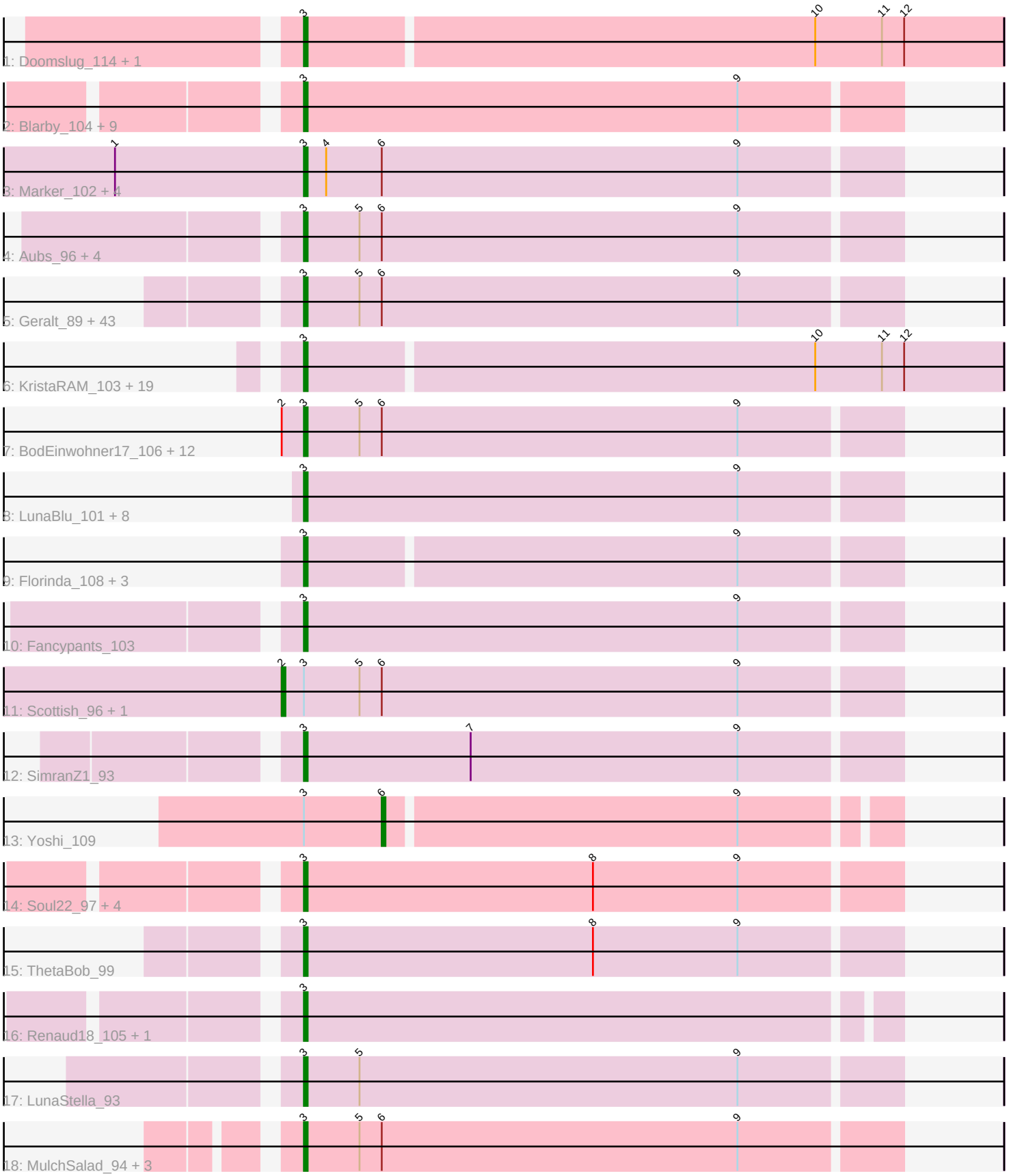
Pham 345502


1: Doomslug_114 + 1
2: Blarby_104 + 9
3: Marker_102 + 4
4: Aubs_96 + 4
5: Geralt_89 + 43
6: KristaRAM_103 + 19
7: BodEinwohner17_106 + 12
8: LunaBlu_101 + 8
9: Florinda_108 + 3
10: Fancypants_103
11: Scottish_96 + 1
12: SimranZ1_93
13: Yoshi_109
14: Soul22_97 + 4
15: ThetaBob_99
16: Renaud18_105 + 1
17: LunaStella_93
18: MulchSalad_94 + 3

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 345502 Report

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

Pham number 345502 has 130 members, 12 are drafts.

