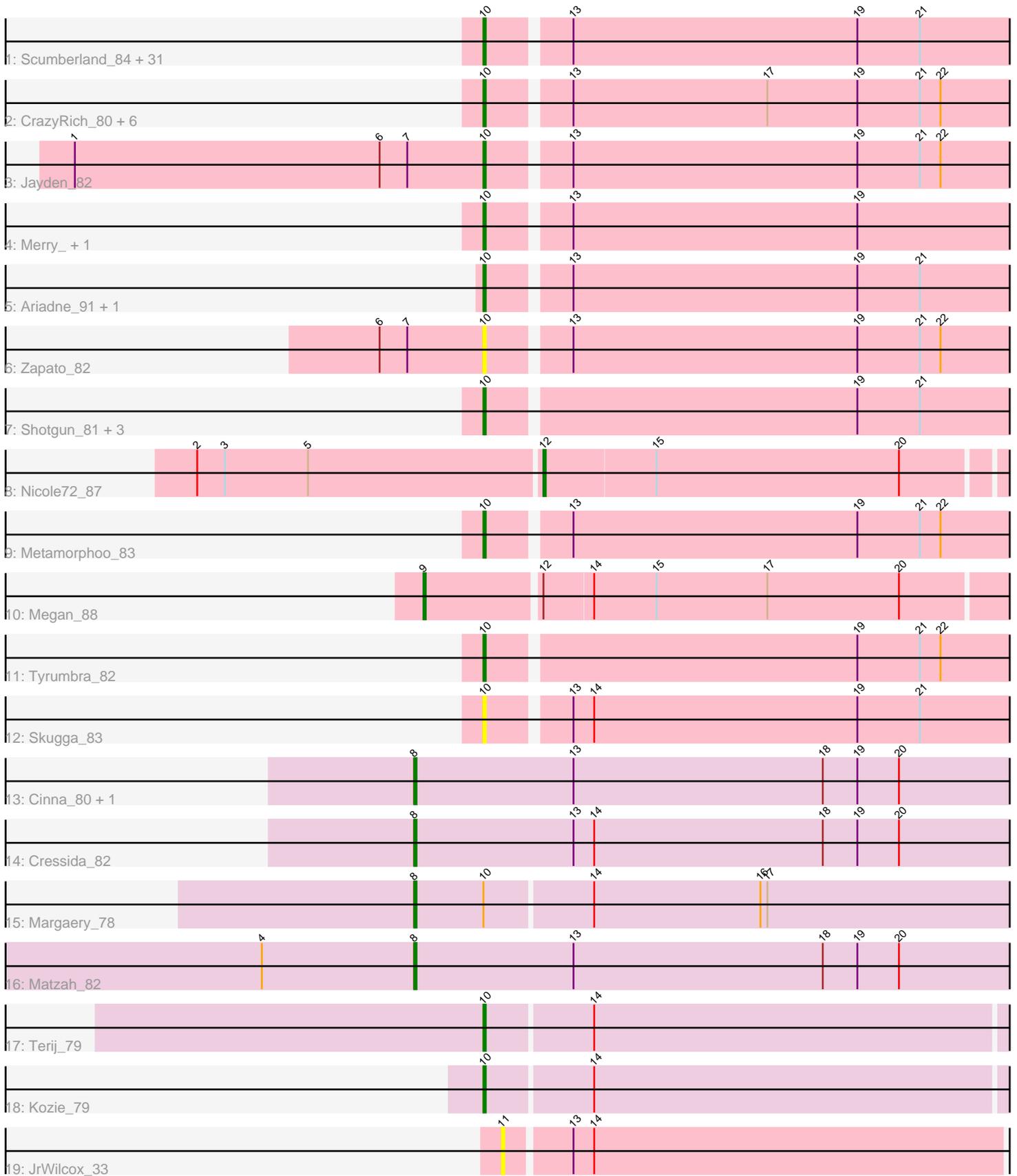# Pham 289414

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 289414 Report

This analysis was run 03/28/26 on database version 641.

Pham number 289414 has 62 members, 8 are drafts.

