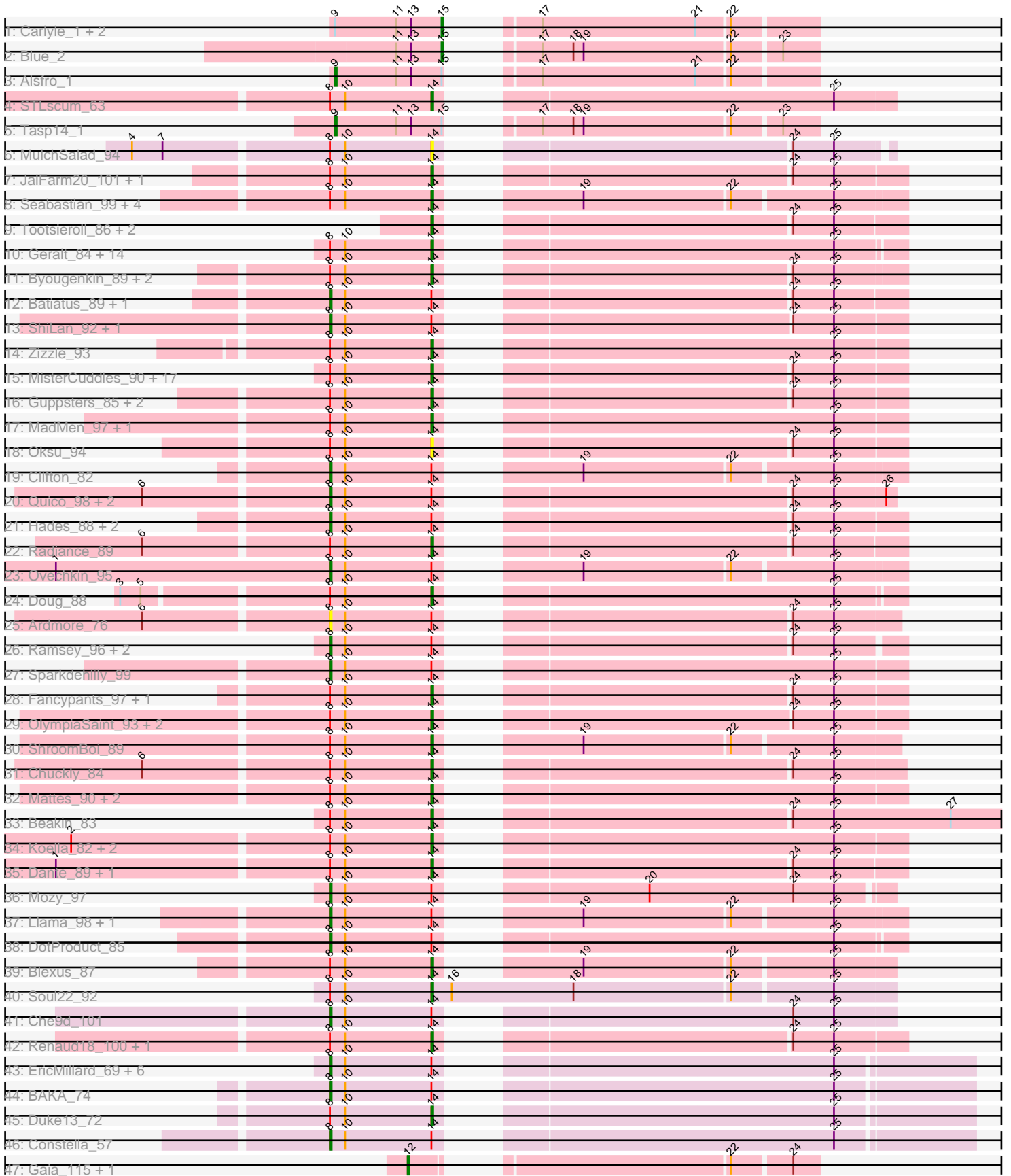


Pham 163456



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 163456 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163456 has 117 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Carlyle_1, A6_01, BK1_01
- Track 2 : Blue_2
- Track 3 : Alsfro_1
- Track 4 : STLscum_63
- Track 5 : Tasp14_1
- Track 6 : MulchSalad_94
- Track 7 : JalFarm20_101, Eradicator_84
- Track 8 : Seabastian_99, AlpineSix_90, Modragons_96, OfUltron_99, Jinglebell_96
- Track 9 : Tootsieroll_86, Phasih_88, Avani_97
- Track 10 : Geralt_84, RitaG_90, GigiOuiOui_86, Bagrid_68, Juice456_90, Deb65_83, Leozinho_88, Nimbo_83, OldBen_88, PHappiness_91, Rita_92, Ogopogo_97, Daenerys_89, Ruby_87, QuickMath_92
- Track 11 : Byougenkin_89, Firehouse51_86, OwlsT2W_90
- Track 12 : Batiatus_89, Hegedechwinu_91
- Track 13 : ShiLan_92, James_93
- Track 14 : Zizzle_93
- Track 15 : MisterCuddles_90, IbOuu_86, Bubbles123_85, Polka14_95, Girr_89, Sandalphon_89, Empress_91, Che8_98, Fastidio_91, KingMidas_91, Cornie_88, Scottish_91, Gandalph_91, Whatsapiecost_84, Donkeykong_98, Bipolar_93, Wachhund_88, SuperGrey_92
- Track 16 : Guppsters_85, MinionDave_90, Melissauren88_80
- Track 17 : MadMen_97, TDanisky_101
- Track 18 : Oksu_94
- Track 19 : Clifton_82
- Track 20 : Quico_98, Florinda_101, Girafales_98
- Track 21 : Hades_88, Llij_87, Mutaforma13_92
- Track 22 : Radiance_89
- Track 23 : Ovechkin_95
- Track 24 : Doug_88
- Track 25 : Ardmore_76
- Track 26 : Ramsey_96, Pollywog_93, SG4_92
- Track 27 : Sparkdehlily_99
- Track 28 : Fancypants_97, Latretium_93
- Track 29 : OlympiaSaint_93, Jarcob_93, Spoonbill_89
- Track 30 : ShroomBoi_89
- Track 31 : Chuckly_84
- Track 32 : Mattes_90, RockyHorror_95, GUmbie_90