Phages represented in each track:
• Track 1 : Doomslug_114, Oksu_101
• Track 2 : Blarby_104, Cheesepuff_101, Zapner_103, Nitzel_90, Avani_102, Jabbawokkie_103, SG4_97, Cornie_93, ShroomBoi_94, SilverChicken_104
• Track 3 : Marker_102, Ruby_93, MisterCuddles_96, Clank_94, Girr_95
• Track 4 : Aubs_96, Krakatau_89, Leozinho_93, Spartacus_103, Karhdo_91
• Track 5 : Geralt_89, DotProduct_90, Drago_95, Stap_91, Veteran_87, Radiance_94, Spikelee_97, MulchExplorer_96, Madiba_95, BlueCrab_97, IbOuu_87, WillSterrel_94, Juice456_95, RockyHorror_100, Pacc40_92, Doug_93, GigiOuiOui_91, RitaG_95, Ramsey_101, DirtMcgirt_97, IrishSherpFalk_96, UncleRicky_96, Lorde_99, Deb65_89, SiSi_92, Lucia_96, PMC_95, Pollywog_98, Job42_97, Nimbo_88, Hades_93, Fastidio_100, VRedHorse_97, Kimberlium_98, OldBen_93, GUmbie_95, DaWorst_96, Cornucopia_96, Enby_100, Daenerys_94, PHappiness_96, Rockne_99, Mantra_94, QuickMath_97
• Track 6 : KristaRAM_103, Coco12_96, Phanphagia_100, Chuckly_92, Cerasum_94, Corium_94, Philus_99, Topiatin_98, Beanstalk_95, Kingsley_104, Hegedechwinu_103, Velveteen_93, BigPhil_92, Sarma624_98, Shauna1_98, PatoPoderoso_96, Fruitloop_94, Batiatus_95, Brookers_94, KingJulian_103
• Track 7 : BodEinwohner17_106, Inventum_94, Empress_96, KingMidas_96, Dorothy_97, Leperchaun_98, MadMen_101, Sassafras_98, RedBird_97, Poenanya_100, Polka14_100, JoeyJr_99, Doomphist_101
• Track 8 : LunaBlu_101, Galactic_98, Enzomatic_107, Polo2Bam_106, Royals2015_100, Mwanjiwa_98, NewHope4_102, Demsculpinboyz_110, SeaLumen_103
• Track 9 : Florinda_108, Girafales_105, Frankie_95, Quico_105
• Track 10 : Fancypants_103
• Track 11 : Scottish_96, DaddyRickover_98
• Track 12 : SimranZ1_93
• Track 13 : Yoshi_109
• Track 14 : Soul22_97, Che8_103, Phasih_93, Gandalph_96, Rita_97
• Track 15 : ThetaBob_99
• Track 16 : Renaud18_105, Che9d_106
• Track 17 : LunaStella_93
• Track 18 : MulchSalad_94, IMpilo_94, Mova_98, Estave1_104

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

The start number called the most often in the published annotations is 3, it was called in 115 of the 118 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Aubs_96, Avani_102, Batiatus_95, Beanstalk_95, BigPhil_92, Blarby_104, BlueCrab_97, BodEinwohner17_106, Brookers_94, Cerasum_94, Che8_103, Che9d_106, Cheesepuff_101, Chuckly_92, Clank_94, Coco12_96, Corium_94, Cornie_93, Cornucopia_96, DaWorst_96, Daenerys_94, Deb65_89, Demsculpinboyz_110, DirtMcgirt_97, Doomphist_101, Doomslug_114, Dorothy_97, DotProduct_90, Doug_93, Drago_95, Empress_96, Enby_100, Enzomatic_107, Estave1_104, Fancypants_103, Fastidio_100, Florinda_108, Frankie_95, Fruitloop_94, GUmbie_95, Galactic_98, Gandalph_96, Geralt_89, GigiOuiOui_91, Girafales_105, Girr_95, Hades_93, Hegedechwinu_103, IMpilo_94, IbOuu_87, Inventum_94, IrishSherpFalk_96, Jabbawokkie_103, Job42_97, JoeyJr_99, Juice456_95, Karhdo_91, Kimberlium_98, KingJulian_103, KingMidas_96, Kingsley_104, Krakatau_89, KristaRAM_103, Leozinho_93, Leperchaun_98, Lorde_99, Lucia_96, LunaBlu_101, LunaStella_93, MadMen_101, Madiba_95, Mantra_94, Marker_102, MisterCuddles_96, Mova_98, MulchExplorer_96, MulchSalad_94, Mwanjiwa_98, NewHope4_102, Nimbo_88, Nitzel_90, Oksu_101, OldBen_93, PHappiness_96, PMC_95, Pacc40_92, PatoPoderoso_96, Phanphagia_100, Phasih_93, Philus_99, Poenanya_100, Polka14_100, Pollywog_98, Polo2Bam_106, QuickMath_97, Quico_105, Radiance_94, Ramsey_101, RedBird_97, Renaud18_105, RitaG_95, Rita_97, Rockne_99, RockyHorror_100, Royals2015_100, Ruby_93, SG4_97, Sarma624_98, Sassafras_98, SeaLumen_103, Shauna1_98, ShroomBoi_94, SiSi_92, SilverChicken_104, SimranZ1_93, Soul22_97, Spartacus_103, Spikelee_97, Stap_91, ThetaBob_99, Topiatin_98, UncleRicky_96, VRedHorse_97, Velveteen_93, Veteran_87, WillSterrel_94, Zapner_103,

Genes that have the "Most Annotated" start but do not call it:
• DaddyRickover_98, Scottish_96, Yoshi_109,

Genes that do not have the "Most Annotated" start:
•

Summary by start number:

Start 2:
• Found in 15 of 130 (11.5%) of genes in pham
• Manual Annotations of this start: 2 of 118
• Called 13.3% of time when present
• Phage (with cluster) where this start called: DaddyRickover_98 (F1), Scottish_96 (F1),

Start 3:
• Found in 130 of 130 (100.0%) of genes in pham
• Manual Annotations of this start: 115 of 118
• Called 97.7% of time when present
• Phage (with cluster) where this start called: Aubs_96 (F1), Avani_102 (F2), Batiatus_95 (F1), Beanstalk_95 (F1), BigPhil_92 (F1), Blarby_104 (F), BlueCrab_97 (F1), BodEinwohner17_106 (F1), Brookers_94 (F1), Cerasum_94 (F1), Che8_103 (F1), Che9d_106 (F2), Cheesepuff_101 (F1), Chuckly_92 (F1), Clank_94 (F), Coco12_96 (F1), Corium_94 (F1), Cornie_93 (F5), Cornucopia_96 (F1), DaWorst_96