Phages represented in each track:
• Track 1 : Scumberland_84, Jollipop_83, Fireman_86, Lucretia_82, BrazzalePHS_81, PierreOrion_81, Phrancesco_82, Gina_87, EarickHC_83, Ganandorf_80, Pulchra_84, Yeti_83, Piperis_83, Busephilis_81, Teamocil_87, BeagleBug_81, Savannah_81, Glorp_83, Crisis_83, Rockwell_81, Cranjis_83, Phorgeous_82, Selwyn23_83, Jefe_82, KaiHaiDragon_83, Ramiel05_81, Shrubaron_87, Kowalski_81, Paschalis_82, RobsFeet_89, Onika_81, Antares_82
• Track 2 : CrazyRich_80, LittleFortune_83, NoodlelyBoi_82, ClearAsMud_85, PhedwardCullen_79, PiperSansNom_83, SirFrank_81
• Track 3 : Jayden_82
• Track 4 : Merry_, Sunny_
• Track 5 : Ariadne_91, Smarties_91
• Track 6 : Zapato_82
• Track 7 : Shotgun_81, Honeyfin_82, Hermeonysus_82, Quhwah_86
• Track 8 : Nicole72_87
• Track 9 : Metamorphoo_83
• Track 10 : Megan_88
• Track 11 : Tyrumbra_82
• Track 12 : Skugga_83
• Track 13 : Cinna_80, MementoMori_81
• Track 14 : Cressida_82
• Track 15 : Margaery_78
• Track 16 : Matzah_82
• Track 17 : Terij_79
• Track 18 : Kozie_79
• Track 19 : JrWilcox_33


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


The start number called the most often in the published annotations is 10, it was called in 47 of the 54 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Antares_82, Ariadne_91, BeagleBug_81, BrazzalePHS_81, Busephilis_81, ClearAsMud_85, Cranjis_83, CrazyRich_80, Crisis_83, EarickHC_83, Fireman_86,

Ganandorf_80, Gina_87, Glorp_83, Hermeonysus_82, Honeyfin_82, Jayden_82, Jefe_82, Jollipop_83, KaiHaiDragon_83, Kowalski_81, Kozie_79, LittleFortune_83, Lucretia_82, Merry_, Metamorphoo_83, NoodlelyBoi_82, Onika_81, Paschalis_82, PhedwardCullen_79, Phorgeous_82, Phrancesco_82, PierreOrion_81, PiperSansNom_83, Piperis_83, Pulchra_84, Quhwah_86, Ramiel05_81, RobsFeet_89, Rockwell_81, Savannah_81, Scumberland_84, Selwyn23_83, Shotgun_81, Shrubaron_87, SirFrank_81, Skugga_83, Smarties_91, Sunny_, Teamocil_87, Terij_79, Tyrumbra_82, Yeti_83, Zapato_82,

Genes that have the "Most Annotated" start but do not call it:
• Margaery_78,

Genes that do not have the "Most Annotated" start:
• Cinna_80, Cressida_82, JrWilcox_33, Matzah_82, Megan_88, MementoMori_81, Nicole72_87,

**Summary by start number:**

Start 8:
• Found in 5 of 62 ( 8.1% ) of genes in pham
• Manual Annotations of this start: 5 of 54
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cinna_80 (EI), Cressida_82 (EI), Margaery_78 (EI), Matzah_82 (EI), MementoMori_81 (EI),

Start 9:
• Found in 1 of 62 ( 1.6% ) of genes in pham
• Manual Annotations of this start: 1 of 54
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Megan_88 (EC),

