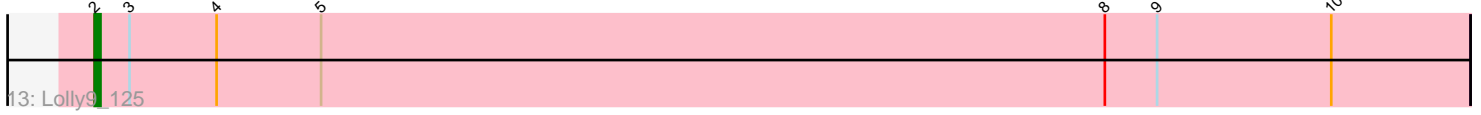
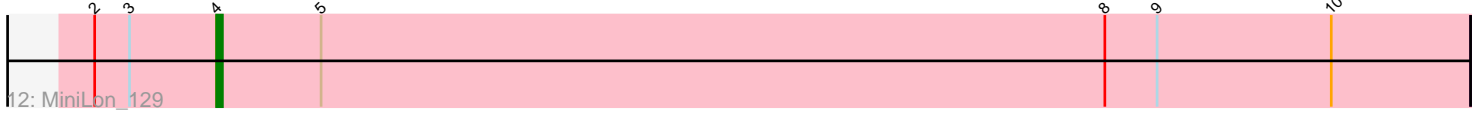
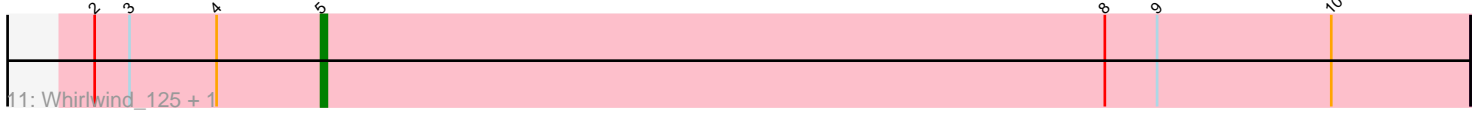
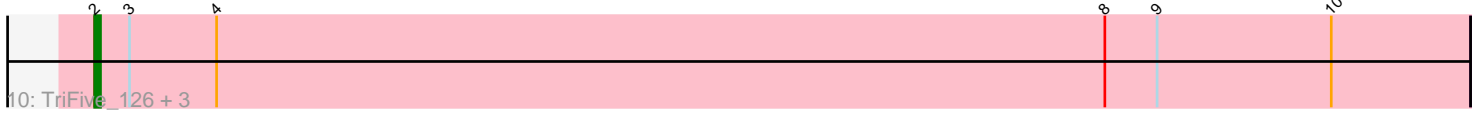
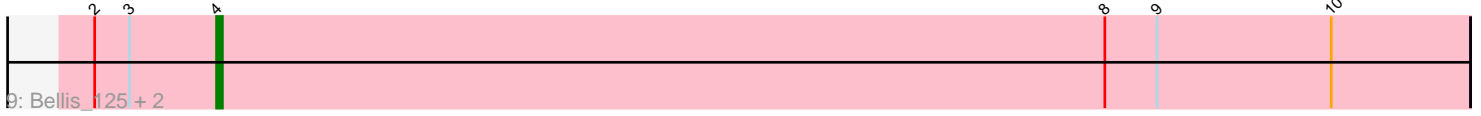
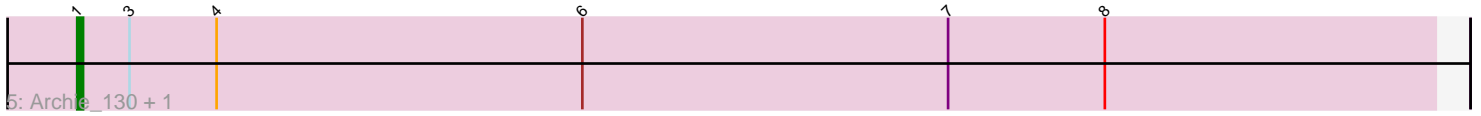
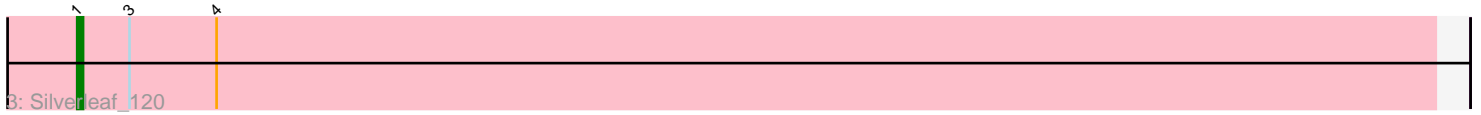
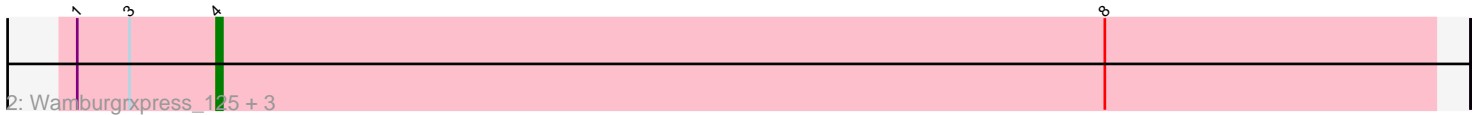
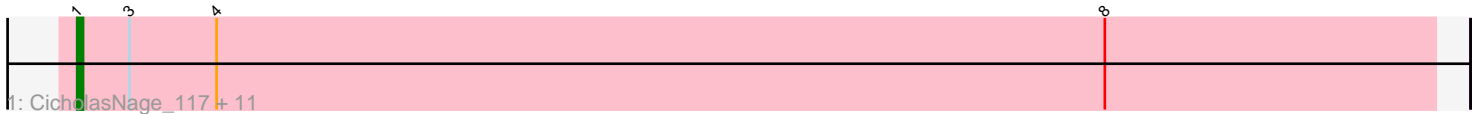