(F1), Daenerys_94 (F1), Deb65_89 (F1), Demsculpinboyz_110 (F2), DirtMcgirt_97 (F1), Doomphist_101 (F1), Doomslug_114 (F), Dorothy_97 (F1), DotProduct_90 (F1), Doug_93 (F1), Drago_95 (F1), Empress_96 (F1), Enby_100 (F1), Enzomatic_107 (F1), Estave1_104 (F1), Fancypants_103 (F1), Fastidio_100 (F1), Florinda_108 (F1), Frankie_95 (F1), Fruitloop_94 (F1), GUmbie_95 (F1), Galactic_98 (F1), Gandalph_96 (F1), Geralt_89 (F1), GigiOuiOui_91 (F1), Girafales_105 (F1), Girr_95 (F1), Hades_93 (F1), Hegedechwinu_103 (F1), IMpilo_94 (F1), IbOuu_87 (F1), Inventum_94 (F1), IrishSherpFalk_96 (F1), Jabbawokkie_103 (F2), Job42_97 (F1), JoeyJr_99 (F1), Juice456_95 (F1), Karhdo_91 (F1), Kimberlium_98 (F1), KingJulian_103 (F1), KingMidas_96 (F1), Kingsley_104 (F1), Krakatau_89 (F1), KristaRAM_103 (F1), Leozinho_93 (F1), Leperchaun_98 (F1), Lorde_99 (F1), Lucia_96 (F1), LunaBlu_101 (F1), LunaStella_93 (F4), MadMen_101 (F1), Madiba_95 (F1), Mantra_94 (F1), Marker_102 (F1), MisterCuddles_96 (F1), Mova_98 (F1), MulchExplorer_96 (F1), MulchSalad_94 (F7), Mwanjiwa_98 (F1), NewHope4_102 (F1), Nimbo_88 (F1), Nitzel_90 (F1), Oksu_101 (F1), OldBen_93 (F1), PHappiness_96 (F1), PMC_95 (F1), Pacc40_92 (F1), PatoPoderoso_96 (F1), Phanphagia_100 (F1), Phasih_93 (F1), Philus_99 (F1), Poenanya_100 (F1), Polka14_100 (F1), Pollywog_98 (F1), Polo2Bam_106 (F1), QuickMath_97 (F1), Quico_105 (F1), Radiance_94 (F1), Ramsey_101 (F1), RedBird_97 (F1), Renaud18_105 (F4), RitaG_95 (F1), Rita_97 (F1), Rockne_99 (F1), RockyHorror_100 (F1), Royals2015_100 (F1), Ruby_93 (F1), SG4_97 (F1), Sarma624_98 (F1), Sassafras_98 (F1), SeaLumen_103 (F1), Shauna1_98 (F1), ShroomBoi_94 (F1), SiSi_92 (F1), SilverChicken_104 (F2), SimranZ1_93 (F1), Soul22_97 (F2), Spartacus_103 (F1), Spikelee_97 (F1), Stap_91 (F1), ThetaBob_99 (F4), Topiatin_98 (F1), UncleRicky_96 (F1), VRedHorse_97 (F1), Velveteen_93 (F1), Veteran_87 (F1), WillSterrel_94 (F1), Zapner_103 (F2),

Start 6:
• Found in 74 of 130 (56.9%) of genes in pham
• Manual Annotations of this start: 1 of 118
• Called 1.4% of time when present
• Phage (with cluster) where this start called: Yoshi_109 (F2),

Summary by clusters:

There are 6 clusters represented in this pham: F1, F2, F4, F5, F7, F,

Info for manual annotations of cluster F1:
•Start number 2 was manually annotated 2 times for cluster F1.
•Start number 3 was manually annotated 104 times for cluster F1.

Info for manual annotations of cluster F2:
•Start number 3 was manually annotated 6 times for cluster F2.
•Start number 6 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:
•Start number 3 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster F5:
•Start number 3 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster F7:

•Start number 3 was manually annotated 1 time for cluster F7.

Gene Information:

Gene: Aubs_96 Start: 54716, Stop: 54874, Start Num: 3
Candidate Starts for Aubs_96:
(Start: 3 @54716 has 115 MA's), (5, 54731), (Start: 6 @54737 has 1 MA's), (9, 54833),

Gene: Avani_102 Start: 50962, Stop: 51120, Start Num: 3
Candidate Starts for Avani_102:
(Start: 3 @50962 has 115 MA's), (9, 51079),

Gene: Batiatus_95 Start: 53238, Stop: 53423, Start Num: 3
Candidate Starts for Batiatus_95:
(Start: 3 @53238 has 115 MA's), (10, 53373), (11, 53391), (12, 53397),

Gene: Beanstalk_95 Start: 52388, Stop: 52573, Start Num: 3
Candidate Starts for Beanstalk_95:
(Start: 3 @52388 has 115 MA's), (10, 52523), (11, 52541), (12, 52547),

Gene: BigPhil_92 Start: 50030, Stop: 50215, Start Num: 3
Candidate Starts for BigPhil_92:
(Start: 3 @50030 has 115 MA's), (10, 50165), (11, 50183), (12, 50189),

Gene: Blarby_104 Start: 51789, Stop: 51947, Start Num: 3
Candidate Starts for Blarby_104:
(Start: 3 @51789 has 115 MA's), (9, 51906),

Gene: BlueCrab_97 Start: 54102, Stop: 54260, Start Num: 3
Candidate Starts for BlueCrab_97:
(Start: 3 @54102 has 115 MA's), (5, 54117), (Start: 6 @54123 has 1 MA's), (9, 54219),

Gene: BodEinwohner17_106 Start: 55754, Stop: 55912, Start Num: 3
Candidate Starts for BodEinwohner17_106:
(Start: 2 @55748 has 2 MA's), (Start: 3 @55754 has 115 MA's), (5, 55769), (Start: 6 @55775 has 1 MA's), (9, 55871),

Gene: Brookers_94 Start: 52981, Stop: 53166, Start Num: 3
Candidate Starts for Brookers_94:
(Start: 3 @52981 has 115 MA's), (10, 53116), (11, 53134), (12, 53140),

Gene: Cerasum_94 Start: 50048, Stop: 50233, Start Num: 3
Candidate Starts for Cerasum_94:
(Start: 3 @50048 has 115 MA's), (10, 50183), (11, 50201), (12, 50207),