Start 10:
• Found in 55 of 62 ( 88.7% ) of genes in pham
• Manual Annotations of this start: 47 of 54
• Called 98.2% of time when present
• Phage (with cluster) where this start called: Antares_82 (EC), Ariadne_91 (EC), BeagleBug_81 (EC), BrazzalePHS_81 (EC), Busephilis_81 (EC), ClearAsMud_85 (EC), Cranjis_83 (EC), CrazyRich_80 (EC), Crisis_83 (EC), EarickHC_83 (EC), Fireman_86 (EC), Ganandorf_80 (EC), Gina_87 (EC), Glorp_83 (EC), Hermeonysus_82 (EC), Honeyfin_82 (EC), Jayden_82 (EC), Jefe_82 (EC), Jollipop_83 (EC), KaiHaiDragon_83 (EC), Kowalski_81 (EC), Kozie_79 (EI), LittleFortune_83 (EC), Lucretia_82 (EC), Merry_ (EC), Metamorphoo_83 (EC), NoodlelyBoi_82 (EC), Onika_81 (EC), Paschalis_82 (EC), PhedwardCullen_79 (EC), Phorgeous_82 (EC), Phrancesco_82 (EC), PierreOrion_81 (EC), PiperSansNom_83 (EC), Piperis_83 (EC), Pulchra_84 (EC), Quhwah_86 (EC), Ramiel05_81 (EC), RobsFeet_89 (EC), Rockwell_81 (EC), Savannah_81 (EC), Scumberland_84 (EC), Selwyn23_83 (EC), Shotgun_81 (EC), Shrubaron_87 (EC), SirFrank_81 (EC), Skugga_83 (EC), Smarties_91 (EC), Sunny_ (EC), Teamocil_87 (EC), Terij_79 (EI), Tyrumbra_82 (EC), Yeti_83 (EC), Zapato_82 (EC),

Start 11:
• Found in 1 of 62 ( 1.6% ) of genes in pham
• No Manual Annotations of this start.

• Called 100.0% of time when present
• Phage (with cluster) where this start called: JrWilcox_33 (GL),

Start 12:
• Found in 2 of 62 ( 3.2% ) of genes in pham
• Manual Annotations of this start: 1 of 54
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Nicole72_87 (EC),

**Summary by clusters:**

There are 3 clusters represented in this pham: GL, EI, EC,

Info for manual annotations of cluster EC:
•Start number 9 was manually annotated 1 time for cluster EC.
•Start number 10 was manually annotated 45 times for cluster EC.
•Start number 12 was manually annotated 1 time for cluster EC.

Info for manual annotations of cluster EI:
•Start number 8 was manually annotated 5 times for cluster EI.
•Start number 10 was manually annotated 2 times for cluster EI.

### *Gene Information:*

Gene: Antares_82 Start: 48883, Stop: 49116, Start Num: 10
Candidate Starts for Antares_82:
(Start: 10 @48883 has 47 MA's), (13, 48916), (19, 49039), (21, 49066),

Gene: Ariadne_91 Start: 49718, Stop: 49951, Start Num: 10
Candidate Starts for Ariadne_91:
(Start: 10 @49718 has 47 MA's), (13, 49751), (19, 49874), (21, 49901),

Gene: BeagleBug_81 Start: 48686, Stop: 48919, Start Num: 10
Candidate Starts for BeagleBug_81:
(Start: 10 @48686 has 47 MA's), (13, 48719), (19, 48842), (21, 48869),

Gene: BrazzalePHS_81 Start: 48683, Stop: 48916, Start Num: 10
Candidate Starts for BrazzalePHS_81:
(Start: 10 @48683 has 47 MA's), (13, 48716), (19, 48839), (21, 48866),

Gene: Busephilis_81 Start: 48590, Stop: 48823, Start Num: 10
Candidate Starts for Busephilis_81:
(Start: 10 @48590 has 47 MA's), (13, 48623), (19, 48746), (21, 48773),

Gene: Cinna_80 Start: 49555, Stop: 49815, Start Num: 8
Candidate Starts for Cinna_80:
(Start: 8 @49555 has 5 MA's), (13, 49624), (18, 49732), (19, 49747), (20, 49765),

Gene: ClearAsMud_85 Start: 48908, Stop: 49135, Start Num: 10
Candidate Starts for ClearAsMud_85:

(Start: 10 @48908 has 47 MA's), (13, 48941), (17, 49025), (19, 49064), (21, 49091), (22, 49100),

Gene: Cranjis_83 Start: 48870, Stop: 49103, Start Num: 10
Candidate Starts for Cranjis_83:
(Start: 10 @48870 has 47 MA's), (13, 48903), (19, 49026), (21, 49053),

Gene: CrazyRich_80 Start: 48380, Stop: 48607, Start Num: 10
Candidate Starts for CrazyRich_80:
(Start: 10 @48380 has 47 MA's), (13, 48413), (17, 48497), (19, 48536), (21, 48563), (22, 48572),