- Track 33 : Beakin_83
- Track 34 : Koella_82, NormanBulbieJr_88, Priscilla_90
- Track 35 : Dante_89, Sabbb_94
- Track 36 : Mozy_97
- Track 37 : Llama_98, Ochi17_97
- Track 38 : DotProduct_85
- Track 39 : Blexus_87
- Track 40 : Soul22_92
- Track 41 : Che9d_101
- Track 42 : Renaud18_100, DosHalletts_92
- Track 43 : EricMillard_69, Pacc40_87, Thibault_62, Kimberlium_93, Kersh_95, Pound_70, Optimus_74
- Track 44 : BAKA_74
- Track 45 : Duke13_72
- Track 46 : Constella_57
- Track 47 : Gaia_115, Nebkiss_116

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

The start number called the most often in the published annotations is 14, it was called in 69 of the 107 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AlpineSix_90, Avani_97, Bagrid_68, Beakin_83, Bipolar_93, Blexus_87, Bubbles123_85, Byougenkin_89, Che8_98, Chuckly_84, Cornie_88, Daenerys_89, Dante_89, Deb65_83, Donkeykong_98, DosHalletts_92, Doug_88, Duke13_72, Empress_91, Eradicator_84, Fancypants_97, Fastidio_91, Firehouse51_86, GUmbe_90, Gandalph_91, Geralt_84, GigiOuiOui_86, Girr_89, Guppsters_85, IbOuu_86, JalFarm20_101, Jarcob_93, Jinglebell_96, Juice456_90, KingMidas_91, Koella_82, Latretium_93, Leozinho_88, MadMen_97, Mattes_90, Melissauren88_80, MinionDave_90, MisterCuddles_90, Modragons_96, MulchSalad_94, Nimbo_83, NormanBulbieJr_88, OfUltron_99, Ogoopogo_97, Oksu_94, OldBen_88, OlympiaSaint_93, OwlsT2W_90, PHappiness_91, Phasih_88, Polka14_95, Priscilla_90, QuickMath_92, Radiance_89, Renaud18_100, RitaG_90, Rita_92, RockyHorror_95, Ruby_87, STLscum_63, Sabbb_94, Sandalphon_89, Scottish_91, Sebastian_99, ShroomBoi_89, Soul22_92, Spoonbill_89, SuperGrey_92, TDanisky_101, Tootsieroll_86, Wachhund_88, Whatsapiecost_84, Zizzle_93,

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

- Ardmore_76, BAKA_74, Batiatus_89, Che9d_101, Clifton_82, Constella_57, DotProduct_85, EricMillard_69, Florinda_101, Girafales_98, Hades_88, Hegedechwinu_91, James_93, Kersh_95, Kimberlium_93, Llama_98, Llij_87, Mozy_97, Mutaforma13_92, Ochi17_97, Optimus_74, Ovechkin_95, Pacc40_87, Pollywog_93, Pound_70, Quico_98, Ramsey_96, SG4_92, ShiLan_92, Sparkdehlily_99, Thibault_62,

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

- A6_01, Alsfro_1, BK1_01, Blue_2, Carlyle_1, Gaia_115, Nebkiss_116, Tasp14_1,

Summary by start number:

Start 8:

- Found in 106 of 117 (90.6%) of genes in pham
- Manual Annotations of this start: 30 of 107
- Called 29.2% of time when present
- Phage (with cluster) where this start called: Ardmore_76 (F1), BAKA_74 (J), Batiatus_89 (F1), Che9d_101 (F2), Clifton_82 (F1), Constella_57 (J), DotProduct_85 (F1), EricMillard_69 (J), Florinda_101 (F1), Girafales_98 (F1), Hades_88 (F1), Hegedechwinu_91 (F1), James_93 (F1), Kersh_95 (F1), Kimberlium_93 (F1), Llama_98 (F1), Llij_87 (F1), Mozy_97 (F1), Mutaforma13_92 (F1), Ochi17_97 (F1), Optimus_74 (J), Ovechkin_95 (F1), Pacc40_87 (F1), Pollywog_93 (F1), Pound_70 (J), Quico_98 (F1), Ramsey_96 (F1), SG4_92 (F1), ShiLan_92 (F1), Sparkdehliiy_99 (F1), Thibault_62 (J),

Start 9:

- Found in 5 of 117 (4.3%) of genes in pham
- Manual Annotations of this start: 2 of 107
- Called 40.0% of time when present
- Phage (with cluster) where this start called: Alsfro_1 (A1), Tasp14_1 (A1),

Start 12:

- Found in 2 of 117 (1.7%) of genes in pham
- Manual Annotations of this start: 2 of 107
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Gaia_115 (X), Nebkiss_116 (X),

Start 14:

- Found in 109 of 117 (93.2%) of genes in pham
- Manual Annotations of this start: 69 of 107
- Called 71.6% of time when present
- Phage (with cluster) where this start called: AlpineSix_90 (F1), Avani_97 (F2), Bagrid_68 (J), Beakin_83 (F1), Bipolar_93 (F1), Blexus_87 (F1), Bubbles123_85 (F1), Byougenkin_89 (F1), Che8_98 (F1), Chuckly_84 (F1), Cornie_88 (F5), Daenerys_89 (F1), Dante_89 (F1), Deb65_83 (F1), Donkeykong_98 (F1), DosHalletts_92 (F1), Doug_88 (F1), Duke13_72 (J), Empress_91 (F1), Eradicator_84 (F1), Fancypants_97 (F1), Fastidio_91 (F1), Firehouse51_86 (F1), GUmble_90 (F1), Gandolph_91 (F1), Geralt_84 (F1), GigiOuiOui_86 (F1), Girr_89 (F1), Guppsters_85 (F1), IbOuu_86 (F1), JalFarm20_101 (F1), Jarcob_93 (F1), Jinglebell_96 (F1), Juice456_90 (F1), KingMidas_91 (F1), Koella_82 (F1), Latretium_93 (F1), Leozinho_88 (F1), MadMen_97 (F1), Mattes_90 (F1), Melissauren88_80 (F1), MinionDave_90 (F1), MisterCuddles_90 (F1), Modragons_96 (F1), MulchSalad_94 (F), Nimbo_83 (F1), NormanBulbieJr_88 (F1), OfUltron_99 (F1), Ogotogo_97 (F1), Oksu_94 (F1), OldBen_88 (F1), OlympiaSaint_93 (F1), OwlsT2W_90 (F1), PHappiness_91 (F1), Phasih_88 (F1), Polka14_95 (F1), Priscilla_90 (F1), QuickMath_92 (F1), Radiance_89 (F1), Renaud18_100 (F4), RitaG_90 (F1), Rita_92 (F1), RockyHorror_95 (F1), Ruby_87 (F1), STLscum_63 (A1), Sabbb_94 (F1), Sandalphon_89 (F1), Scottish_91 (F1), Seabastian_99 (F1), ShroomBoi_89 (F1), Soul22_92 (F2), Spoonbill_89 (F1), SuperGrey_92 (F1), TDanisky_101 (F1), Tootsieroll_86 (F1), Wachhund_88 (F1), Whatsapiecost_84 (F1), Zizzle_93 (F1),

Start 15:

- Found in 6 of 117 (5.1%) of genes in pham
- Manual Annotations of this start: 4 of 107

- Called 66.7% of time when present
- Phage (with cluster) where this start called: A6_01 (A1), BK1_01 (A1), Blue_2 (A1), Carlyle_1 (A1),

Summary by clusters:

There are 8 clusters represented in this pham: F1, F2, F4, F5, F, J, A1, X,

Info for manual annotations of cluster A1:

- Start number 9 was manually annotated 2 times for cluster A1.
- Start number 14 was manually annotated 1 time for cluster A1.
- Start number 15 was manually annotated 4 times for cluster A1.

Info for manual annotations of cluster F1:

- Start number 8 was manually annotated 23 times for cluster F1.
- Start number 14 was manually annotated 63 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 8 was manually annotated 1 time for cluster F2.
- Start number 14 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 14 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:

- Start number 14 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster J:

- Start number 8 was manually annotated 6 times for cluster J.
- Start number 14 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster X:

- Start number 12 was manually annotated 2 times for cluster X.

Gene Information:

Gene: A6_01 Start: 595, Stop: 771, Start Num: 15

Candidate Starts for A6_01:

(Start: 9 @532 has 2 MA's), (11, 568), (13, 577), (Start: 15 @595 has 4 MA's), (17, 616), (21, 706), (22, 724),

Gene: AlpineSix_90 Start: 50889, Stop: 51125, Start Num: 14

Candidate Starts for AlpineSix_90:

(Start: 8 @50829 has 30 MA's), (10, 50838), (Start: 14 @50889 has 69 MA's), (19, 50943), (22, 51027), (25, 51084),

Gene: Alsfro_1 Start: 542, Stop: 781, Start Num: 9

Candidate Starts for Alsfro_1:

(Start: 9 @542 has 2 MA's), (11, 578), (13, 587), (Start: 15 @605 has 4 MA's), (17, 626), (21, 716), (22, 734),

Gene: Ardmore_76 Start: 46009, Stop: 46302, Start Num: 8
Candidate Starts for Ardmore_76:
(6, 45904), (Start: 8 @46009 has 30 MA's), (10, 46018), (Start: 14 @46069 has 69 MA's), (24, 46240),
(25, 46264),

Gene: Avani_97 Start: 48825, Stop: 49061, Start Num: 14
Candidate Starts for Avani_97:
(Start: 14 @48825 has 69 MA's), (24, 48996), (25, 49020),

Gene: BAKA_74 Start: 50332, Stop: 49997, Start Num: 8
Candidate Starts for BAKA_74:
(Start: 8 @50332 has 30 MA's), (10, 50323), (Start: 14 @50272 has 69 MA's), (25, 50074),

Gene: BK1_01 Start: 595, Stop: 771, Start Num: 15
Candidate Starts for BK1_01:
(Start: 9 @532 has 2 MA's), (11, 568), (13, 577), (Start: 15 @595 has 4 MA's), (17, 616), (21, 706),
(22, 724),

Gene: Bagrid_68 Start: 49050, Stop: 48775, Start Num: 14
Candidate Starts for Bagrid_68:
(Start: 8 @49110 has 30 MA's), (10, 49101), (Start: 14 @49050 has 69 MA's), (25, 48852),

Gene: Batiatus_89 Start: 51111, Stop: 51407, Start Num: 8
Candidate Starts for Batiatus_89:
(Start: 8 @51111 has 30 MA's), (10, 51120), (Start: 14 @51171 has 69 MA's), (24, 51342), (25,
51366),

Gene: Beakin_83 Start: 47922, Stop: 48218, Start Num: 14
Candidate Starts for Beakin_83:
(Start: 8 @47862 has 30 MA's), (10, 47871), (Start: 14 @47922 has 69 MA's), (24, 48093), (25,
48117), (27, 48186),

Gene: Bipolar_93 Start: 53088, Stop: 53324, Start Num: 14
Candidate Starts for Bipolar_93:
(Start: 8 @53028 has 30 MA's), (10, 53037), (Start: 14 @53088 has 69 MA's), (24, 53259), (25,
53283),