Gene: Che8_103 Start: 54898, Stop: 55056, Start Num: 3
Candidate Starts for Che8_103:
(Start: 3 @54898 has 115 MA's), (8, 54976), (9, 55015),

Gene: Che9d_106 Start: 52777, Stop: 52935, Start Num: 3
Candidate Starts for Che9d_106:

(Start: 3 @52777 has 115 MA's),

Gene: Cheesepuff_101 Start: 53083, Stop: 53238, Start Num: 3
Candidate Starts for Cheesepuff_101:
(Start: 3 @53083 has 115 MA's), (9, 53197),

Gene: Chuckly_92 Start: 49918, Stop: 50103, Start Num: 3
Candidate Starts for Chuckly_92:
(Start: 3 @49918 has 115 MA's), (10, 50053), (11, 50071), (12, 50077),

Gene: Clank_94 Start: 50915, Stop: 51073, Start Num: 3
Candidate Starts for Clank_94:
(1, 50864), (Start: 3 @50915 has 115 MA's), (4, 50921), (Start: 6 @50936 has 1 MA's), (9, 51032),

Gene: Coco12_96 Start: 54105, Stop: 54290, Start Num: 3
Candidate Starts for Coco12_96:
(Start: 3 @54105 has 115 MA's), (10, 54240), (11, 54258), (12, 54264),

Gene: Corium_94 Start: 54905, Stop: 55090, Start Num: 3
Candidate Starts for Corium_94:
(Start: 3 @54905 has 115 MA's), (10, 55040), (11, 55058), (12, 55064),

Gene: Cornie_93 Start: 52525, Stop: 52683, Start Num: 3
Candidate Starts for Cornie_93:
(Start: 3 @52525 has 115 MA's), (9, 52642),

Gene: Cornucopia_96 Start: 51265, Stop: 51423, Start Num: 3
Candidate Starts for Cornucopia_96:
(Start: 3 @51265 has 115 MA's), (5, 51280), (Start: 6 @51286 has 1 MA's), (9, 51382),

Gene: DaWorst_96 Start: 53081, Stop: 53239, Start Num: 3
Candidate Starts for DaWorst_96:
(Start: 3 @53081 has 115 MA's), (5, 53096), (Start: 6 @53102 has 1 MA's), (9, 53198),

Gene: DaddyRickover_98 Start: 53942, Stop: 54106, Start Num: 2
Candidate Starts for DaddyRickover_98:
(Start: 2 @53942 has 2 MA's), (Start: 3 @53948 has 115 MA's), (5, 53963), (Start: 6 @53969 has 1 MA's), (9, 54065),

Gene: Daenerys_94 Start: 54116, Stop: 54274, Start Num: 3
Candidate Starts for Daenerys_94:
(Start: 3 @54116 has 115 MA's), (5, 54131), (Start: 6 @54137 has 1 MA's), (9, 54233),

Gene: Deb65_89 Start: 51840, Stop: 51998, Start Num: 3
Candidate Starts for Deb65_89:
(Start: 3 @51840 has 115 MA's), (5, 51855), (Start: 6 @51861 has 1 MA's), (9, 51957),

Gene: Demsculpinboyz_110 Start: 53410, Stop: 53568, Start Num: 3
Candidate Starts for Demsculpinboyz_110:
(Start: 3 @53410 has 115 MA's), (9, 53527),

Gene: DirtMcgirt_97 Start: 50596, Stop: 50754, Start Num: 3
Candidate Starts for DirtMcgirt_97:

(Start: 3 @50596 has 115 MA's), (5, 50611), (Start: 6 @50617 has 1 MA's), (9, 50713),

Gene: Doomphist_101 Start: 54768, Stop: 54926, Start Num: 3
Candidate Starts for Doomphist_101:
(Start: 2 @54762 has 2 MA's), (Start: 3 @54768 has 115 MA's), (5, 54783), (Start: 6 @54789 has 1 MA's), (9, 54885),

Gene: Doomslug_114 Start: 56207, Stop: 56392, Start Num: 3
Candidate Starts for Doomslug_114:
(Start: 3 @56207 has 115 MA's), (10, 56342), (11, 56360), (12, 56366),

Gene: Dorothy_97 Start: 54937, Stop: 55095, Start Num: 3
Candidate Starts for Dorothy_97:
(Start: 2 @54931 has 2 MA's), (Start: 3 @54937 has 115 MA's), (5, 54952), (Start: 6 @54958 has 1 MA's), (9, 55054),

Gene: DotProduct_90 Start: 50954, Stop: 51112, Start Num: 3
Candidate Starts for DotProduct_90:
(Start: 3 @50954 has 115 MA's), (5, 50969), (Start: 6 @50975 has 1 MA's), (9, 51071),

Gene: Doug_93 Start: 54435, Stop: 54593, Start Num: 3
Candidate Starts for Doug_93:
(Start: 3 @54435 has 115 MA's), (5, 54450), (Start: 6 @54456 has 1 MA's), (9, 54552),

Gene: Drago_95 Start: 50599, Stop: 50757, Start Num: 3
Candidate Starts for Drago_95:
(Start: 3 @50599 has 115 MA's), (5, 50614), (Start: 6 @50620 has 1 MA's), (9, 50716),

Gene: Empress_96 Start: 53031, Stop: 53189, Start Num: 3
Candidate Starts for Empress_96:
(Start: 2 @53025 has 2 MA's), (Start: 3 @53031 has 115 MA's), (5, 53046), (Start: 6 @53052 has 1 MA's), (9, 53148),

Gene: Enby_100 Start: 50875, Stop: 51033, Start Num: 3
Candidate Starts for Enby_100:
(Start: 3 @50875 has 115 MA's), (5, 50890), (Start: 6 @50896 has 1 MA's), (9, 50992),

Gene: Enzomatic_107 Start: 52263, Stop: 52421, Start Num: 3
Candidate Starts for Enzomatic_107:
(Start: 3 @52263 has 115 MA's), (9, 52380),

