Start Num: 68
Candidate Starts for Hegedechwinu_74:
(41, 44795), (45, 44816), (Start: 68 @44915 has 114 MA's),

Gene: Hlubikazi_69 Start: 44290, Stop: 44424, Start Num: 68
Candidate Starts for Hlubikazi_69:
(56, 44236), (Start: 68 @44290 has 114 MA's), (72, 44341), (73, 44356),

Gene: IMpilo_64 Start: 42435, Stop: 42569, Start Num: 68
Candidate Starts for IMpilo_64:
(Start: 61 @42411 has 1 MA's), (Start: 68 @42435 has 114 MA's), (72, 42486), (73, 42501),

Gene: Impisi_61 Start: 37721, Stop: 37858, Start Num: 64
Candidate Starts for Impisi_61:
(38, 37601), (40, 37613), (48, 37655), (51, 37673), (53, 37679), (64, 37721), (71, 37763), (72, 37772), (75, 37847),

Gene: Inventum_73 Start: 46592, Stop: 46726, Start Num: 68
Candidate Starts for Inventum_73:
(12, 46172), (13, 46205), (55, 46535), (Start: 61 @46568 has 1 MA's), (Start: 68 @46592 has 114 MA's), (69, 46613), (72, 46643), (73, 46658),

Gene: Island3_63 Start: 40659, Stop: 40793, Start Num: 68
Candidate Starts for Island3_63:
(Start: 68 @40659 has 114 MA's), (72, 40710),

Gene: JalFarm20_82 Start: 47370, Stop: 47504, Start Num: 68
Candidate Starts for JalFarm20_82:
(47, 47274), (58, 47331), (Start: 68 @47370 has 114 MA's), (72, 47421), (73, 47436),

Gene: Jebeks_62 Start: 39070, Stop: 39204, Start Num: 68
Candidate Starts for Jebeks_62:
(38, 38935), (41, 38959), (Start: 63 @39046 has 2 MA's), (Start: 65 @39058 has 3 MA's), (Start: 68 @39070 has 114 MA's), (72, 39121),

Gene: JoeyJr_75 Start: 47581, Stop: 47715, Start Num: 68
Candidate Starts for JoeyJr_75:
(12, 47161), (13, 47194), (55, 47524), (Start: 61 @47557 has 1 MA's), (Start: 68 @47581 has 114 MA's), (69, 47602), (72, 47632), (73, 47647),

Gene: Journey_56 Start: 37628, Stop: 37762, Start Num: 68
Candidate Starts for Journey_56:
(25, 37364), (32, 37433), (33, 37448), (Start: 68 @37628 has 114 MA's),

Gene: Juice456_70 Start: 45326, Stop: 45460, Start Num: 68
Candidate Starts for Juice456_70:
(47, 45230), (58, 45287), (Start: 68 @45326 has 114 MA's), (72, 45377), (73, 45392),

Gene: Jung_62 Start: 40067, Stop: 40207, Start Num: 68
Candidate Starts for Jung_62:
(15, 39704), (18, 39716), (21, 39764), (22, 39767), (34, 39899), (58, 40028), (66, 40055), (Start: 68 @40067 has 114 MA's), (72, 40118),

Gene: Juniormint_59 Start: 38526, Stop: 38660, Start Num: 68
Candidate Starts for Juniormint_59:
(14, 38166), (16, 38175), (19, 38202), (38, 38391), (41, 38415), (Start: 63 @38502 has 2 MA's), (Start: 65 @38514 has 3 MA's), (Start: 68 @38526 has 114 MA's), (72, 38577),

Gene: Kari_61 Start: 40045, Stop: 40179, Start Num: 68
Candidate Starts for Kari_61:
(31, 39847), (41, 39925), (45, 39946), (Start: 68 @40045 has 114 MA's),

Gene: Kevin1_61 Start: 37537, Stop: 37671, Start Num: 60
Candidate Starts for Kevin1_61:

(39, 37435), (40, 37444), (Start: 43 @37471 has 2 MA's), (Start: 60 @37537 has 3 MA's), (72, 37588), (74, 37660),

Gene: KilKor_62 Start: 41971, Stop: 42105, Start Num: 68
Candidate Starts for KilKor_62:
(38, 41836), (41, 41860), (Start: 63 @41947 has 2 MA's), (Start: 65 @41959 has 3 MA's), (Start: 68 @41971 has 114 MA's), (72, 42022),

Gene: KingJulian_76 Start: 47202, Stop: 47336, Start Num: 68
Candidate Starts for KingJulian_76:
(31, 47004), (41, 47082), (45, 47103), (Start: 68 @47202 has 114 MA's), (72, 47253),

Gene: KingMidas_74 Start: 46995, Stop: 47129, Start Num: 68
Candidate Starts for KingMidas_74:
(12, 46575), (13, 46608), (55, 46938), (Start: 61 @46971 has 1 MA's), (Start: 68 @46995 has 114 MA's), (69, 47016), (72, 47046), (73, 47061),

Gene: Kingsley_77 Start: 48832, Stop: 48966, Start Num: 68
Candidate Starts for Kingsley_77:
(20, 48508), (23, 48532), (24, 48538), (29, 48592), (41, 48712), (Start: 68 @48832 has 114 MA's), (72, 48883), (73, 48898),

Gene: KristaRAM_72 Start: 45695, Stop: 45829, Start Num: 68
Candidate Starts for KristaRAM_72:
(47, 45599), (58, 45656), (Start: 68 @45695 has 114 MA's), (72, 45746), (73, 45761),

Gene: Ksquared_65 Start: 42287, Stop: 42421, Start Num: 68
Candidate Starts for Ksquared_65:
(38, 42152), (41, 42176), (Start: 63 @42263 has 2 MA's), (Start: 65 @42275 has 3 MA's), (Start: 68 @42287 has 114 MA's), (72, 42338),

Gene: Leperchaun_73 Start: 46815, Stop: 46949, Start Num: 68
Candidate Starts for Leperchaun_73:
(12, 46395), (13, 46428), (55, 46758), (Start: 61 @46791 has 1 MA's), (Start: 68 @46815 has 114 MA's), (69, 46836), (72, 46866), (73, 46881),

Gene: LittleShirley_74 Start: 45751, Stop: 45885, Start Num: 68
Candidate Starts for LittleShirley_74:
(Start: 61 @45727 has 1 MA's), (Start: 68 @45751 has 114 MA's), (72, 45802), (73, 45817),

Gene: LordVader_77 Start: 46612, Stop: 46743, Start Num: 59
Candidate Starts for LordVader_77:
(35, 46483), (36, 46492), (Start: 59 @46612 has 37 MA's), (71, 46654),

Gene: LunaStella_72 Start: 45804, Stop: 46013, Start Num: 43
Candidate Starts for LunaStella_72:
(42, 45795), (Start: 43 @45804 has 2 MA's), (49, 45831), (Start: 60 @45879 has 3 MA's), (72, 45930),

Gene: Magsby_62 Start: 39305, Stop: 39466, Start Num: 59
Candidate Starts for Magsby_62:
(35, 39176), (36, 39185), (Start: 59 @39305 has 37 MA's), (72, 39356), (77, 39449),

Gene: Majeke_64 Start: 40672, Stop: 40806, Start Num: 68

Candidate Starts for Majeke_64:
(31, 40474), (41, 40552), (Start: 68 @40672 has 114 MA's),

Gene: Malithi_61 Start: 39664, Stop: 39822, Start Num: 63
Candidate Starts for Malithi_61:
(38, 39553), (41, 39577), (Start: 63 @39664 has 2 MA's), (Start: 65 @39676 has 3 MA's), (Start: 68 @39688 has 114 MA's), (72, 39739),

Gene: Mandlovu_69 Start: 44232, Stop: 44366, Start Num: 68
Candidate Starts for Mandlovu_69:
(56, 44178), (Start: 68 @44232 has 114 MA's), (72, 44283), (73, 44298),