Gene: Blexus_87 Start: 51299, Stop: 51529, Start Num: 14
Candidate Starts for Blexus_87:
(Start: 8 @51239 has 30 MA's), (10, 51248), (Start: 14 @51299 has 69 MA's), (19, 51353), (22,
51437), (25, 51494),

Gene: Blue_2 Start: 1059, Stop: 1235, Start Num: 15
Candidate Starts for Blue_2:
(11, 1032), (13, 1041), (Start: 15 @1059 has 4 MA's), (17, 1080), (18, 1098), (19, 1104), (22, 1188),
(23, 1215),

Gene: Bubbles123_85 Start: 50944, Stop: 51180, Start Num: 14
Candidate Starts for Bubbles123_85:
(Start: 8 @50884 has 30 MA's), (10, 50893), (Start: 14 @50944 has 69 MA's), (24, 51115), (25,
51139),

Gene: Byougenkin_89 Start: 48702, Stop: 48938, Start Num: 14
Candidate Starts for Byougenkin_89:
(Start: 8 @48642 has 30 MA's), (10, 48651), (Start: 14 @48702 has 69 MA's), (24, 48873), (25, 48897),

Gene: Carlyle_1 Start: 605, Stop: 781, Start Num: 15
Candidate Starts for Carlyle_1:
(Start: 9 @542 has 2 MA's), (11, 578), (13, 587), (Start: 15 @605 has 4 MA's), (17, 626), (21, 716), (22, 734),

Gene: Che8_98 Start: 52901, Stop: 53140, Start Num: 14
Candidate Starts for Che8_98:
(Start: 8 @52841 has 30 MA's), (10, 52850), (Start: 14 @52901 has 69 MA's), (24, 53075), (25, 53099),

Gene: Che9d_101 Start: 50979, Stop: 51272, Start Num: 8
Candidate Starts for Che9d_101:
(Start: 8 @50979 has 30 MA's), (10, 50988), (Start: 14 @51039 has 69 MA's), (24, 51213), (25, 51237),

Gene: Chuckly_84 Start: 47404, Stop: 47640, Start Num: 14
Candidate Starts for Chuckly_84:
(6, 47239), (Start: 8 @47344 has 30 MA's), (10, 47353), (Start: 14 @47404 has 69 MA's), (24, 47575), (25, 47599),

Gene: Clifton_82 Start: 49376, Stop: 49672, Start Num: 8
Candidate Starts for Clifton_82:
(Start: 8 @49376 has 30 MA's), (10, 49385), (Start: 14 @49436 has 69 MA's), (19, 49490), (22, 49574), (25, 49631),

Gene: Constella_57 Start: 44626, Stop: 44291, Start Num: 8
Candidate Starts for Constella_57:
(Start: 8 @44626 has 30 MA's), (10, 44617), (Start: 14 @44566 has 69 MA's), (25, 44368),

Gene: Cornie_88 Start: 50388, Stop: 50624, Start Num: 14
Candidate Starts for Cornie_88:
(Start: 8 @50328 has 30 MA's), (10, 50337), (Start: 14 @50388 has 69 MA's), (24, 50559), (25, 50583),

Gene: Daenerys_89 Start: 52494, Stop: 52730, Start Num: 14
Candidate Starts for Daenerys_89:
(Start: 8 @52434 has 30 MA's), (10, 52443), (Start: 14 @52494 has 69 MA's), (25, 52692),

Gene: Dante_89 Start: 52666, Stop: 52902, Start Num: 14
Candidate Starts for Dante_89:
(1, 52450), (Start: 8 @52606 has 30 MA's), (10, 52615), (Start: 14 @52666 has 69 MA's), (24, 52837), (25, 52861),

Gene: Deb65_83 Start: 50218, Stop: 50454, Start Num: 14
Candidate Starts for Deb65_83:
(Start: 8 @50158 has 30 MA's), (10, 50167), (Start: 14 @50218 has 69 MA's), (25, 50416),

Gene: Donkeykong_98 Start: 53578, Stop: 53814, Start Num: 14

Candidate Starts for Donkeykong_98:

(Start: 8 @53518 has 30 MA's), (10, 53527), (Start: 14 @53578 has 69 MA's), (24, 53749), (25, 53773),

Gene: DosHalletts_92 Start: 51582, Stop: 51818, Start Num: 14

Candidate Starts for DosHalletts_92:

(Start: 8 @51522 has 30 MA's), (10, 51531), (Start: 14 @51582 has 69 MA's), (24, 51753), (25, 51777),

Gene: DotProduct_85 Start: 49272, Stop: 49568, Start Num: 8

Candidate Starts for DotProduct_85:

(Start: 8 @49272 has 30 MA's), (10, 49281), (Start: 14 @49332 has 69 MA's), (25, 49530),

Gene: Doug_88 Start: 52337, Stop: 52573, Start Num: 14

Candidate Starts for Doug_88:

(3, 52163), (5, 52175), (Start: 8 @52277 has 30 MA's), (10, 52286), (Start: 14 @52337 has 69 MA's), (25, 52535),

Gene: Duke13_72 Start: 49484, Stop: 49209, Start Num: 14

Candidate Starts for Duke13_72:

(Start: 8 @49544 has 30 MA's), (10, 49535), (Start: 14 @49484 has 69 MA's), (25, 49286),

Gene: Empress_91 Start: 51396, Stop: 51632, Start Num: 14

Candidate Starts for Empress_91:

(Start: 8 @51336 has 30 MA's), (10, 51345), (Start: 14 @51396 has 69 MA's), (24, 51567), (25, 51591),

Gene: Eradicator_84 Start: 49799, Stop: 50035, Start Num: 14

Candidate Starts for Eradicator_84:

(Start: 8 @49739 has 30 MA's), (10, 49748), (Start: 14 @49799 has 69 MA's), (24, 49970), (25, 49994),