Gene: Estave1_104 Start: 56759, Stop: 56917, Start Num: 3
Candidate Starts for Estave1_104:
(Start: 3 @56759 has 115 MA's), (5, 56774), (Start: 6 @56780 has 1 MA's), (9, 56876),

Gene: Fancypants_103 Start: 56265, Stop: 56423, Start Num: 3
Candidate Starts for Fancypants_103:
(Start: 3 @56265 has 115 MA's), (9, 56382),

Gene: Fastidio_100 Start: 51346, Stop: 51504, Start Num: 3
Candidate Starts for Fastidio_100:
(Start: 3 @51346 has 115 MA's), (5, 51361), (Start: 6 @51367 has 1 MA's), (9, 51463),

Gene: Florinda_108 Start: 55253, Stop: 55408, Start Num: 3
Candidate Starts for Florinda_108:
(Start: 3 @55253 has 115 MA's), (9, 55367),

Gene: Frankie_95 Start: 52839, Stop: 52994, Start Num: 3
Candidate Starts for Frankie_95:
(Start: 3 @52839 has 115 MA's), (9, 52953),

Gene: Fruitloop_94 Start: 54018, Stop: 54203, Start Num: 3
Candidate Starts for Fruitloop_94:
(Start: 3 @54018 has 115 MA's), (10, 54153), (11, 54171), (12, 54177),

Gene: GUmbie_95 Start: 52968, Stop: 53126, Start Num: 3
Candidate Starts for GUmbie_95:
(Start: 3 @52968 has 115 MA's), (5, 52983), (Start: 6 @52989 has 1 MA's), (9, 53085),

Gene: Galactic_98 Start: 52797, Stop: 52955, Start Num: 3
Candidate Starts for Galactic_98:
(Start: 3 @52797 has 115 MA's), (9, 52914),

Gene: Gandalph_96 Start: 51008, Stop: 51166, Start Num: 3
Candidate Starts for Gandalph_96:
(Start: 3 @51008 has 115 MA's), (8, 51086), (9, 51125),

Gene: Geralt_89 Start: 51838, Stop: 51996, Start Num: 3
Candidate Starts for Geralt_89:
(Start: 3 @51838 has 115 MA's), (5, 51853), (Start: 6 @51859 has 1 MA's), (9, 51955),

Gene: GigiOuiOui_91 Start: 51971, Stop: 52129, Start Num: 3
Candidate Starts for GigiOuiOui_91:
(Start: 3 @51971 has 115 MA's), (5, 51986), (Start: 6 @51992 has 1 MA's), (9, 52088),

Gene: Girafales_105 Start: 54858, Stop: 55013, Start Num: 3
Candidate Starts for Girafales_105:
(Start: 3 @54858 has 115 MA's), (9, 54972),

Gene: Girr_95 Start: 53837, Stop: 53995, Start Num: 3
Candidate Starts for Girr_95:
(1, 53786), (Start: 3 @53837 has 115 MA's), (4, 53843), (Start: 6 @53858 has 1 MA's), (9, 53954),

Gene: Hades_93 Start: 50557, Stop: 50715, Start Num: 3
Candidate Starts for Hades_93:
(Start: 3 @50557 has 115 MA's), (5, 50572), (Start: 6 @50578 has 1 MA's), (9, 50674),

Gene: Hegedechwinu_103 Start: 53239, Stop: 53424, Start Num: 3
Candidate Starts for Hegedechwinu_103:
(Start: 3 @53239 has 115 MA's), (10, 53374), (11, 53392), (12, 53398),

Gene: IMpilo_94 Start: 51570, Stop: 51728, Start Num: 3
Candidate Starts for IMpilo_94:
(Start: 3 @51570 has 115 MA's), (5, 51585), (Start: 6 @51591 has 1 MA's), (9, 51687),

Gene: IbOuu_87 Start: 50868, Stop: 51026, Start Num: 3

Candidate Starts for IbOuu_87:
(Start: 3 @50868 has 115 MA's), (5, 50883), (Start: 6 @50889 has 1 MA's), (9, 50985),

Gene: Inventum_94 Start: 53125, Stop: 53283, Start Num: 3
Candidate Starts for Inventum_94:
(Start: 2 @53119 has 2 MA's), (Start: 3 @53125 has 115 MA's), (5, 53140), (Start: 6 @53146 has 1 MA's), (9, 53242),

Gene: IrishSherpFalk_96 Start: 53395, Stop: 53553, Start Num: 3
Candidate Starts for IrishSherpFalk_96:
(Start: 3 @53395 has 115 MA's), (5, 53410), (Start: 6 @53416 has 1 MA's), (9, 53512),

Gene: Jabbawokkie_103 Start: 51709, Stop: 51867, Start Num: 3
Candidate Starts for Jabbawokkie_103:
(Start: 3 @51709 has 115 MA's), (9, 51826),

Gene: Job42_97 Start: 55548, Stop: 55706, Start Num: 3
Candidate Starts for Job42_97:
(Start: 3 @55548 has 115 MA's), (5, 55563), (Start: 6 @55569 has 1 MA's), (9, 55665),

Gene: JoeyJr_99 Start: 55033, Stop: 55191, Start Num: 3
Candidate Starts for JoeyJr_99:
(Start: 2 @55027 has 2 MA's), (Start: 3 @55033 has 115 MA's), (5, 55048), (Start: 6 @55054 has 1 MA's), (9, 55150),

Gene: Juice456_95 Start: 52744, Stop: 52902, Start Num: 3
Candidate Starts for Juice456_95:
(Start: 3 @52744 has 115 MA's), (5, 52759), (Start: 6 @52765 has 1 MA's), (9, 52861),

Gene: Karhdo_91 Start: 51137, Stop: 51295, Start Num: 3
Candidate Starts for Karhdo_91:
(Start: 3 @51137 has 115 MA's), (5, 51152), (Start: 6 @51158 has 1 MA's), (9, 51254),