Gene: Mangethe_64 Start: 40672, Stop: 40806, Start Num: 68
Candidate Starts for Mangethe_64:
(31, 40474), (41, 40552), (Start: 68 @40672 has 114 MA's),

Gene: Medindi_74 Start: 46132, Stop: 46266, Start Num: 68
Candidate Starts for Medindi_74:
(31, 45934), (41, 46012), (45, 46033), (Start: 68 @46132 has 114 MA's), (72, 46183), (73, 46198),

Gene: Megiddo_60 Start: 41056, Stop: 41202, Start Num: 68
Candidate Starts for Megiddo_60:
(17, 40711), (30, 40834), (Start: 68 @41056 has 114 MA's), (72, 41107),

Gene: Melville_68 Start: 38914, Stop: 39075, Start Num: 59
Candidate Starts for Melville_68:
(35, 38785), (36, 38794), (Start: 59 @38914 has 37 MA's), (72, 38965), (77, 39058),

Gene: MichelleMyBell_60 Start: 37388, Stop: 37522, Start Num: 68
Candidate Starts for MichelleMyBell_60:
(Start: 46 @37295 has 1 MA's), (52, 37322), (Start: 54 @37328 has 1 MA's), (Start: 68 @37388 has 114 MA's),

Gene: MilanaBonita_67 Start: 45011, Stop: 45145, Start Num: 68
Candidate Starts for MilanaBonita_67:
(31, 44813), (41, 44891), (Start: 68 @45011 has 114 MA's), (72, 45062), (73, 45077),

Gene: Minnie_71 Start: 48191, Stop: 48325, Start Num: 68
Candidate Starts for Minnie_71:
(56, 48137), (Start: 68 @48191 has 114 MA's), (72, 48242), (73, 48257),

Gene: Misha28_83 Start: 51321, Stop: 51461, Start Num: 59
Candidate Starts for Misha28_83:
(37, 51210), (Start: 43 @51252 has 2 MA's), (50, 51282), (53, 51288), (Start: 59 @51321 has 37 MA's), (71, 51363),

Gene: Ms6_72 Start: 42574, Stop: 42708, Start Num: 68
Candidate Starts for Ms6_72:
(45, 42475), (Start: 68 @42574 has 114 MA's), (72, 42625), (73, 42640),

Gene: MulchSalad_78 Start: 48362, Stop: 48490, Start Num: 59
Candidate Starts for MulchSalad_78:
(35, 48233), (36, 48242), (Start: 59 @48362 has 37 MA's),

Gene: Nazo_62 Start: 41086, Stop: 41238, Start Num: 63
Candidate Starts for Nazo_62:
(38, 40975), (41, 40999), (Start: 63 @41086 has 2 MA's), (Start: 65 @41098 has 3 MA's), (Start: 68 @41110 has 114 MA's), (70, 41134), (72, 41161),

Gene: Necropolis_59 Start: 39139, Stop: 39273, Start Num: 68
Candidate Starts for Necropolis_59:
(38, 39004), (41, 39028), (Start: 63 @39115 has 2 MA's), (Start: 65 @39127 has 3 MA's), (Start: 68 @39139 has 114 MA's), (72, 39190),

Gene: Nimbo_67 Start: 45679, Stop: 45813, Start Num: 68
Candidate Starts for Nimbo_67:
(12, 45259), (13, 45292), (55, 45622), (Start: 61 @45655 has 1 MA's), (Start: 68 @45679 has 114 MA's), (69, 45700), (72, 45730), (73, 45745),

Gene: Ogopogo_79 Start: 46196, Stop: 46330, Start Num: 68
Candidate Starts for Ogopogo_79:
(12, 45776), (13, 45809), (55, 46139), (Start: 61 @46172 has 1 MA's), (Start: 68 @46196 has 114 MA's), (69, 46217), (72, 46247), (73, 46262),