Pham 301315



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 301315 Report

This analysis was run 06/08/26 on database version 649.

Pham number 301315 has 79 members, 16 are drafts.

Phages represented in each track:

- Track 1 : CicholasNage_117, Rose5_124, Appletree2_122, Zaria_127, Acquire49_123, OhShagHennessy_115, Calm_130, MAckerman_124, AvadaKedavra_123, JoeDirt_125, Wyatt2_123, Halena_123
- Track 2 : Wamburgxpress_125, UPIE_122, LeBron_122, Tyson_124
- Track 3 : Silverleaf_120
- Track 4 : Gardann_131, BrainDrainer_141, GuuelaD_129, ZhongYanYuan_128, Netyap_129, SoJulia_134, Crossroads_134, Kahlid_131, DHan_133, Loadrie_132, Vetric_131, Gabriela_131, ChutneyChips_142, Sheng711_143, Douzhi_141, MkaliMitinis3_133, DyoEdafos_142, Quby_144, Finemlucis_131, Wigglewiggle_132, DrSeegs_129, Itos_131, Rossetti_132, Tourach_133, Soap141_132, Lynnae_132
- Track 5 : Archie_130, Bazzle_128
- Track 6 : BigCheese_130, Nicholasp3_132, Winky_131, Faith1_129, LilDestine_128, Breezona_131, Miley16_131, Kropertea_136, Wilder_132, Chaser_139, PYPDinur_141, Zakai_133
- Track 7 : Lewan_133, Underpass_124
- Track 8 : BourbonZero_125, Finnry_123, Clautastrophe_124, Jubie_125, MsGreen_126, KirDoubleO7_122, Snenia_124, Red305_126
- Track 9 : Bellis_125, Jobypre_125, Samty_123
- Track 10 : TriFive_126, DuncansLeg_125, Lumos_125, Ellson_123
- Track 11 : Whirlwind_125, Krypton555_127
- Track 12 : MiniLon_129
- Track 13 : Lolly9_125
- Track 14 : FarmResident_142

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

The start number called the most often in the published annotations is 1, it was called in 31 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_123, Appletree2_122, Archie_130, AvadaKedavra_123, Bazzle_128, BrainDrainer_141, Calm_130, ChutneyChips_142, CicholasNage_117, Crossroads_134, DHan_133, Douzhi_141, DrSeegs_129, DyoEdafos_142, Finemlucis_131, Gabriela_131, Gardann_131, GuuelaD_129, Halena_123, Itos_131,

JoeDirt_125, Kahlid_131, Loadrie_132, Lynnae_132, MAckerman_124, MkaliMitinis3_133, Netyap_129, OhShagHennessy_115, Quby_144, Rose5_124, Rossetti_132, Sheng711_143, Silverleaf_120, SoJulia_134, Soap141_132, Tourach_133, Vetrix_131, Wigglewigggle_132, Wyatt2_123, Zaria_127, ZhongYanYuan_128,

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

- BigCheese_130, Breezona_131, Chaser_139, Faith1_129, FarmResident_142, Kropertea_136, LeBron_122, Lewan_133, LilDestine_128, Miley16_131, Nicholasp3_132, PYPDinur_141, Tyson_124, UPIE_122, Underpass_124, Wamburgxpress_125, Wilder_132, Winky_131, Zakai_133,

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

- Bellis_125, BourbonZero_125, Clautastrophe_124, DuncansLeg_125, Ellson_123, Finnry_123, Jobypre_125, Jubie_125, KirDoubleO7_122, Krypton555_127, Lolly9_125, Lumos_125, MiniLon_129, MsGreen_126, Red305_126, Samty_123, Snenia_124, TriFive_126, Whirlwind_125,