Gene: Kimberlium_98 Start: 52844, Stop: 53002, Start Num: 3
Candidate Starts for Kimberlium_98:
(Start: 3 @52844 has 115 MA's), (5, 52859), (Start: 6 @52865 has 1 MA's), (9, 52961),

Gene: KingJulian_103 Start: 55769, Stop: 55954, Start Num: 3
Candidate Starts for KingJulian_103:
(Start: 3 @55769 has 115 MA's), (10, 55904), (11, 55922), (12, 55928),

Gene: KingMidas_96 Start: 53262, Stop: 53420, Start Num: 3
Candidate Starts for KingMidas_96:
(Start: 2 @53256 has 2 MA's), (Start: 3 @53262 has 115 MA's), (5, 53277), (Start: 6 @53283 has 1 MA's), (9, 53379),

Gene: Kingsley_104 Start: 56712, Stop: 56897, Start Num: 3
Candidate Starts for Kingsley_104:
(Start: 3 @56712 has 115 MA's), (10, 56847), (11, 56865), (12, 56871),

Gene: Krakatau_89 Start: 49095, Stop: 49253, Start Num: 3
Candidate Starts for Krakatau_89:
(Start: 3 @49095 has 115 MA's), (5, 49110), (Start: 6 @49116 has 1 MA's), (9, 49212),

Gene: KristaRAM_103 Start: 54435, Stop: 54620, Start Num: 3
Candidate Starts for KristaRAM_103:
(Start: 3 @54435 has 115 MA's), (10, 54570), (11, 54588), (12, 54594),

Gene: Leozinho_93 Start: 50782, Stop: 50940, Start Num: 3
Candidate Starts for Leozinho_93:
(Start: 3 @50782 has 115 MA's), (5, 50797), (Start: 6 @50803 has 1 MA's), (9, 50899),

Gene: Leperchaun_98 Start: 54267, Stop: 54425, Start Num: 3
Candidate Starts for Leperchaun_98:
(Start: 2 @54261 has 2 MA's), (Start: 3 @54267 has 115 MA's), (5, 54282), (Start: 6 @54288 has 1 MA's), (9, 54384),

Gene: Lorde_99 Start: 50040, Stop: 50198, Start Num: 3
Candidate Starts for Lorde_99:
(Start: 3 @50040 has 115 MA's), (5, 50055), (Start: 6 @50061 has 1 MA's), (9, 50157),

Gene: Lucia_96 Start: 50888, Stop: 51046, Start Num: 3
Candidate Starts for Lucia_96:
(Start: 3 @50888 has 115 MA's), (5, 50903), (Start: 6 @50909 has 1 MA's), (9, 51005),

Gene: LunaBlu_101 Start: 54283, Stop: 54441, Start Num: 3
Candidate Starts for LunaBlu_101:
(Start: 3 @54283 has 115 MA's), (9, 54400),

Gene: LunaStella_93 Start: 51434, Stop: 51592, Start Num: 3
Candidate Starts for LunaStella_93:
(Start: 3 @51434 has 115 MA's), (5, 51449), (9, 51551),

Gene: MadMen_101 Start: 53804, Stop: 53962, Start Num: 3
Candidate Starts for MadMen_101:
(Start: 2 @53798 has 2 MA's), (Start: 3 @53804 has 115 MA's), (5, 53819), (Start: 6 @53825 has 1 MA's), (9, 53921),

Gene: Madiba_95 Start: 52481, Stop: 52639, Start Num: 3
Candidate Starts for Madiba_95:
(Start: 3 @52481 has 115 MA's), (5, 52496), (Start: 6 @52502 has 1 MA's), (9, 52598),

Gene: Mantra_94 Start: 52867, Stop: 53025, Start Num: 3
Candidate Starts for Mantra_94:
(Start: 3 @52867 has 115 MA's), (5, 52882), (Start: 6 @52888 has 1 MA's), (9, 52984),

Gene: Marker_102 Start: 54587, Stop: 54745, Start Num: 3
Candidate Starts for Marker_102:
(1, 54536), (Start: 3 @54587 has 115 MA's), (4, 54593), (Start: 6 @54608 has 1 MA's), (9, 54704),

Gene: MisterCuddles_96 Start: 53837, Stop: 53995, Start Num: 3
Candidate Starts for MisterCuddles_96:
(1, 53786), (Start: 3 @53837 has 115 MA's), (4, 53843), (Start: 6 @53858 has 1 MA's), (9, 53954),

Gene: Mova_98 Start: 53625, Stop: 53783, Start Num: 3
Candidate Starts for Mova_98:

(Start: 3 @53625 has 115 MA's), (5, 53640), (Start: 6 @53646 has 1 MA's), (9, 53742),

Gene: MulchExplorer_96 Start: 52515, Stop: 52673, Start Num: 3
Candidate Starts for MulchExplorer_96:
(Start: 3 @52515 has 115 MA's), (5, 52530), (Start: 6 @52536 has 1 MA's), (9, 52632),

Gene: MulchSalad_94 Start: 54450, Stop: 54608, Start Num: 3
Candidate Starts for MulchSalad_94:
(Start: 3 @54450 has 115 MA's), (5, 54465), (Start: 6 @54471 has 1 MA's), (9, 54567),

Gene: Mwanjiwa_98 Start: 54370, Stop: 54528, Start Num: 3
Candidate Starts for Mwanjiwa_98:
(Start: 3 @54370 has 115 MA's), (9, 54487),

Gene: NewHope4_102 Start: 52409, Stop: 52567, Start Num: 3
Candidate Starts for NewHope4_102:
(Start: 3 @52409 has 115 MA's), (9, 52526),

Gene: Nimbo_88 Start: 51840, Stop: 51998, Start Num: 3
Candidate Starts for Nimbo_88:
(Start: 3 @51840 has 115 MA's), (5, 51855), (Start: 6 @51861 has 1 MA's), (9, 51957),