Gene: OldBen_72 Start: 47071, Stop: 47205, Start Num: 68
Candidate Starts for OldBen_72:
(12, 46651), (13, 46684), (55, 47014), (Start: 61 @47047 has 1 MA's), (Start: 68 @47071 has 114 MA's), (69, 47092), (72, 47122), (73, 47137),

Gene: Ovechkin_76 Start: 46664, Stop: 46873, Start Num: 46
Candidate Starts for Ovechkin_76:
(44, 46655), (Start: 46 @46664 has 1 MA's), (52, 46691), (Start: 68 @46739 has 114 MA's),

Gene: PHappiness_75 Start: 47900, Stop: 48034, Start Num: 68
Candidate Starts for PHappiness_75:
(12, 47480), (13, 47513), (55, 47843), (Start: 61 @47876 has 1 MA's), (Start: 68 @47900 has 114 MA's), (69, 47921), (72, 47951), (73, 47966),

Gene: PaintedDog_65 Start: 42363, Stop: 42497, Start Num: 68
Candidate Starts for PaintedDog_65:
(Start: 68 @42363 has 114 MA's), (70, 42387), (72, 42414),

Gene: Panchino_56 Start: 38919, Stop: 39056, Start Num: 68
Candidate Starts for Panchino_56:
(14, 38559), (16, 38568), (19, 38595), (38, 38784), (41, 38808), (Start: 63 @38895 has 2 MA's), (Start: 65 @38907 has 3 MA's), (Start: 68 @38919 has 114 MA's), (72, 38970), (75, 39045),

Gene: Parmesanjohn_63 Start: 39363, Stop: 39524, Start Num: 59
Candidate Starts for Parmesanjohn_63:
(35, 39234), (36, 39243), (Start: 59 @39363 has 37 MA's), (72, 39414), (77, 39507),

Gene: PatoPoderoso_70 Start: 47202, Stop: 47336, Start Num: 68
Candidate Starts for PatoPoderoso_70:
(31, 47004), (41, 47082), (45, 47103), (Start: 68 @47202 has 114 MA's), (72, 47253),

Gene: PeanutPie_66 Start: 41642, Stop: 41776, Start Num: 68

Candidate Starts for PeanutPie_66:
(38, 41507), (41, 41531), (Start: 63 @41618 has 2 MA's), (Start: 65 @41630 has 3 MA's), (Start: 68 @41642 has 114 MA's), (72, 41693),

Gene: Phalconet_71 Start: 45548, Stop: 45682, Start Num: 68
Candidate Starts for Phalconet_71:
(41, 45428), (Start: 68 @45548 has 114 MA's), (72, 45599), (73, 45614),

Gene: Phalm_62 Start: 41278, Stop: 41403, Start Num: 68
Candidate Starts for Phalm_62:
(38, 41143), (41, 41167), (Start: 63 @41254 has 2 MA's), (Start: 65 @41266 has 3 MA's), (Start: 68 @41278 has 114 MA's), (72, 41329),

Gene: Phanphagia_72 Start: 46628, Stop: 46762, Start Num: 68
Candidate Starts for Phanphagia_72:
(31, 46430), (41, 46508), (45, 46529), (Start: 68 @46628 has 114 MA's), (72, 46679), (73, 46694),

Gene: Phayonce_64 Start: 43136, Stop: 43282, Start Num: 68
Candidate Starts for Phayonce_64:
(57, 43085), (Start: 68 @43136 has 114 MA's), (70, 43160), (72, 43187),

Gene: Phegasus_64 Start: 40639, Stop: 40773, Start Num: 68
Candidate Starts for Phegasus_64:
(31, 40441), (41, 40519), (Start: 68 @40639 has 114 MA's),

Gene: PhesterPhotato_77 Start: 46716, Stop: 46850, Start Num: 68
Candidate Starts for PhesterPhotato_77:
(Start: 61 @46692 has 1 MA's), (Start: 68 @46716 has 114 MA's), (72, 46767), (73, 46782),