Gene: Cressida_82 Start: 49856, Stop: 50116, Start Num: 8
Candidate Starts for Cressida_82:
(Start: 8 @49856 has 5 MA's), (13, 49925), (14, 49934), (18, 50033), (19, 50048), (20, 50066),

Gene: Crisis_83 Start: 48826, Stop: 49059, Start Num: 10
Candidate Starts for Crisis_83:
(Start: 10 @48826 has 47 MA's), (13, 48859), (19, 48982), (21, 49009),

Gene: EarickHC_83 Start: 48748, Stop: 48981, Start Num: 10
Candidate Starts for EarickHC_83:
(Start: 10 @48748 has 47 MA's), (13, 48781), (19, 48904), (21, 48931),

Gene: Fireman_86 Start: 50140, Stop: 50367, Start Num: 10
Candidate Starts for Fireman_86:
(Start: 10 @50140 has 47 MA's), (13, 50173), (19, 50296), (21, 50323),

Gene: Ganandorf_80 Start: 48234, Stop: 48467, Start Num: 10
Candidate Starts for Ganandorf_80:
(Start: 10 @48234 has 47 MA's), (13, 48267), (19, 48390), (21, 48417),

Gene: Gina_87 Start: 48746, Stop: 48973, Start Num: 10
Candidate Starts for Gina_87:
(Start: 10 @48746 has 47 MA's), (13, 48779), (19, 48902), (21, 48929),

Gene: Glorp_83 Start: 48635, Stop: 48868, Start Num: 10
Candidate Starts for Glorp_83:
(Start: 10 @48635 has 47 MA's), (13, 48668), (19, 48791), (21, 48818),

Gene: Hermeonysus_82 Start: 48591, Stop: 48824, Start Num: 10
Candidate Starts for Hermeonysus_82:
(Start: 10 @48591 has 47 MA's), (19, 48747), (21, 48774),

Gene: Honeyfin_82 Start: 48424, Stop: 48657, Start Num: 10
Candidate Starts for Honeyfin_82:
(Start: 10 @48424 has 47 MA's), (19, 48580), (21, 48607),

Gene: Jayden_82 Start: 48351, Stop: 48578, Start Num: 10
Candidate Starts for Jayden_82:
(1, 48174), (6, 48306), (7, 48318), (Start: 10 @48351 has 47 MA's), (13, 48384), (19, 48507), (21, 48534), (22, 48543),

Gene: Jefe_82 Start: 48646, Stop: 48879, Start Num: 10
Candidate Starts for Jefe_82:

(Start: 10 @48646 has 47 MA's), (13, 48679), (19, 48802), (21, 48829),

Gene: Jollipop_83 Start: 49011, Stop: 49244, Start Num: 10
Candidate Starts for Jollipop_83:
(Start: 10 @49011 has 47 MA's), (13, 49044), (19, 49167), (21, 49194),

Gene: JrWilcox_33 Start: 18993, Stop: 19205, Start Num: 11
Candidate Starts for JrWilcox_33:
(11, 18993), (13, 19020), (14, 19029),

Gene: KaiHaiDragon_83 Start: 48748, Stop: 48981, Start Num: 10
Candidate Starts for KaiHaiDragon_83:
(Start: 10 @48748 has 47 MA's), (13, 48781), (19, 48904), (21, 48931),

Gene: Kowalski_81 Start: 48678, Stop: 48911, Start Num: 10
Candidate Starts for Kowalski_81:
(Start: 10 @48678 has 47 MA's), (13, 48711), (19, 48834), (21, 48861),

Gene: Kozie_79 Start: 49382, Stop: 49612, Start Num: 10
Candidate Starts for Kozie_79:
(Start: 10 @49382 has 47 MA's), (14, 49427),

Gene: LittleFortune_83 Start: 48667, Stop: 48894, Start Num: 10
Candidate Starts for LittleFortune_83:
(Start: 10 @48667 has 47 MA's), (13, 48700), (17, 48784), (19, 48823), (21, 48850), (22, 48859),

Gene: Lucretia_82 Start: 48720, Stop: 48953, Start Num: 10
Candidate Starts for Lucretia_82:
(Start: 10 @48720 has 47 MA's), (13, 48753), (19, 48876), (21, 48903),