Gene: Nitzel_90 Start: 50387, Stop: 50545, Start Num: 3
Candidate Starts for Nitzel_90:
(Start: 3 @50387 has 115 MA's), (9, 50504),

Gene: Oksu_101 Start: 55504, Stop: 55689, Start Num: 3
Candidate Starts for Oksu_101:
(Start: 3 @55504 has 115 MA's), (10, 55639), (11, 55657), (12, 55663),

Gene: OldBen_93 Start: 53232, Stop: 53390, Start Num: 3
Candidate Starts for OldBen_93:
(Start: 3 @53232 has 115 MA's), (5, 53247), (Start: 6 @53253 has 1 MA's), (9, 53349),

Gene: PHappiness_96 Start: 54061, Stop: 54219, Start Num: 3
Candidate Starts for PHappiness_96:
(Start: 3 @54061 has 115 MA's), (5, 54076), (Start: 6 @54082 has 1 MA's), (9, 54178),

Gene: PMC_95 Start: 52210, Stop: 52368, Start Num: 3
Candidate Starts for PMC_95:
(Start: 3 @52210 has 115 MA's), (5, 52225), (Start: 6 @52231 has 1 MA's), (9, 52327),

Gene: Pacc40_92 Start: 54058, Stop: 54216, Start Num: 3
Candidate Starts for Pacc40_92:
(Start: 3 @54058 has 115 MA's), (5, 54073), (Start: 6 @54079 has 1 MA's), (9, 54175),

Gene: PatoPoderoso_96 Start: 55769, Stop: 55954, Start Num: 3
Candidate Starts for PatoPoderoso_96:
(Start: 3 @55769 has 115 MA's), (10, 55904), (11, 55922), (12, 55928),

Gene: Phanphagia_100 Start: 54951, Stop: 55136, Start Num: 3
Candidate Starts for Phanphagia_100:
(Start: 3 @54951 has 115 MA's), (10, 55086), (11, 55104), (12, 55110),

Gene: Phasih_93 Start: 52107, Stop: 52265, Start Num: 3
Candidate Starts for Phasih_93:
(Start: 3 @52107 has 115 MA's), (8, 52185), (9, 52224),

Gene: Philus_99 Start: 55258, Stop: 55443, Start Num: 3
Candidate Starts for Philus_99:
(Start: 3 @55258 has 115 MA's), (10, 55393), (11, 55411), (12, 55417),

Gene: Poenanya_100 Start: 54768, Stop: 54926, Start Num: 3
Candidate Starts for Poenanya_100:
(Start: 2 @54762 has 2 MA's), (Start: 3 @54768 has 115 MA's), (5, 54783), (Start: 6 @54789 has 1 MA's), (9, 54885),

Gene: Polka14_100 Start: 54829, Stop: 54987, Start Num: 3
Candidate Starts for Polka14_100:
(Start: 2 @54823 has 2 MA's), (Start: 3 @54829 has 115 MA's), (5, 54844), (Start: 6 @54850 has 1 MA's), (9, 54946),

Gene: Pollywog_98 Start: 54888, Stop: 55046, Start Num: 3
Candidate Starts for Pollywog_98:
(Start: 3 @54888 has 115 MA's), (5, 54903), (Start: 6 @54909 has 1 MA's), (9, 55005),

Gene: Polo2Bam_106 Start: 52263, Stop: 52421, Start Num: 3
Candidate Starts for Polo2Bam_106:
(Start: 3 @52263 has 115 MA's), (9, 52380),

Gene: QuickMath_97 Start: 53096, Stop: 53254, Start Num: 3
Candidate Starts for QuickMath_97:
(Start: 3 @53096 has 115 MA's), (5, 53111), (Start: 6 @53117 has 1 MA's), (9, 53213),

Gene: Quico_105 Start: 55073, Stop: 55228, Start Num: 3
Candidate Starts for Quico_105:
(Start: 3 @55073 has 115 MA's), (9, 55187),

Gene: Radiance_94 Start: 53173, Stop: 53331, Start Num: 3
Candidate Starts for Radiance_94:
(Start: 3 @53173 has 115 MA's), (5, 53188), (Start: 6 @53194 has 1 MA's), (9, 53290),

Gene: Ramsey_101 Start: 55069, Stop: 55227, Start Num: 3
Candidate Starts for Ramsey_101:
(Start: 3 @55069 has 115 MA's), (5, 55084), (Start: 6 @55090 has 1 MA's), (9, 55186),

Gene: RedBird_97 Start: 54807, Stop: 54965, Start Num: 3
Candidate Starts for RedBird_97:
(Start: 2 @54801 has 2 MA's), (Start: 3 @54807 has 115 MA's), (5, 54822), (Start: 6 @54828 has 1 MA's), (9, 54924),

Gene: Renaud18_105 Start: 54054, Stop: 54209, Start Num: 3
Candidate Starts for Renaud18_105:
(Start: 3 @54054 has 115 MA's),

Gene: Rita_97 Start: 54816, Stop: 54974, Start Num: 3

Candidate Starts for Rita_97:
(Start: 3 @54816 has 115 MA's), (8, 54894), (9, 54933),

Gene: RitaG_95 Start: 53863, Stop: 54021, Start Num: 3
Candidate Starts for RitaG_95:
(Start: 3 @53863 has 115 MA's), (5, 53878), (Start: 6 @53884 has 1 MA's), (9, 53980),

Gene: Rockne_99 Start: 52222, Stop: 52380, Start Num: 3
Candidate Starts for Rockne_99:
(Start: 3 @52222 has 115 MA's), (5, 52237), (Start: 6 @52243 has 1 MA's), (9, 52339),

Gene: RockyHorror_100 Start: 52973, Stop: 53131, Start Num: 3
Candidate Starts for RockyHorror_100:
(Start: 3 @52973 has 115 MA's), (5, 52988), (Start: 6 @52994 has 1 MA's), (9, 53090),