Gene: Philonius_63 Start: 39528, Stop: 39689, Start Num: 59
Candidate Starts for Philonius_63:
(35, 39399), (36, 39408), (Start: 59 @39528 has 37 MA's), (72, 39579), (77, 39672),

Gene: Phineas_62 Start: 40096, Stop: 40242, Start Num: 65
Candidate Starts for Phineas_62:
(38, 39973), (41, 39997), (Start: 63 @40084 has 2 MA's), (Start: 65 @40096 has 3 MA's), (Start: 68 @40108 has 114 MA's), (72, 40159),

Gene: Phloss_61 Start: 38770, Stop: 38931, Start Num: 59
Candidate Starts for Phloss_61:
(35, 38641), (36, 38650), (Start: 59 @38770 has 37 MA's), (72, 38821), (77, 38914),

Gene: Phrann_59 Start: 40673, Stop: 40810, Start Num: 68
Candidate Starts for Phrann_59:
(56, 40619), (Start: 68 @40673 has 114 MA's), (72, 40724), (75, 40799),

Gene: Piper2020_87 Start: 52127, Stop: 52279, Start Num: 59
Candidate Starts for Piper2020_87:
(35, 51998), (36, 52007), (Start: 59 @52127 has 37 MA's),

Gene: Pipsqueaks_64 Start: 39341, Stop: 39502, Start Num: 59
Candidate Starts for Pipsqueaks_64:
(35, 39212), (36, 39221), (Start: 59 @39341 has 37 MA's), (72, 39392), (77, 39485),

Gene: Poenanya_78 Start: 47769, Stop: 47903, Start Num: 68
Candidate Starts for Poenanya_78:
(12, 47349), (13, 47382), (55, 47712), (Start: 61 @47745 has 1 MA's), (Start: 68 @47769 has 114 MA's), (69, 47790), (72, 47820), (73, 47835),

Gene: Polka14_79 Start: 48559, Stop: 48693, Start Num: 68
Candidate Starts for Polka14_79:
(12, 48139), (13, 48172), (55, 48502), (Start: 61 @48535 has 1 MA's), (Start: 68 @48559 has 114 MA's), (69, 48580), (72, 48610), (73, 48625),

Gene: Polkaroo_63 Start: 41848, Stop: 41988, Start Num: 68
Candidate Starts for Polkaroo_63:
(Start: 61 @41824 has 1 MA's), (Start: 68 @41848 has 114 MA's), (72, 41899),

Gene: PopTart_64 Start: 43414, Stop: 43548, Start Num: 68
Candidate Starts for PopTart_64:
(Start: 68 @43414 has 114 MA's), (72, 43465), (73, 43480),

Gene: Purky_74 Start: 45740, Stop: 45874, Start Num: 68
Candidate Starts for Purky_74:
(41, 45620), (Start: 63 @45716 has 2 MA's), (Start: 65 @45728 has 3 MA's), (Start: 68 @45740 has 114 MA's), (72, 45791),

Gene: Pygmy_65 Start: 41572, Stop: 41706, Start Num: 68
Candidate Starts for Pygmy_65:
(38, 41437), (41, 41461), (Start: 63 @41548 has 2 MA's), (Start: 65 @41560 has 3 MA's), (Start: 68 @41572 has 114 MA's), (72, 41623),

Gene: QueenHazel_58 Start: 39693, Stop: 39827, Start Num: 68
Candidate Starts for QueenHazel_58:
(47, 39597), (58, 39654), (Start: 68 @39693 has 114 MA's), (72, 39744), (76, 39822),

Gene: Quico_83 Start: 49042, Stop: 49176, Start Num: 68
Candidate Starts for Quico_83:
(41, 48922), (45, 48943), (Start: 68 @49042 has 114 MA's), (72, 49093), (73, 49108),