Gene: Margaery_78 Start: 49302, Stop: 49565, Start Num: 8
Candidate Starts for Margaery_78:
(Start: 8 @49302 has 5 MA's), (Start: 10 @49332 has 47 MA's), (14, 49377), (16, 49449), (17, 49452),

Gene: Matzah_82 Start: 49610, Stop: 49870, Start Num: 8
Candidate Starts for Matzah_82:
(4, 49544), (Start: 8 @49610 has 5 MA's), (13, 49679), (18, 49787), (19, 49802), (20, 49820),

Gene: Megan_88 Start: 54259, Stop: 54507, Start Num: 9
Candidate Starts for Megan_88:
(Start: 9 @54259 has 1 MA's), (Start: 12 @54307 has 1 MA's), (14, 54328), (15, 54355), (17, 54403), (20, 54460),

Gene: MementoMori_81 Start: 49295, Stop: 49555, Start Num: 8
Candidate Starts for MementoMori_81:
(Start: 8 @49295 has 5 MA's), (13, 49364), (18, 49472), (19, 49487), (20, 49505),

Gene: Merry_ Start: 48837, Stop: 49064, Start Num: 10
Candidate Starts for Merry_:
(Start: 10 @48837 has 47 MA's), (13, 48870), (19, 48993),

Gene: Metamorphoo_83 Start: 49433, Stop: 49660, Start Num: 10
Candidate Starts for Metamorphoo_83:

(Start: 10 @49433 has 47 MA's), (13, 49466), (19, 49589), (21, 49616), (22, 49625),

Gene: Nicole72_87 Start: 54338, Stop: 54535, Start Num: 12
Candidate Starts for Nicole72_87:
(2, 54191), (3, 54203), (5, 54239), (Start: 12 @54338 has 1 MA's), (15, 54386), (20, 54491),

Gene: NoodlelyBoi_82 Start: 49013, Stop: 49240, Start Num: 10
Candidate Starts for NoodlelyBoi_82:
(Start: 10 @49013 has 47 MA's), (13, 49046), (17, 49130), (19, 49169), (21, 49196), (22, 49205),

Gene: Onika_81 Start: 48649, Stop: 48882, Start Num: 10
Candidate Starts for Onika_81:
(Start: 10 @48649 has 47 MA's), (13, 48682), (19, 48805), (21, 48832),

Gene: Paschalis_82 Start: 48676, Stop: 48909, Start Num: 10
Candidate Starts for Paschalis_82:
(Start: 10 @48676 has 47 MA's), (13, 48709), (19, 48832), (21, 48859),

Gene: PhedwardCullen_79 Start: 48127, Stop: 48354, Start Num: 10
Candidate Starts for PhedwardCullen_79:
(Start: 10 @48127 has 47 MA's), (13, 48160), (17, 48244), (19, 48283), (21, 48310), (22, 48319),

Gene: Phorgeous_82 Start: 48465, Stop: 48698, Start Num: 10
Candidate Starts for Phorgeous_82:
(Start: 10 @48465 has 47 MA's), (13, 48498), (19, 48621), (21, 48648),

Gene: Phrancesco_82 Start: 48776, Stop: 49009, Start Num: 10
Candidate Starts for Phrancesco_82:
(Start: 10 @48776 has 47 MA's), (13, 48809), (19, 48932), (21, 48959),

Gene: PierreOrion_81 Start: 48485, Stop: 48718, Start Num: 10
Candidate Starts for PierreOrion_81:
(Start: 10 @48485 has 47 MA's), (13, 48518), (19, 48641), (21, 48668),

Gene: PiperSansNom_83 Start: 48985, Stop: 49212, Start Num: 10
Candidate Starts for PiperSansNom_83:
(Start: 10 @48985 has 47 MA's), (13, 49018), (17, 49102), (19, 49141), (21, 49168), (22, 49177),

Gene: Piperis_83 Start: 48584, Stop: 48817, Start Num: 10
Candidate Starts for Piperis_83:
(Start: 10 @48584 has 47 MA's), (13, 48617), (19, 48740), (21, 48767),

Gene: Pulchra_84 Start: 49151, Stop: 49384, Start Num: 10
Candidate Starts for Pulchra_84:
(Start: 10 @49151 has 47 MA's), (13, 49184), (19, 49307), (21, 49334),