Summary by start number:

Start 1:

- Found in 60 of 79 (75.9%) of genes in pham
- Manual Annotations of this start: 31 of 63
- Called 68.3% of time when present
- Phage (with cluster) where this start called: Acquire49_123 (L1), Appletree2_122 (L1), Archie_130 (L2), AvadaKedavra_123 (L1), Bazzle_128 (L2), BrainDrainer_141 (L4), Calm_130 (L1), ChutneyChips_142 (L4), CicholasNage_117 (L1), Crossroads_134 (L2), DHan_133 (L2), Douzhi_141 (L4), DrSeegs_129 (L2), DyoEdafos_142 (L4), Finemlucis_131 (L2), Gabriela_131 (L2), Gardann_131 (L2), GuuelaD_129 (L2), Halena_123 (L1), Itos_131 (L2), JoeDirt_125 (L1), Kahlid_131 (L2), Loadrie_132 (L2), Lynnae_132 (L2), MAckerman_124 (L1), MkaliMitinis3_133 (L2), Netyap_129 (L2), OhShagHennessy_115 (L1), Quby_144 (L4), Rose5_124 (L1), Rossetti_132 (L2), Sheng711_143 (L4), Silverleaf_120 (L1), SoJulia_134 (L2), Soap141_132 (L2), Tourach_133 (L2), Vetrix_131 (L2), Wigglewigggle_132 (L2), Wyatt2_123 (L1), Zaria_127 (L1), ZhongYanYuan_128 (L2),

Start 2:

- Found in 19 of 79 (24.1%) of genes in pham
- Manual Annotations of this start: 4 of 63
- Called 26.3% of time when present
- Phage (with cluster) where this start called: DuncansLeg_125 (L3), Ellson_123 (L3), Lolly9_125 (L3), Lumos_125 (L3), TriFive_126 (L3),

Start 3:

- Found in 79 of 79 (100.0%) of genes in pham
- Manual Annotations of this start: 7 of 63
- Called 12.7% of time when present
- Phage (with cluster) where this start called: BourbonZero_125 (L3), Clautastrophe_124 (L3), Finnry_123 (L3), Jubie_125 (L3), KirDoubleO7_122 (L3), Lewan_133 (L2), MsGreen_126 (L3), Red305_126 (L3), Snenia_124 (L3), Underpass_124 (L2),

Start 4:

- Found in 79 of 79 (100.0%) of genes in pham
- Manual Annotations of this start: 19 of 63
- Called 26.6% of time when present
- Phage (with cluster) where this start called: Bellis_125 (L3), BigCheese_130 (L2), Breezona_131 (L2), Chaser_139 (L4), Faith1_129 (L2), FarmResident_142 (L4), Jobypre_125 (L3), Kropertea_136 (L4), LeBron_122 (L1), LilDestine_128 (L2), Miley16_131 (L2), MiniLon_129 (L3), Nicholasp3_132 (L2), PYPDinur_141 (L4), Samty_123 (L3), Tyson_124 (L1), UPIE_122 (L1), Wamburggrxpress_125 (L1), Wilder_132 (L2), Winky_131 (L2), Zakai_133 (L2),

Start 5:

- Found in 4 of 79 (5.1%) of genes in pham
- Manual Annotations of this start: 2 of 63
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Krypton555_127 (L3), Whirlwind_125 (L3),

Summary by clusters:

There are 4 clusters represented in this pham: L4, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 1 was manually annotated 13 times for cluster L1.
- Start number 4 was manually annotated 4 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 1 was manually annotated 16 times for cluster L2.
- Start number 3 was manually annotated 2 times for cluster L2.
- Start number 4 was manually annotated 9 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 2 was manually annotated 4 times for cluster L3.
- Start number 3 was manually annotated 5 times for cluster L3.
- Start number 4 was manually annotated 4 times for cluster L3.
- Start number 5 was manually annotated 2 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 1 was manually annotated 2 times for cluster L4.
- Start number 4 was manually annotated 2 times for cluster L4.

Gene Information:

Gene: Acquire49_123 Start: 66969, Stop: 66736, Start Num: 1

Candidate Starts for Acquire49_123:

(Start: 1 @66969 has 31 MA's), (Start: 3 @66960 has 7 MA's), (Start: 4 @66945 has 19 MA's), (8, 66792),

Gene: Appletree2_122 Start: 67010, Stop: 66777, Start Num: 1

Candidate Starts for Appletree2_122:

(Start: 1 @67010 has 31 MA's), (Start: 3 @67001 has 7 MA's), (Start: 4 @66986 has 19 MA's), (8, 66833),

Gene: Archie_130 Start: 69615, Stop: 69382, Start Num: 1

Candidate Starts for Archie_130:

(Start: 1 @69615 has 31 MA's), (Start: 3 @69606 has 7 MA's), (Start: 4 @69591 has 19 MA's), (6, 69528), (7, 69465), (8, 69438),

Gene: AvadaKedavra_123 Start: 67083, Stop: 66850, Start Num: 1

Candidate Starts for AvadaKedavra_123:

(Start: 1 @67083 has 31 MA's), (Start: 3 @67074 has 7 MA's), (Start: 4 @67059 has 19 MA's), (8, 66906),

Gene: Bazzle_128 Start: 69789, Stop: 69556, Start Num: 1

Candidate Starts for Bazzle_128:

(Start: 1 @69789 has 31 MA's), (Start: 3 @69780 has 7 MA's), (Start: 4 @69765 has 19 MA's), (6, 69702), (7, 69639), (8, 69612),

Gene: Bellis_125 Start: 68585, Stop: 68370, Start Num: 4

Candidate Starts for Bellis_125:

(Start: 2 @68606 has 4 MA's), (Start: 3 @68600 has 7 MA's), (Start: 4 @68585 has 19 MA's), (8, 68432), (9, 68423), (10, 68393),

Gene: BigCheese_130 Start: 69547, Stop: 69338, Start Num: 4

Candidate Starts for BigCheese_130:

(Start: 1 @69571 has 31 MA's), (Start: 3 @69562 has 7 MA's), (Start: 4 @69547 has 19 MA's), (6, 69484), (8, 69394),

Gene: BourbonZero_125 Start: 68868, Stop: 68638, Start Num: 3

Candidate Starts for BourbonZero_125:

(Start: 2 @68874 has 4 MA's), (Start: 3 @68868 has 7 MA's), (Start: 4 @68853 has 19 MA's), (8, 68700), (9, 68691), (10, 68661),

Gene: BrainDrainer_141 Start: 71455, Stop: 71222, Start Num: 1

Candidate Starts for BrainDrainer_141:

(Start: 1 @71455 has 31 MA's), (Start: 3 @71446 has 7 MA's), (Start: 4 @71431 has 19 MA's), (6, 71368), (8, 71278),

Gene: Breezona_131 Start: 69882, Stop: 69673, Start Num: 4

Candidate Starts for Breezona_131:

(Start: 1 @69906 has 31 MA's), (Start: 3 @69897 has 7 MA's), (Start: 4 @69882 has 19 MA's), (6, 69819), (8, 69729),

Gene: Calm_130 Start: 68184, Stop: 67951, Start Num: 1

Candidate Starts for Calm_130:

(Start: 1 @68184 has 31 MA's), (Start: 3 @68175 has 7 MA's), (Start: 4 @68160 has 19 MA's), (8, 68007),

Gene: Chaser_139 Start: 71276, Stop: 71067, Start Num: 4

Candidate Starts for Chaser_139:

(Start: 1 @71300 has 31 MA's), (Start: 3 @71291 has 7 MA's), (Start: 4 @71276 has 19 MA's), (6, 71213), (8, 71123),

Gene: ChutneyChips_142 Start: 71363, Stop: 71130, Start Num: 1

Candidate Starts for ChutneyChips_142:

(Start: 1 @71363 has 31 MA's), (Start: 3 @71354 has 7 MA's), (Start: 4 @71339 has 19 MA's), (6, 71276), (8, 71186),

Gene: CicholasNage_117 Start: 67314, Stop: 67081, Start Num: 1

Candidate Starts for CicholasNage_117:

(Start: 1 @67314 has 31 MA's), (Start: 3 @67305 has 7 MA's), (Start: 4 @67290 has 19 MA's), (8, 67137),

Gene: Clautastrophe_124 Start: 68711, Stop: 68481, Start Num: 3

Candidate Starts for Clautastrophe_124:

(Start: 2 @68717 has 4 MA's), (Start: 3 @68711 has 7 MA's), (Start: 4 @68696 has 19 MA's), (8, 68543), (9, 68534), (10, 68504),

Gene: Crossroads_134 Start: 69840, Stop: 69607, Start Num: 1

Candidate Starts for Crossroads_134:

(Start: 1 @69840 has 31 MA's), (Start: 3 @69831 has 7 MA's), (Start: 4 @69816 has 19 MA's), (6, 69753), (8, 69663),

Gene: DHan_133 Start: 69980, Stop: 69747, Start Num: 1

Candidate Starts for DHan_133:

(Start: 1 @69980 has 31 MA's), (Start: 3 @69971 has 7 MA's), (Start: 4 @69956 has 19 MA's), (6, 69893), (8, 69803),

Gene: Douzhi_141 Start: 71627, Stop: 71394, Start Num: 1

Candidate Starts for Douzhi_141:

(Start: 1 @71627 has 31 MA's), (Start: 3 @71618 has 7 MA's), (Start: 4 @71603 has 19 MA's), (6, 71540), (8, 71450),