Gene: Rebel_56 Start: 35847, Stop: 35981, Start Num: 60
Candidate Starts for Rebel_56:
(40, 35754), (Start: 43 @35781 has 2 MA's), (45, 35787), (Start: 60 @35847 has 3 MA's), (72, 35898), (74, 35970),

Gene: RedBird_76 Start: 48274, Stop: 48408, Start Num: 68
Candidate Starts for RedBird_76:
(31, 48079), (41, 48157), (Start: 68 @48274 has 114 MA's), (72, 48325), (73, 48340),

Gene: RitaG_75 Start: 47678, Stop: 47836, Start Num: 61
Candidate Starts for RitaG_75:
(12, 47282), (13, 47315), (55, 47645), (Start: 61 @47678 has 1 MA's), (Start: 68 @47702 has 114 MA's), (69, 47723), (72, 47753), (73, 47768),

Gene: Rubeelu_59 Start: 37429, Stop: 37563, Start Num: 62
Candidate Starts for Rubeelu_59:

(39, 37315), (40, 37324), (48, 37366), (51, 37384), (Start: 62 @37429 has 2 MA's), (72, 37480), (74, 37552),

Gene: SG4_71 Start: 45477, Stop: 45611, Start Num: 68
Candidate Starts for SG4_71:
(31, 45279), (41, 45357), (Start: 68 @45477 has 114 MA's), (72, 45528), (73, 45543),

Gene: Sandalphon_69 Start: 46176, Stop: 46310, Start Num: 68
Candidate Starts for Sandalphon_69:
(56, 46122), (Start: 68 @46176 has 114 MA's), (72, 46227), (73, 46242),

Gene: Sassafras_76 Start: 46591, Stop: 46725, Start Num: 68
Candidate Starts for Sassafras_76:
(12, 46171), (13, 46204), (55, 46534), (Start: 61 @46567 has 1 MA's), (Start: 68 @46591 has 114 MA's), (69, 46612), (72, 46642), (73, 46657),

Gene: SassyB_64 Start: 43414, Stop: 43548, Start Num: 68
Candidate Starts for SassyB_64:
(Start: 68 @43414 has 114 MA's), (72, 43465), (73, 43480),

Gene: Sbash_75 Start: 48069, Stop: 48203, Start Num: 68
Candidate Starts for Sbash_75:
(Start: 68 @48069 has 114 MA's), (72, 48120),

Gene: Schnauzer_64 Start: 39363, Stop: 39524, Start Num: 59
Candidate Starts for Schnauzer_64:
(35, 39234), (36, 39243), (Start: 59 @39363 has 37 MA's), (72, 39414), (77, 39507),

Gene: Scitech_58 Start: 38766, Stop: 38927, Start Num: 59
Candidate Starts for Scitech_58:
(35, 38637), (36, 38646), (Start: 59 @38766 has 37 MA's), (72, 38817), (77, 38910),

Gene: Scottish_73 Start: 46250, Stop: 46384, Start Num: 68
Candidate Starts for Scottish_73:
(12, 45830), (13, 45863), (55, 46193), (Start: 61 @46226 has 1 MA's), (Start: 68 @46250 has 114 MA's), (69, 46271), (72, 46301), (73, 46316),

Gene: Seagreen_75 Start: 47524, Stop: 47658, Start Num: 68
Candidate Starts for Seagreen_75:
(31, 47326), (41, 47404), (45, 47425), (Start: 68 @47524 has 114 MA's), (72, 47575), (73, 47590),

Gene: Shauna1_73 Start: 46878, Stop: 47012, Start Num: 68
Candidate Starts for Shauna1_73:
(31, 46680), (41, 46758), (45, 46779), (Start: 68 @46878 has 114 MA's), (72, 46929), (73, 46944),

Gene: Shipwreck_64 Start: 41547, Stop: 41681, Start Num: 68
Candidate Starts for Shipwreck_64:
(38, 41412), (41, 41436), (Start: 63 @41523 has 2 MA's), (Start: 65 @41535 has 3 MA's), (Start: 68 @41547 has 114 MA's), (72, 41598),