Gene: Quhwah_86 Start: 49305, Stop: 49538, Start Num: 10
Candidate Starts for Quhwah_86:
(Start: 10 @49305 has 47 MA's), (19, 49461), (21, 49488),

Gene: Ramiel05_81 Start: 48678, Stop: 48911, Start Num: 10
Candidate Starts for Ramiel05_81:
(Start: 10 @48678 has 47 MA's), (13, 48711), (19, 48834), (21, 48861),

Gene: RobsFeet_89 Start: 49750, Stop: 49977, Start Num: 10
Candidate Starts for RobsFeet_89:
(Start: 10 @49750 has 47 MA's), (13, 49783), (19, 49906), (21, 49933),

Gene: Rockwell_81 Start: 48702, Stop: 48935, Start Num: 10
Candidate Starts for Rockwell_81:
(Start: 10 @48702 has 47 MA's), (13, 48735), (19, 48858), (21, 48885),

Gene: Savannah_81 Start: 48870, Stop: 49103, Start Num: 10
Candidate Starts for Savannah_81:
(Start: 10 @48870 has 47 MA's), (13, 48903), (19, 49026), (21, 49053),

Gene: Scumberland_84 Start: 48924, Stop: 49157, Start Num: 10
Candidate Starts for Scumberland_84:
(Start: 10 @48924 has 47 MA's), (13, 48957), (19, 49080), (21, 49107),

Gene: Selwyn23_83 Start: 48809, Stop: 49042, Start Num: 10
Candidate Starts for Selwyn23_83:
(Start: 10 @48809 has 47 MA's), (13, 48842), (19, 48965), (21, 48992),

Gene: Shotgun_81 Start: 48180, Stop: 48413, Start Num: 10
Candidate Starts for Shotgun_81:
(Start: 10 @48180 has 47 MA's), (19, 48336), (21, 48363),

Gene: Shrubaron_87 Start: 49340, Stop: 49567, Start Num: 10
Candidate Starts for Shrubaron_87:
(Start: 10 @49340 has 47 MA's), (13, 49373), (19, 49496), (21, 49523),

Gene: SirFrank_81 Start: 48600, Stop: 48827, Start Num: 10
Candidate Starts for SirFrank_81:
(Start: 10 @48600 has 47 MA's), (13, 48633), (17, 48717), (19, 48756), (21, 48783), (22, 48792),

Gene: Skugga_83 Start: 49022, Stop: 49249, Start Num: 10
Candidate Starts for Skugga_83:
(Start: 10 @49022 has 47 MA's), (13, 49055), (14, 49064), (19, 49178), (21, 49205),

Gene: Smarties_91 Start: 49715, Stop: 49948, Start Num: 10
Candidate Starts for Smarties_91:
(Start: 10 @49715 has 47 MA's), (13, 49748), (19, 49871), (21, 49898),

Gene: Sunny_ Start: 48839, Stop: 49066, Start Num: 10
Candidate Starts for Sunny_:
(Start: 10 @48839 has 47 MA's), (13, 48872), (19, 48995),

Gene: Teamocil_87 Start: 48839, Stop: 49066, Start Num: 10
Candidate Starts for Teamocil_87:
(Start: 10 @48839 has 47 MA's), (13, 48872), (19, 48995), (21, 49022),

Gene: Terij_79 Start: 48974, Stop: 49204, Start Num: 10
Candidate Starts for Terij_79:
(Start: 10 @48974 has 47 MA's), (14, 49019),

Gene: Tyrumbra_82 Start: 49354, Stop: 49581, Start Num: 10
Candidate Starts for Tyrumbra_82:
(Start: 10 @49354 has 47 MA's), (19, 49510), (21, 49537), (22, 49546),

Gene: Yeti_83 Start: 48206, Stop: 48439, Start Num: 10
Candidate Starts for Yeti_83:
(Start: 10 @48206 has 47 MA's), (13, 48239), (19, 48362), (21, 48389),

Gene: Zapato_82 Start: 48679, Stop: 48906, Start Num: 10
Candidate Starts for Zapato_82:
(6, 48634), (7, 48646), (Start: 10 @48679 has 47 MA's), (13, 48712), (19, 48835), (21, 48862), (22, 48871),