Gene: EricMillard_69 Start: 49963, Stop: 49628, Start Num: 8

Candidate Starts for EricMillard_69:

(Start: 8 @49963 has 30 MA's), (10, 49954), (Start: 14 @49903 has 69 MA's), (25, 49705),

Gene: Fancypants_97 Start: 53902, Stop: 54138, Start Num: 14

Candidate Starts for Fancypants_97:

(Start: 8 @53842 has 30 MA's), (10, 53851), (Start: 14 @53902 has 69 MA's), (24, 54073), (25, 54097),

Gene: Fastidio_91 Start: 49445, Stop: 49675, Start Num: 14

Candidate Starts for Fastidio_91:

(Start: 8 @49385 has 30 MA's), (10, 49394), (Start: 14 @49445 has 69 MA's), (24, 49616), (25, 49640),

Gene: Firehouse51_86 Start: 52035, Stop: 52259, Start Num: 14

Candidate Starts for Firehouse51_86:

(Start: 8 @51975 has 30 MA's), (10, 51984), (Start: 14 @52035 has 69 MA's), (24, 52206), (25, 52230),

Gene: Florinda_101 Start: 53017, Stop: 53307, Start Num: 8

Candidate Starts for Florinda_101:

(6, 52912), (Start: 8 @53017 has 30 MA's), (10, 53026), (Start: 14 @53077 has 69 MA's), (24, 53248), (25, 53272), (26, 53302),

Gene: GUmbie_90 Start: 51346, Stop: 51582, Start Num: 14

Candidate Starts for GUmbie_90:

(Start: 8 @51286 has 30 MA's), (10, 51295), (Start: 14 @51346 has 69 MA's), (25, 51544),

Gene: Gaia_115 Start: 65557, Stop: 65751, Start Num: 12

Candidate Starts for Gaia_115:

(Start: 12 @65557 has 2 MA's), (22, 65704), (24, 65737),

Gene: Gandalph_91 Start: 48872, Stop: 49105, Start Num: 14

Candidate Starts for Gandalph_91:

(Start: 8 @48812 has 30 MA's), (10, 48821), (Start: 14 @48872 has 69 MA's), (24, 49043), (25, 49067),

Gene: Geralt_84 Start: 50216, Stop: 50452, Start Num: 14

Candidate Starts for Geralt_84:

(Start: 8 @50156 has 30 MA's), (10, 50165), (Start: 14 @50216 has 69 MA's), (25, 50414),

Gene: GigiOuiOui_86 Start: 50349, Stop: 50585, Start Num: 14

Candidate Starts for GigiOuiOui_86:

(Start: 8 @50289 has 30 MA's), (10, 50298), (Start: 14 @50349 has 69 MA's), (25, 50547),

Gene: Girafales_98 Start: 52622, Stop: 52912, Start Num: 8

Candidate Starts for Girafales_98:

(6, 52517), (Start: 8 @52622 has 30 MA's), (10, 52631), (Start: 14 @52682 has 69 MA's), (24, 52853), (25, 52877), (26, 52907),

Gene: Girr_89 Start: 51613, Stop: 51849, Start Num: 14

Candidate Starts for Girr_89:

(Start: 8 @51553 has 30 MA's), (10, 51562), (Start: 14 @51613 has 69 MA's), (24, 51784), (25, 51808),

Gene: Guppsters_85 Start: 48781, Stop: 49017, Start Num: 14

Candidate Starts for Guppsters_85:

(Start: 8 @48721 has 30 MA's), (10, 48730), (Start: 14 @48781 has 69 MA's), (24, 48952), (25, 48976),

Gene: Hades_88 Start: 48876, Stop: 49172, Start Num: 8

Candidate Starts for Hades_88:

(Start: 8 @48876 has 30 MA's), (10, 48885), (Start: 14 @48936 has 69 MA's), (24, 49107), (25, 49131),

Gene: Hegedechwinu_91 Start: 50212, Stop: 50508, Start Num: 8

Candidate Starts for Hegedechwinu_91:

(Start: 8 @50212 has 30 MA's), (10, 50221), (Start: 14 @50272 has 69 MA's), (24, 50443), (25, 50467),

Gene: lbOuu_86 Start: 49253, Stop: 49489, Start Num: 14

Candidate Starts for lbOuu_86:

(Start: 8 @49193 has 30 MA's), (10, 49202), (Start: 14 @49253 has 69 MA's), (24, 49424), (25, 49448),

Gene: JalFarm20_101 Start: 53265, Stop: 53501, Start Num: 14
Candidate Starts for JalFarm20_101:
(Start: 8 @53205 has 30 MA's), (10, 53214), (Start: 14 @53265 has 69 MA's), (24, 53436), (25, 53460),

Gene: James_93 Start: 52977, Stop: 53273, Start Num: 8
Candidate Starts for James_93:
(Start: 8 @52977 has 30 MA's), (10, 52986), (Start: 14 @53037 has 69 MA's), (24, 53208), (25, 53232),

Gene: Jarcob_93 Start: 52636, Stop: 52872, Start Num: 14
Candidate Starts for Jarcob_93:
(Start: 8 @52576 has 30 MA's), (10, 52585), (Start: 14 @52636 has 69 MA's), (24, 52807), (25, 52831),

Gene: Jinglebell_96 Start: 52786, Stop: 53022, Start Num: 14
Candidate Starts for Jinglebell_96:
(Start: 8 @52726 has 30 MA's), (10, 52735), (Start: 14 @52786 has 69 MA's), (19, 52840), (22, 52924), (25, 52981),

Gene: Juice456_90 Start: 51122, Stop: 51358, Start Num: 14
Candidate Starts for Juice456_90:
(Start: 8 @51062 has 30 MA's), (10, 51071), (Start: 14 @51122 has 69 MA's), (25, 51320),