Gene: Shweta_58 Start: 38359, Stop: 38496, Start Num: 60
Candidate Starts for Shweta_58:

(42, 38275), (Start: 43 @38284 has 2 MA's), (49, 38311), (50, 38317), (Start: 60 @38359 has 3 MA's), (72, 38410), (75, 38485),

Gene: SiSi_70 Start: 45708, Stop: 45842, Start Num: 68
Candidate Starts for SiSi_70:
(Start: 68 @45708 has 114 MA's), (72, 45759), (73, 45774),

Gene: Silvafighter_65 Start: 38906, Stop: 39067, Start Num: 59
Candidate Starts for Silvafighter_65:
(35, 38777), (36, 38786), (Start: 59 @38906 has 37 MA's), (72, 38957), (77, 39050),

Gene: Silvy_59 Start: 39996, Stop: 40157, Start Num: 59
Candidate Starts for Silvy_59:
(35, 39867), (36, 39876), (Start: 59 @39996 has 37 MA's), (72, 40047), (77, 40140),

Gene: SkinnyPete_60 Start: 39110, Stop: 39271, Start Num: 59
Candidate Starts for SkinnyPete_60:
(35, 38981), (36, 38990), (Start: 59 @39110 has 37 MA's), (72, 39161), (77, 39254),

Gene: Smurph_63 Start: 39363, Stop: 39524, Start Num: 59
Candidate Starts for Smurph_63:
(35, 39234), (36, 39243), (Start: 59 @39363 has 37 MA's), (72, 39414), (77, 39507),

Gene: Sonah_62 Start: 39244, Stop: 39378, Start Num: 68
Candidate Starts for Sonah_62:
(38, 39109), (41, 39133), (Start: 63 @39220 has 2 MA's), (Start: 65 @39232 has 3 MA's), (Start: 68 @39244 has 114 MA's), (72, 39295),

Gene: StAnnes_71 Start: 46866, Stop: 47000, Start Num: 68
Candidate Starts for StAnnes_71:
(41, 46746), (Start: 68 @46866 has 114 MA's), (72, 46917), (76, 46995),

Gene: StevieRay_66 Start: 42311, Stop: 42445, Start Num: 68
Candidate Starts for StevieRay_66:
(Start: 61 @42287 has 1 MA's), (Start: 68 @42311 has 114 MA's), (69, 42332), (72, 42362),

Gene: StressBall_61 Start: 40980, Stop: 41105, Start Num: 68
Candidate Starts for StressBall_61:
(1, 40242), (2, 40311), (5, 40359), (7, 40431), (8, 40437), (9, 40455), (11, 40506), (38, 40845), (41, 40869), (Start: 63 @40956 has 2 MA's), (Start: 65 @40968 has 3 MA's), (Start: 68 @40980 has 114 MA's), (72, 41031),

Gene: Strokeseat_69 Start: 44289, Stop: 44423, Start Num: 68
Candidate Starts for Strokeseat_69:
(56, 44235), (Start: 68 @44289 has 114 MA's), (72, 44340), (73, 44355),

Gene: Stuck_72 Start: 48313, Stop: 48447, Start Num: 68
Candidate Starts for Stuck_72:
(41, 48193), (Start: 63 @48289 has 2 MA's), (Start: 65 @48301 has 3 MA's), (Start: 68 @48313 has 114 MA's), (72, 48364),

Gene: TChen_74 Start: 47755, Stop: 47964, Start Num: 43
Candidate Starts for TChen_74:

(42, 47746), (Start: 43 @47755 has 2 MA's), (49, 47782), (Start: 60 @47830 has 3 MA's), (72, 47881),

Gene: Taj_80 Start: 48332, Stop: 48466, Start Num: 68
Candidate Starts for Taj_80:
(31, 48134), (41, 48212), (45, 48233), (Start: 68 @48332 has 114 MA's), (72, 48383), (73, 48398),