Gene: DrSeegs_129 Start: 69906, Stop: 69673, Start Num: 1

Candidate Starts for DrSeegs_129:

(Start: 1 @69906 has 31 MA's), (Start: 3 @69897 has 7 MA's), (Start: 4 @69882 has 19 MA's), (6, 69819), (8, 69729),

Gene: DuncansLeg_125 Start: 68900, Stop: 68664, Start Num: 2

Candidate Starts for DuncansLeg_125:

(Start: 2 @68900 has 4 MA's), (Start: 3 @68894 has 7 MA's), (Start: 4 @68879 has 19 MA's), (8, 68726), (9, 68717), (10, 68687),

Gene: DyoEdafos_142 Start: 70893, Stop: 70660, Start Num: 1

Candidate Starts for DyoEdafos_142:

(Start: 1 @70893 has 31 MA's), (Start: 3 @70884 has 7 MA's), (Start: 4 @70869 has 19 MA's), (6, 70806), (8, 70716),

Gene: Ellson_123 Start: 69156, Stop: 68920, Start Num: 2

Candidate Starts for Ellson_123:

(Start: 2 @69156 has 4 MA's), (Start: 3 @69150 has 7 MA's), (Start: 4 @69135 has 19 MA's), (8, 68982), (9, 68973), (10, 68943),

Gene: Faith1_129 Start: 69190, Stop: 68981, Start Num: 4

Candidate Starts for Faith1_129:

(Start: 1 @69214 has 31 MA's), (Start: 3 @69205 has 7 MA's), (Start: 4 @69190 has 19 MA's), (6, 69127), (8, 69037),

Gene: FarmResident_142 Start: 70986, Stop: 70777, Start Num: 4
Candidate Starts for FarmResident_142:
(Start: 1 @71010 has 31 MA's), (Start: 3 @71001 has 7 MA's), (Start: 4 @70986 has 19 MA's), (6, 70923),

Gene: Finemlucis_131 Start: 70665, Stop: 70432, Start Num: 1
Candidate Starts for Finemlucis_131:
(Start: 1 @70665 has 31 MA's), (Start: 3 @70656 has 7 MA's), (Start: 4 @70641 has 19 MA's), (6, 70578), (8, 70488),

Gene: Finnry_123 Start: 68948, Stop: 68718, Start Num: 3
Candidate Starts for Finnry_123:
(Start: 2 @68954 has 4 MA's), (Start: 3 @68948 has 7 MA's), (Start: 4 @68933 has 19 MA's), (8, 68780), (9, 68771), (10, 68741),

Gene: Gabriela_131 Start: 69002, Stop: 68769, Start Num: 1
Candidate Starts for Gabriela_131:
(Start: 1 @69002 has 31 MA's), (Start: 3 @68993 has 7 MA's), (Start: 4 @68978 has 19 MA's), (6, 68915), (8, 68825),

Gene: Gardann_131 Start: 69679, Stop: 69446, Start Num: 1
Candidate Starts for Gardann_131:
(Start: 1 @69679 has 31 MA's), (Start: 3 @69670 has 7 MA's), (Start: 4 @69655 has 19 MA's), (6, 69592), (8, 69502),

Gene: GuuelaD_129 Start: 69567, Stop: 69334, Start Num: 1
Candidate Starts for GuuelaD_129:
(Start: 1 @69567 has 31 MA's), (Start: 3 @69558 has 7 MA's), (Start: 4 @69543 has 19 MA's), (6, 69480), (8, 69390),

Gene: Halena_123 Start: 66957, Stop: 66724, Start Num: 1
Candidate Starts for Halena_123:
(Start: 1 @66957 has 31 MA's), (Start: 3 @66948 has 7 MA's), (Start: 4 @66933 has 19 MA's), (8, 66780),

Gene: Itos_131 Start: 68120, Stop: 67887, Start Num: 1
Candidate Starts for Itos_131:
(Start: 1 @68120 has 31 MA's), (Start: 3 @68111 has 7 MA's), (Start: 4 @68096 has 19 MA's), (6, 68033), (8, 67943),

Gene: Jobypre_125 Start: 68694, Stop: 68479, Start Num: 4
Candidate Starts for Jobypre_125:
(Start: 2 @68715 has 4 MA's), (Start: 3 @68709 has 7 MA's), (Start: 4 @68694 has 19 MA's), (8, 68541), (9, 68532), (10, 68502),

Gene: JoeDirt_125 Start: 68188, Stop: 67955, Start Num: 1
Candidate Starts for JoeDirt_125:
(Start: 1 @68188 has 31 MA's), (Start: 3 @68179 has 7 MA's), (Start: 4 @68164 has 19 MA's), (8, 68011),

Gene: Jubie_125 Start: 68844, Stop: 68614, Start Num: 3
Candidate Starts for Jubie_125:

(Start: 2 @68850 has 4 MA's), (Start: 3 @68844 has 7 MA's), (Start: 4 @68829 has 19 MA's), (8, 68676), (9, 68667), (10, 68637),

Gene: Kahlid_131 Start: 69518, Stop: 69285, Start Num: 1

Candidate Starts for Kahlid_131:

(Start: 1 @69518 has 31 MA's), (Start: 3 @69509 has 7 MA's), (Start: 4 @69494 has 19 MA's), (6, 69431), (8, 69341),

Gene: KirDoubleO7_122 Start: 68841, Stop: 68611, Start Num: 3

Candidate Starts for KirDoubleO7_122:

(Start: 2 @68847 has 4 MA's), (Start: 3 @68841 has 7 MA's), (Start: 4 @68826 has 19 MA's), (8, 68673), (9, 68664), (10, 68634),

Gene: Kropertea_136 Start: 70537, Stop: 70328, Start Num: 4

Candidate Starts for Kropertea_136:

(Start: 1 @70561 has 31 MA's), (Start: 3 @70552 has 7 MA's), (Start: 4 @70537 has 19 MA's), (6, 70474), (8, 70384),

Gene: Krypton555_127 Start: 69057, Stop: 68860, Start Num: 5

Candidate Starts for Krypton555_127:

(Start: 2 @69096 has 4 MA's), (Start: 3 @69090 has 7 MA's), (Start: 4 @69075 has 19 MA's), (Start: 5 @69057 has 2 MA's), (8, 68922), (9, 68913), (10, 68883),

Gene: LeBron_122 Start: 66549, Stop: 66340, Start Num: 4

Candidate Starts for LeBron_122:

(Start: 1 @66573 has 31 MA's), (Start: 3 @66564 has 7 MA's), (Start: 4 @66549 has 19 MA's), (8, 66396),

Gene: Lewan_133 Start: 70188, Stop: 69964, Start Num: 3

Candidate Starts for Lewan_133:

(Start: 1 @70197 has 31 MA's), (Start: 3 @70188 has 7 MA's), (Start: 4 @70173 has 19 MA's), (6, 70110), (8, 70020),

Gene: LilDestine_128 Start: 68664, Stop: 68455, Start Num: 4

Candidate Starts for LilDestine_128:

(Start: 1 @68688 has 31 MA's), (Start: 3 @68679 has 7 MA's), (Start: 4 @68664 has 19 MA's), (6, 68601), (8, 68511),

Gene: Loadrie_132 Start: 70230, Stop: 69997, Start Num: 1

Candidate Starts for Loadrie_132:

(Start: 1 @70230 has 31 MA's), (Start: 3 @70221 has 7 MA's), (Start: 4 @70206 has 19 MA's), (6, 70143), (8, 70053),

Gene: Lolly9_125 Start: 69251, Stop: 69015, Start Num: 2

Candidate Starts for Lolly9_125:

(Start: 2 @69251 has 4 MA's), (Start: 3 @69245 has 7 MA's), (Start: 4 @69230 has 19 MA's), (Start: 5 @69212 has 2 MA's), (8, 69077), (9, 69068), (10, 69038),

Gene: Lumos_125 Start: 68712, Stop: 68476, Start Num: 2

Candidate Starts for Lumos_125:

(Start: 2 @68712 has 4 MA's), (Start: 3 @68706 has 7 MA's), (Start: 4 @68691 has 19 MA's), (8, 68538), (9, 68529), (10, 68499),

Gene: Lynnae_132 Start: 69331, Stop: 69098, Start Num: 1
Candidate Starts for Lynnae_132:
(Start: 1 @69331 has 31 MA's), (Start: 3 @69322 has 7 MA's), (Start: 4 @69307 has 19 MA's), (6, 69244), (8, 69154),

Gene: MAckerman_124 Start: 66950, Stop: 66717, Start Num: 1
Candidate Starts for MAckerman_124:
(Start: 1 @66950 has 31 MA's), (Start: 3 @66941 has 7 MA's), (Start: 4 @66926 has 19 MA's), (8, 66773),

Gene: Miley16_131 Start: 69882, Stop: 69673, Start Num: 4
Candidate Starts for Miley16_131:
(Start: 1 @69906 has 31 MA's), (Start: 3 @69897 has 7 MA's), (Start: 4 @69882 has 19 MA's), (6, 69819), (8, 69729),

Gene: MiniLon_129 Start: 69231, Stop: 69016, Start Num: 4
Candidate Starts for MiniLon_129:
(Start: 2 @69252 has 4 MA's), (Start: 3 @69246 has 7 MA's), (Start: 4 @69231 has 19 MA's), (Start: 5 @69213 has 2 MA's), (8, 69078), (9, 69069), (10, 69039),