Gene: Kersh_95 Start: 54006, Stop: 54305, Start Num: 8
Candidate Starts for Kersh_95:
(Start: 8 @54006 has 30 MA's), (10, 54015), (Start: 14 @54066 has 69 MA's), (25, 54264),

Gene: Kimberlium_93 Start: 51162, Stop: 51458, Start Num: 8
Candidate Starts for Kimberlium_93:
(Start: 8 @51162 has 30 MA's), (10, 51171), (Start: 14 @51222 has 69 MA's), (25, 51420),

Gene: KingMidas_91 Start: 51627, Stop: 51863, Start Num: 14
Candidate Starts for KingMidas_91:
(Start: 8 @51567 has 30 MA's), (10, 51576), (Start: 14 @51627 has 69 MA's), (24, 51798), (25, 51822),

Gene: Koella_82 Start: 47796, Stop: 48035, Start Num: 14
Candidate Starts for Koella_82:
(2, 47589), (Start: 8 @47736 has 30 MA's), (10, 47745), (Start: 14 @47796 has 69 MA's), (25, 47994),

Gene: Latretium_93 Start: 51905, Stop: 52129, Start Num: 14
Candidate Starts for Latretium_93:
(Start: 8 @51845 has 30 MA's), (10, 51854), (Start: 14 @51905 has 69 MA's), (24, 52076), (25, 52100),

Gene: Leozinho_88 Start: 48663, Stop: 48899, Start Num: 14
Candidate Starts for Leozinho_88:
(Start: 8 @48603 has 30 MA's), (10, 48612), (Start: 14 @48663 has 69 MA's), (25, 48861),

Gene: Llama_98 Start: 52582, Stop: 52878, Start Num: 8
Candidate Starts for Llama_98:

(Start: 8 @52582 has 30 MA's), (10, 52591), (Start: 14 @52642 has 69 MA's), (19, 52696), (22, 52780), (25, 52837),

Gene: Llij_87 Start: 50129, Stop: 50419, Start Num: 8

Candidate Starts for Llij_87:

(Start: 8 @50129 has 30 MA's), (10, 50138), (Start: 14 @50189 has 69 MA's), (24, 50360), (25, 50384),

Gene: MadMen_97 Start: 51947, Stop: 52186, Start Num: 14

Candidate Starts for MadMen_97:

(Start: 8 @51887 has 30 MA's), (10, 51896), (Start: 14 @51947 has 69 MA's), (25, 52145),

Gene: Mattes_90 Start: 51769, Stop: 52008, Start Num: 14

Candidate Starts for Mattes_90:

(Start: 8 @51709 has 30 MA's), (10, 51718), (Start: 14 @51769 has 69 MA's), (25, 51967),

Gene: Melissauren88_80 Start: 47616, Stop: 47852, Start Num: 14

Candidate Starts for Melissauren88_80:

(Start: 8 @47556 has 30 MA's), (10, 47565), (Start: 14 @47616 has 69 MA's), (24, 47787), (25, 47811),

Gene: MinionDave_90 Start: 51739, Stop: 51969, Start Num: 14

Candidate Starts for MinionDave_90:

(Start: 8 @51679 has 30 MA's), (10, 51688), (Start: 14 @51739 has 69 MA's), (24, 51910), (25, 51934),

Gene: MisterCuddles_90 Start: 51613, Stop: 51849, Start Num: 14

Candidate Starts for MisterCuddles_90:

(Start: 8 @51553 has 30 MA's), (10, 51562), (Start: 14 @51613 has 69 MA's), (24, 51784), (25, 51808),

Gene: Modragons_96 Start: 52630, Stop: 52866, Start Num: 14

Candidate Starts for Modragons_96:

(Start: 8 @52570 has 30 MA's), (10, 52579), (Start: 14 @52630 has 69 MA's), (19, 52684), (22, 52768), (25, 52825),

Gene: Mozy_97 Start: 51483, Stop: 51770, Start Num: 8

Candidate Starts for Mozy_97:

(Start: 8 @51483 has 30 MA's), (10, 51492), (Start: 14 @51543 has 69 MA's), (20, 51633), (24, 51717), (25, 51741),

Gene: MulchSalad_94 Start: 52605, Stop: 52829, Start Num: 14

Candidate Starts for MulchSalad_94:

(4, 52434), (7, 52452), (Start: 8 @52545 has 30 MA's), (10, 52554), (Start: 14 @52605 has 69 MA's), (24, 52776), (25, 52800),

Gene: Mutaforma13_92 Start: 50818, Stop: 51102, Start Num: 8

Candidate Starts for Mutaforma13_92:

(Start: 8 @50818 has 30 MA's), (10, 50827), (Start: 14 @50878 has 69 MA's), (24, 51049), (25, 51073),

Gene: Nebkiss_116 Start: 64483, Stop: 64677, Start Num: 12

Candidate Starts for Nebkiss_116:

(Start: 12 @64483 has 2 MA's), (22, 64630), (24, 64663),

Gene: Nimbo_83 Start: 50218, Stop: 50454, Start Num: 14

Candidate Starts for Nimbo_83:

(Start: 8 @50158 has 30 MA's), (10, 50167), (Start: 14 @50218 has 69 MA's), (25, 50416),

Gene: NormanBulbieJr_88 Start: 51810, Stop: 52049, Start Num: 14

Candidate Starts for NormanBulbieJr_88:

(2, 51603), (Start: 8 @51750 has 30 MA's), (10, 51759), (Start: 14 @51810 has 69 MA's), (25, 52008),

Gene: Ochi17_97 Start: 52177, Stop: 52473, Start Num: 8

Candidate Starts for Ochi17_97:

(Start: 8 @52177 has 30 MA's), (10, 52186), (Start: 14 @52237 has 69 MA's), (19, 52291), (22, 52375), (25, 52432),

Gene: OfUltron_99 Start: 52786, Stop: 53022, Start Num: 14

Candidate Starts for OfUltron_99:

(Start: 8 @52726 has 30 MA's), (10, 52735), (Start: 14 @52786 has 69 MA's), (19, 52840), (22, 52924), (25, 52981),

Gene: Ogopogo_97 Start: 51107, Stop: 51346, Start Num: 14

Candidate Starts for Ogopogo_97:

(Start: 8 @51047 has 30 MA's), (10, 51056), (Start: 14 @51107 has 69 MA's), (25, 51305),

Gene: Oksu_94 Start: 53367, Stop: 53603, Start Num: 14

Candidate Starts for Oksu_94:

(Start: 8 @53307 has 30 MA's), (10, 53316), (Start: 14 @53367 has 69 MA's), (24, 53538), (25, 53562),

Gene: OldBen_88 Start: 51610, Stop: 51846, Start Num: 14

Candidate Starts for OldBen_88:

(Start: 8 @51550 has 30 MA's), (10, 51559), (Start: 14 @51610 has 69 MA's), (25, 51808),

Gene: OlympiaSaint_93 Start: 51979, Stop: 52215, Start Num: 14

Candidate Starts for OlympiaSaint_93:

(Start: 8 @51919 has 30 MA's), (10, 51928), (Start: 14 @51979 has 69 MA's), (24, 52150), (25, 52174),

Gene: Optimus_74 Start: 50678, Stop: 50343, Start Num: 8

Candidate Starts for Optimus_74:

(Start: 8 @50678 has 30 MA's), (10, 50669), (Start: 14 @50618 has 69 MA's), (25, 50420),

Gene: Ovechkin_95 Start: 52388, Stop: 52684, Start Num: 8

Candidate Starts for Ovechkin_95:

(1, 52226), (Start: 8 @52388 has 30 MA's), (10, 52397), (Start: 14 @52448 has 69 MA's), (19, 52502), (22, 52586), (25, 52643),

Gene: OwlsT2W_90 Start: 50280, Stop: 50516, Start Num: 14

Candidate Starts for OwlsT2W_90:

(Start: 8 @50220 has 30 MA's), (10, 50229), (Start: 14 @50280 has 69 MA's), (24, 50451), (25, 50475),

Gene: PHappiness_91 Start: 52439, Stop: 52675, Start Num: 14

Candidate Starts for PHappiness_91:
(Start: 8 @52379 has 30 MA's), (10, 52388), (Start: 14 @52439 has 69 MA's), (25, 52637),

Gene: Pacc40_87 Start: 52144, Stop: 52443, Start Num: 8
Candidate Starts for Pacc40_87:
(Start: 8 @52144 has 30 MA's), (10, 52153), (Start: 14 @52204 has 69 MA's), (25, 52402),

Gene: Phasih_88 Start: 49971, Stop: 50204, Start Num: 14
Candidate Starts for Phasih_88:
(Start: 14 @49971 has 69 MA's), (24, 50142), (25, 50166),

Gene: Polka14_95 Start: 53191, Stop: 53427, Start Num: 14
Candidate Starts for Polka14_95:
(Start: 8 @53131 has 30 MA's), (10, 53140), (Start: 14 @53191 has 69 MA's), (24, 53362), (25, 53386),

Gene: Pollywog_93 Start: 52973, Stop: 53269, Start Num: 8
Candidate Starts for Pollywog_93:
(Start: 8 @52973 has 30 MA's), (10, 52982), (Start: 14 @53033 has 69 MA's), (24, 53204), (25, 53228),

Gene: Pound_70 Start: 51651, Stop: 51316, Start Num: 8
Candidate Starts for Pound_70:
(Start: 8 @51651 has 30 MA's), (10, 51642), (Start: 14 @51591 has 69 MA's), (25, 51393),

Gene: Priscilla_90 Start: 51908, Stop: 52147, Start Num: 14
Candidate Starts for Priscilla_90:
(2, 51701), (Start: 8 @51848 has 30 MA's), (10, 51857), (Start: 14 @51908 has 69 MA's), (25, 52106),

Gene: QuickMath_92 Start: 51474, Stop: 51710, Start Num: 14
Candidate Starts for QuickMath_92:
(Start: 8 @51414 has 30 MA's), (10, 51423), (Start: 14 @51474 has 69 MA's), (25, 51672),

Gene: Quico_98 Start: 52837, Stop: 53127, Start Num: 8
Candidate Starts for Quico_98:
(6, 52732), (Start: 8 @52837 has 30 MA's), (10, 52846), (Start: 14 @52897 has 69 MA's), (24, 53068), (25, 53092), (26, 53122),

Gene: Radiance_89 Start: 51319, Stop: 51555, Start Num: 14
Candidate Starts for Radiance_89:
(6, 51154), (Start: 8 @51259 has 30 MA's), (10, 51268), (Start: 14 @51319 has 69 MA's), (24, 51490), (25, 51514),

Gene: Ramsey_96 Start: 53396, Stop: 53689, Start Num: 8
Candidate Starts for Ramsey_96:
(Start: 8 @53396 has 30 MA's), (10, 53405), (Start: 14 @53456 has 69 MA's), (24, 53627), (25, 53651),

Gene: Renaud18_100 Start: 51917, Stop: 52153, Start Num: 14
Candidate Starts for Renaud18_100:
(Start: 8 @51857 has 30 MA's), (10, 51866), (Start: 14 @51917 has 69 MA's), (24, 52088), (25, 52112),

Gene: Rita_92 Start: 52822, Stop: 53061, Start Num: 14

Candidate Starts for Rita_92:

(Start: 8 @52762 has 30 MA's), (10, 52771), (Start: 14 @52822 has 69 MA's), (25, 53020),

Gene: RitaG_90 Start: 52241, Stop: 52477, Start Num: 14

Candidate Starts for RitaG_90:

(Start: 8 @52181 has 30 MA's), (10, 52190), (Start: 14 @52241 has 69 MA's), (25, 52439),