Gene: Tapioca_61 Start: 39880, Stop: 40041, Start Num: 59
Candidate Starts for Tapioca_61:
(35, 39751), (36, 39760), (Start: 59 @39880 has 37 MA's), (72, 39931), (77, 40024),

Gene: Techage_62 Start: 40112, Stop: 40246, Start Num: 68
Candidate Starts for Techage_62:
(31, 39914), (41, 39992), (Start: 68 @40112 has 114 MA's), (72, 40163),

Gene: Tessdabest_64 Start: 39497, Stop: 39658, Start Num: 59
Candidate Starts for Tessdabest_64:
(35, 39368), (36, 39377), (Start: 59 @39497 has 37 MA's), (72, 39548), (77, 39641),

Gene: Thespis_63 Start: 41077, Stop: 41211, Start Num: 68
Candidate Starts for Thespis_63:
(Start: 61 @41053 has 1 MA's), (Start: 68 @41077 has 114 MA's), (69, 41098), (72, 41128),

Gene: ThulaThula_68 Start: 44563, Stop: 44709, Start Num: 68
Candidate Starts for ThulaThula_68:
(57, 44512), (Start: 68 @44563 has 114 MA's), (70, 44587), (72, 44614),

Gene: TootsiePop_83 Start: 51321, Stop: 51461, Start Num: 59
Candidate Starts for TootsiePop_83:
(37, 51210), (Start: 43 @51252 has 2 MA's), (50, 51282), (53, 51288), (Start: 59 @51321 has 37 MA's), (71, 51363),

Gene: Tortellini_69 Start: 45507, Stop: 45668, Start Num: 59
Candidate Starts for Tortellini_69:
(37, 45396), (50, 45468), (53, 45474), (Start: 59 @45507 has 37 MA's), (71, 45549),

Gene: Tortoise12_63 Start: 38484, Stop: 38645, Start Num: 59
Candidate Starts for Tortoise12_63:
(35, 38355), (36, 38364), (Start: 59 @38484 has 37 MA's), (72, 38535), (77, 38628),

Gene: Vidya_60 Start: 39365, Stop: 39499, Start Num: 68
Candidate Starts for Vidya_60:
(38, 39230), (41, 39254), (Start: 63 @39341 has 2 MA's), (Start: 65 @39353 has 3 MA's), (Start: 68 @39365 has 114 MA's), (72, 39416),

Gene: Wee_79 Start: 48408, Stop: 48542, Start Num: 68
Candidate Starts for Wee_79:
(31, 48210), (41, 48288), (45, 48309), (Start: 68 @48408 has 114 MA's), (72, 48459), (73, 48474),

Gene: Willsammy_63 Start: 41455, Stop: 41589, Start Num: 68
Candidate Starts for Willsammy_63:
(38, 41320), (41, 41344), (Start: 63 @41431 has 2 MA's), (Start: 65 @41443 has 3 MA's), (Start: 68 @41455 has 114 MA's), (72, 41506),

Gene: Xavia_63 Start: 45540, Stop: 45674, Start Num: 68
Candidate Starts for Xavia_63:
(Start: 68 @45540 has 114 MA's), (72, 45591),

Gene: Xeno_60 Start: 38028, Stop: 38162, Start Num: 68
Candidate Starts for Xeno_60:
(41, 37908), (Start: 68 @38028 has 114 MA's),

Gene: Xerxes_63 Start: 39360, Stop: 39521, Start Num: 59
Candidate Starts for Xerxes_63:
(35, 39231), (36, 39240), (Start: 59 @39360 has 37 MA's), (72, 39411), (77, 39504),

Gene: Xula_57 Start: 39314, Stop: 39448, Start Num: 68
Candidate Starts for Xula_57:
(47, 39218), (58, 39275), (Start: 68 @39314 has 114 MA's), (72, 39365), (76, 39443),

Gene: Zilizebeth_67 Start: 40886, Stop: 41020, Start Num: 68
Candidate Starts for Zilizebeth_67:
(Start: 68 @40886 has 114 MA's), (72, 40937),