Gene: MkaliMitinis3_133 Start: 69603, Stop: 69370, Start Num: 1
Candidate Starts for MkaliMitinis3_133:
(Start: 1 @69603 has 31 MA's), (Start: 3 @69594 has 7 MA's), (Start: 4 @69579 has 19 MA's), (6, 69516), (8, 69426),

Gene: MsGreen_126 Start: 68708, Stop: 68478, Start Num: 3
Candidate Starts for MsGreen_126:
(Start: 2 @68714 has 4 MA's), (Start: 3 @68708 has 7 MA's), (Start: 4 @68693 has 19 MA's), (8, 68540), (9, 68531), (10, 68501),

Gene: Netyap_129 Start: 69620, Stop: 69387, Start Num: 1
Candidate Starts for Netyap_129:
(Start: 1 @69620 has 31 MA's), (Start: 3 @69611 has 7 MA's), (Start: 4 @69596 has 19 MA's), (6, 69533), (8, 69443),

Gene: Nicholasp3_132 Start: 69655, Stop: 69446, Start Num: 4
Candidate Starts for Nicholasp3_132:
(Start: 1 @69679 has 31 MA's), (Start: 3 @69670 has 7 MA's), (Start: 4 @69655 has 19 MA's), (6, 69592), (8, 69502),

Gene: OhShagHennessy_115 Start: 65735, Stop: 65502, Start Num: 1
Candidate Starts for OhShagHennessy_115:
(Start: 1 @65735 has 31 MA's), (Start: 3 @65726 has 7 MA's), (Start: 4 @65711 has 19 MA's), (8, 65558),

Gene: PYPDinur_141 Start: 71415, Stop: 71206, Start Num: 4
Candidate Starts for PYPDinur_141:
(Start: 1 @71439 has 31 MA's), (Start: 3 @71430 has 7 MA's), (Start: 4 @71415 has 19 MA's), (6, 71352), (8, 71262),

Gene: Quby_144 Start: 71426, Stop: 71193, Start Num: 1
Candidate Starts for Quby_144:

(Start: 1 @71426 has 31 MA's), (Start: 3 @71417 has 7 MA's), (Start: 4 @71402 has 19 MA's), (6, 71339), (8, 71249),

Gene: Red305_126 Start: 68709, Stop: 68479, Start Num: 3

Candidate Starts for Red305_126:

(Start: 2 @68715 has 4 MA's), (Start: 3 @68709 has 7 MA's), (Start: 4 @68694 has 19 MA's), (8, 68541), (9, 68532), (10, 68502),

Gene: Rose5_124 Start: 67247, Stop: 67014, Start Num: 1

Candidate Starts for Rose5_124:

(Start: 1 @67247 has 31 MA's), (Start: 3 @67238 has 7 MA's), (Start: 4 @67223 has 19 MA's), (8, 67070),

Gene: Rossetti_132 Start: 69855, Stop: 69622, Start Num: 1

Candidate Starts for Rossetti_132:

(Start: 1 @69855 has 31 MA's), (Start: 3 @69846 has 7 MA's), (Start: 4 @69831 has 19 MA's), (6, 69768), (8, 69678),

Gene: Samty_123 Start: 68676, Stop: 68461, Start Num: 4

Candidate Starts for Samty_123:

(Start: 2 @68697 has 4 MA's), (Start: 3 @68691 has 7 MA's), (Start: 4 @68676 has 19 MA's), (8, 68523), (9, 68514), (10, 68484),

Gene: Sheng711_143 Start: 71051, Stop: 70818, Start Num: 1

Candidate Starts for Sheng711_143:

(Start: 1 @71051 has 31 MA's), (Start: 3 @71042 has 7 MA's), (Start: 4 @71027 has 19 MA's), (6, 70964), (8, 70874),

Gene: Silverleaf_120 Start: 66548, Stop: 66315, Start Num: 1

Candidate Starts for Silverleaf_120:

(Start: 1 @66548 has 31 MA's), (Start: 3 @66539 has 7 MA's), (Start: 4 @66524 has 19 MA's),

Gene: Snenia_124 Start: 68710, Stop: 68480, Start Num: 3

Candidate Starts for Snenia_124:

(Start: 2 @68716 has 4 MA's), (Start: 3 @68710 has 7 MA's), (Start: 4 @68695 has 19 MA's), (8, 68542), (9, 68533), (10, 68503),

Gene: SoJulia_134 Start: 71682, Stop: 71449, Start Num: 1

Candidate Starts for SoJulia_134:

(Start: 1 @71682 has 31 MA's), (Start: 3 @71673 has 7 MA's), (Start: 4 @71658 has 19 MA's), (6, 71595), (8, 71505),

Gene: Soap141_132 Start: 70575, Stop: 70342, Start Num: 1

Candidate Starts for Soap141_132:

(Start: 1 @70575 has 31 MA's), (Start: 3 @70566 has 7 MA's), (Start: 4 @70551 has 19 MA's), (6, 70488), (8, 70398),

Gene: Tourach_133 Start: 71094, Stop: 70861, Start Num: 1

Candidate Starts for Tourach_133:

(Start: 1 @71094 has 31 MA's), (Start: 3 @71085 has 7 MA's), (Start: 4 @71070 has 19 MA's), (6, 71007), (8, 70917),

Gene: TriFive_126 Start: 68828, Stop: 68592, Start Num: 2

Candidate Starts for TriFive_126:

(Start: 2 @68828 has 4 MA's), (Start: 3 @68822 has 7 MA's), (Start: 4 @68807 has 19 MA's), (8, 68654), (9, 68645), (10, 68615),

Gene: Tyson_124 Start: 67653, Stop: 67444, Start Num: 4

Candidate Starts for Tyson_124:

(Start: 1 @67677 has 31 MA's), (Start: 3 @67668 has 7 MA's), (Start: 4 @67653 has 19 MA's), (8, 67500),

Gene: UPIE_122 Start: 66890, Stop: 66681, Start Num: 4

Candidate Starts for UPIE_122:

(Start: 1 @66914 has 31 MA's), (Start: 3 @66905 has 7 MA's), (Start: 4 @66890 has 19 MA's), (8, 66737),

Gene: Underpass_124 Start: 64710, Stop: 64486, Start Num: 3

Candidate Starts for Underpass_124:

(Start: 1 @64719 has 31 MA's), (Start: 3 @64710 has 7 MA's), (Start: 4 @64695 has 19 MA's), (6, 64632), (8, 64542),

Gene: Vetrix_131 Start: 70216, Stop: 69983, Start Num: 1

Candidate Starts for Vetrix_131:

(Start: 1 @70216 has 31 MA's), (Start: 3 @70207 has 7 MA's), (Start: 4 @70192 has 19 MA's), (6, 70129), (8, 70039),

Gene: Wamburgexpress_125 Start: 67556, Stop: 67347, Start Num: 4

Candidate Starts for Wamburgexpress_125:

(Start: 1 @67580 has 31 MA's), (Start: 3 @67571 has 7 MA's), (Start: 4 @67556 has 19 MA's), (8, 67403),

Gene: Whirlwind_125 Start: 68933, Stop: 68736, Start Num: 5

Candidate Starts for Whirlwind_125:

(Start: 2 @68972 has 4 MA's), (Start: 3 @68966 has 7 MA's), (Start: 4 @68951 has 19 MA's), (Start: 5 @68933 has 2 MA's), (8, 68798), (9, 68789), (10, 68759),

Gene: Wigglewobble_132 Start: 69812, Stop: 69579, Start Num: 1

Candidate Starts for Wigglewobble_132:

(Start: 1 @69812 has 31 MA's), (Start: 3 @69803 has 7 MA's), (Start: 4 @69788 has 19 MA's), (6, 69725), (8, 69635),

Gene: Wilder_132 Start: 69348, Stop: 69139, Start Num: 4

Candidate Starts for Wilder_132:

(Start: 1 @69372 has 31 MA's), (Start: 3 @69363 has 7 MA's), (Start: 4 @69348 has 19 MA's), (6, 69285), (8, 69195),

Gene: Winky_131 Start: 69883, Stop: 69674, Start Num: 4

Candidate Starts for Winky_131:

(Start: 1 @69907 has 31 MA's), (Start: 3 @69898 has 7 MA's), (Start: 4 @69883 has 19 MA's), (6, 69820), (8, 69730),

Gene: Wyatt2_123 Start: 67340, Stop: 67107, Start Num: 1

Candidate Starts for Wyatt2_123:

(Start: 1 @67340 has 31 MA's), (Start: 3 @67331 has 7 MA's), (Start: 4 @67316 has 19 MA's), (8, 67163),

Gene: Zakai_133 Start: 69593, Stop: 69384, Start Num: 4

Candidate Starts for Zakai_133:

(Start: 1 @69617 has 31 MA's), (Start: 3 @69608 has 7 MA's), (Start: 4 @69593 has 19 MA's), (6, 69530), (8, 69440),

Gene: Zaria_127 Start: 67649, Stop: 67416, Start Num: 1

Candidate Starts for Zaria_127:

(Start: 1 @67649 has 31 MA's), (Start: 3 @67640 has 7 MA's), (Start: 4 @67625 has 19 MA's), (8, 67472),

Gene: ZhongYanYuan_128 Start: 69100, Stop: 68867, Start Num: 1

Candidate Starts for ZhongYanYuan_128:

(Start: 1 @69100 has 31 MA's), (Start: 3 @69091 has 7 MA's), (Start: 4 @69076 has 19 MA's), (6, 69013), (8, 68923),