Gene: RockyHorror_95 Start: 51354, Stop: 51593, Start Num: 14

Candidate Starts for RockyHorror_95:

(Start: 8 @51294 has 30 MA's), (10, 51303), (Start: 14 @51354 has 69 MA's), (25, 51552),

Gene: Ruby_87 Start: 51614, Stop: 51850, Start Num: 14

Candidate Starts for Ruby_87:

(Start: 8 @51554 has 30 MA's), (10, 51563), (Start: 14 @51614 has 69 MA's), (25, 51812),

Gene: SG4_92 Start: 52390, Stop: 52686, Start Num: 8

Candidate Starts for SG4_92:

(Start: 8 @52390 has 30 MA's), (10, 52399), (Start: 14 @52450 has 69 MA's), (24, 52621), (25, 52645),

Gene: STLscum_63 Start: 41682, Stop: 41449, Start Num: 14

Candidate Starts for STLscum_63:

(Start: 8 @41742 has 30 MA's), (10, 41733), (Start: 14 @41682 has 69 MA's), (25, 41484),

Gene: Sabbb_94 Start: 49914, Stop: 50150, Start Num: 14

Candidate Starts for Sabbb_94:

(1, 49698), (Start: 8 @49854 has 30 MA's), (10, 49863), (Start: 14 @49914 has 69 MA's), (24, 50085), (25, 50109),

Gene: Sandalphon_89 Start: 52466, Stop: 52702, Start Num: 14

Candidate Starts for Sandalphon_89:

(Start: 8 @52406 has 30 MA's), (10, 52415), (Start: 14 @52466 has 69 MA's), (24, 52637), (25, 52661),

Gene: Scottish_91 Start: 51066, Stop: 51302, Start Num: 14

Candidate Starts for Scottish_91:

(Start: 8 @51006 has 30 MA's), (10, 51015), (Start: 14 @51066 has 69 MA's), (24, 51237), (25, 51261),

Gene: Seabastian_99 Start: 52787, Stop: 53023, Start Num: 14

Candidate Starts for Seabastian_99:

(Start: 8 @52727 has 30 MA's), (10, 52736), (Start: 14 @52787 has 69 MA's), (19, 52841), (22, 52925), (25, 52982),

Gene: ShiLan_92 Start: 53432, Stop: 53728, Start Num: 8

Candidate Starts for ShiLan_92:

(Start: 8 @53432 has 30 MA's), (10, 53441), (Start: 14 @53492 has 69 MA's), (24, 53663), (25, 53687),

Gene: ShroomBoi_89 Start: 51000, Stop: 51233, Start Num: 14

Candidate Starts for ShroomBoi_89:

(Start: 8 @50940 has 30 MA's), (10, 50949), (Start: 14 @51000 has 69 MA's), (19, 51054), (22, 51138), (25, 51195),

Gene: Soul22_92 Start: 49297, Stop: 49563, Start Num: 14

Candidate Starts for Soul22_92:

(Start: 8 @49237 has 30 MA's), (10, 49246), (Start: 14 @49297 has 69 MA's), (16, 49309), (18, 49381), (22, 49471), (25, 49528),

Gene: Sparkdehlily_99 Start: 50589, Stop: 50888, Start Num: 8

Candidate Starts for Sparkdehlily_99:

(Start: 8 @50589 has 30 MA's), (10, 50598), (Start: 14 @50649 has 69 MA's), (25, 50847),

Gene: Spoonbill_89 Start: 49405, Stop: 49641, Start Num: 14

Candidate Starts for Spoonbill_89:

(Start: 8 @49345 has 30 MA's), (10, 49354), (Start: 14 @49405 has 69 MA's), (24, 49576), (25, 49600),

Gene: SuperGrey_92 Start: 53452, Stop: 53688, Start Num: 14

Candidate Starts for SuperGrey_92:

(Start: 8 @53392 has 30 MA's), (10, 53401), (Start: 14 @53452 has 69 MA's), (24, 53623), (25, 53647),

Gene: TDanisky_101 Start: 50649, Stop: 50888, Start Num: 14

Candidate Starts for TDanisky_101:

(Start: 8 @50589 has 30 MA's), (10, 50598), (Start: 14 @50649 has 69 MA's), (25, 50847),

Gene: Tasp14_1 Start: 534, Stop: 773, Start Num: 9

Candidate Starts for Tasp14_1:

(Start: 9 @534 has 2 MA's), (11, 570), (13, 579), (Start: 15 @597 has 4 MA's), (17, 618), (18, 636), (19, 642), (22, 726), (23, 753),

Gene: Thibault_62 Start: 46268, Stop: 45933, Start Num: 8

Candidate Starts for Thibault_62:

(Start: 8 @46268 has 30 MA's), (10, 46259), (Start: 14 @46208 has 69 MA's), (25, 46010),

Gene: Tootsieroll_86 Start: 51876, Stop: 52112, Start Num: 14

Candidate Starts for Tootsieroll_86:

(Start: 14 @51876 has 69 MA's), (24, 52047), (25, 52071),

Gene: Wachhund_88 Start: 48256, Stop: 48486, Start Num: 14

Candidate Starts for Wachhund_88:

(Start: 8 @48196 has 30 MA's), (10, 48205), (Start: 14 @48256 has 69 MA's), (24, 48427), (25, 48451),

Gene: Whatsapiecost_84 Start: 46263, Stop: 46499, Start Num: 14

Candidate Starts for Whatsapiecost_84:

(Start: 8 @46203 has 30 MA's), (10, 46212), (Start: 14 @46263 has 69 MA's), (24, 46434), (25, 46458),

Gene: Zizzle_93 Start: 52799, Stop: 53038, Start Num: 14

Candidate Starts for Zizzle_93:

(Start: 8 @52739 has 30 MA's), (10, 52748), (Start: 14 @52799 has 69 MA's), (25, 52997),