Gene: Royals2015_100 Start: 52320, Stop: 52478, Start Num: 3
Candidate Starts for Royals2015_100:
(Start: 3 @52320 has 115 MA's), (9, 52437),

Gene: Ruby_93 Start: 53839, Stop: 53997, Start Num: 3
Candidate Starts for Ruby_93:
(1, 53788), (Start: 3 @53839 has 115 MA's), (4, 53845), (Start: 6 @53860 has 1 MA's), (9, 53956),

Gene: SG4_97 Start: 54587, Stop: 54745, Start Num: 3
Candidate Starts for SG4_97:
(Start: 3 @54587 has 115 MA's), (9, 54704),

Gene: Sarma624_98 Start: 50724, Stop: 50909, Start Num: 3
Candidate Starts for Sarma624_98:
(Start: 3 @50724 has 115 MA's), (10, 50859), (11, 50877), (12, 50883),

Gene: Sassafras_98 Start: 53124, Stop: 53282, Start Num: 3
Candidate Starts for Sassafras_98:
(Start: 2 @53118 has 2 MA's), (Start: 3 @53124 has 115 MA's), (5, 53139), (Start: 6 @53145 has 1 MA's), (9, 53241),

Gene: Scottish_96 Start: 52695, Stop: 52859, Start Num: 2
Candidate Starts for Scottish_96:
(Start: 2 @52695 has 2 MA's), (Start: 3 @52701 has 115 MA's), (5, 52716), (Start: 6 @52722 has 1 MA's), (9, 52818),

Gene: SeaLumen_103 Start: 52263, Stop: 52421, Start Num: 3
Candidate Starts for SeaLumen_103:
(Start: 3 @52263 has 115 MA's), (9, 52380),

Gene: Shauna1_98 Start: 54567, Stop: 54752, Start Num: 3
Candidate Starts for Shauna1_98:
(Start: 3 @54567 has 115 MA's), (10, 54702), (11, 54720), (12, 54726),

Gene: ShroomBoi_94 Start: 53142, Stop: 53300, Start Num: 3
Candidate Starts for ShroomBoi_94:
(Start: 3 @53142 has 115 MA's), (9, 53259),

Gene: SiSi_92 Start: 52392, Stop: 52550, Start Num: 3
Candidate Starts for SiSi_92:
(Start: 3 @52392 has 115 MA's), (5, 52407), (Start: 6 @52413 has 1 MA's), (9, 52509),

Gene: SilverChicken_104 Start: 53941, Stop: 54099, Start Num: 3
Candidate Starts for SilverChicken_104:
(Start: 3 @53941 has 115 MA's), (9, 54058),

Gene: SimranZ1_93 Start: 51689, Stop: 51847, Start Num: 3
Candidate Starts for SimranZ1_93:
(Start: 3 @51689 has 115 MA's), (7, 51734), (9, 51806),

Gene: Soul22_97 Start: 51311, Stop: 51469, Start Num: 3
Candidate Starts for Soul22_97:
(Start: 3 @51311 has 115 MA's), (8, 51389), (9, 51428),

Gene: Spartacus_103 Start: 56424, Stop: 56582, Start Num: 3
Candidate Starts for Spartacus_103:
(Start: 3 @56424 has 115 MA's), (5, 56439), (Start: 6 @56445 has 1 MA's), (9, 56541),

Gene: Spikelee_97 Start: 54867, Stop: 55025, Start Num: 3
Candidate Starts for Spikelee_97:
(Start: 3 @54867 has 115 MA's), (5, 54882), (Start: 6 @54888 has 1 MA's), (9, 54984),

Gene: Stap_91 Start: 50354, Stop: 50512, Start Num: 3
Candidate Starts for Stap_91:
(Start: 3 @50354 has 115 MA's), (5, 50369), (Start: 6 @50375 has 1 MA's), (9, 50471),

Gene: ThetaBob_99 Start: 52568, Stop: 52726, Start Num: 3
Candidate Starts for ThetaBob_99:
(Start: 3 @52568 has 115 MA's), (8, 52646), (9, 52685),

Gene: Topiatin_98 Start: 54314, Stop: 54499, Start Num: 3
Candidate Starts for Topiatin_98:
(Start: 3 @54314 has 115 MA's), (10, 54449), (11, 54467), (12, 54473),

Gene: UncleRicky_96 Start: 52096, Stop: 52254, Start Num: 3
Candidate Starts for UncleRicky_96:
(Start: 3 @52096 has 115 MA's), (5, 52111), (Start: 6 @52117 has 1 MA's), (9, 52213),

Gene: VRedHorse_97 Start: 50912, Stop: 51070, Start Num: 3
Candidate Starts for VRedHorse_97:
(Start: 3 @50912 has 115 MA's), (5, 50927), (Start: 6 @50933 has 1 MA's), (9, 51029),

Gene: Velveteen_93 Start: 50724, Stop: 50909, Start Num: 3
Candidate Starts for Velveteen_93:
(Start: 3 @50724 has 115 MA's), (10, 50859), (11, 50877), (12, 50883),

Gene: Veteran_87 Start: 52260, Stop: 52418, Start Num: 3
Candidate Starts for Veteran_87:
(Start: 3 @52260 has 115 MA's), (5, 52275), (Start: 6 @52281 has 1 MA's), (9, 52377),

Gene: WillSterrel_94 Start: 53428, Stop: 53586, Start Num: 3

Candidate Starts for WillSterrel_94:
(Start: 3 @53428 has 115 MA's), (5, 53443), (Start: 6 @53449 has 1 MA's), (9, 53545),

Gene: Yoshi_109 Start: 54720, Stop: 54851, Start Num: 6
Candidate Starts for Yoshi_109:
(Start: 3 @54699 has 115 MA's), (Start: 6 @54720 has 1 MA's), (9, 54813),

Gene: Zapner_103 Start: 51803, Stop: 51961, Start Num: 3
Candidate Starts for Zapner_103:
(Start: 3 @51803 has 115 MA's), (9, 51920),