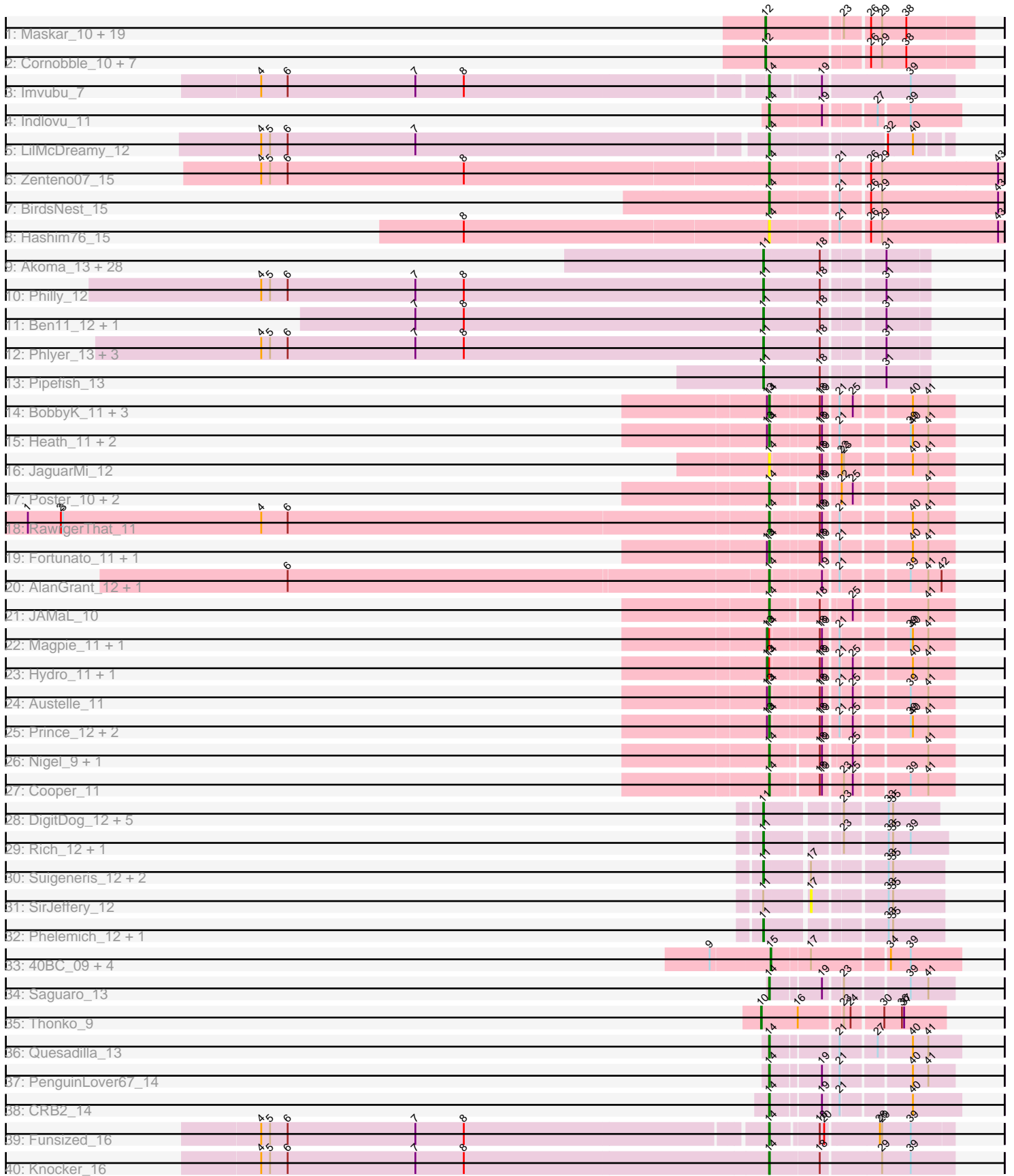


Pham 157704



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 157704 Report

This analysis was run 04/13/24 on database version 558.

Pham number 157704 has 125 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Maskar_10, Labeouficaum_10, BatteryCK_10, Struggle_10, MelsMeow_10, Pinkman_10, Oline_10, DuchessDung_10, CharlieGBrown_10, Phleuron_10, Derpp_10, Phergie_10, Jiminy_10, Kwksand96_10, Ashraf_10, MichaelPhcott_10, PhenghisKhan_10, ImtiyazSitla_10, TyrionL_10, PhrankReynolds_10
- Track 2 : Cornobble_10, Manad_10, Robyn_10, Lopsy_10, Schadenfreude_10, Antonia_10, Crownjwl_11, Aelin_10
- Track 3 : Imvubu_7
- Track 4 : Indlovu_11
- Track 5 : LilMcDreamy_12
- Track 6 : Zenteno07_15
- Track 7 : BirdsNest_15
- Track 8 : Hashim76_15
- Track 9 : Akoma_13, HarveySr_13, Jackstina_12, Neos5_13, Yinz_13, OrangeOswald_13, Tydolla_13, SynergyX_13, LestyG_13, Briakila_13, Corofin_13, RagingRooster_13, Baloo_13, Gadjet_14, Kronus_12, Devonte_13, Deenasa_13, Audrey_13, SlippinJimmy_13, Mortcellus_12, Halfpint_12, MmasiCarm_13, Phayeta_13, Athena_14, Phaedrus_12, Casbah_12, Kamiyu_13, Nozo_13, ChaChing_13
- Track 10 : Philly_12
- Track 11 : Ben11_12, Abinghost_13
- Track 12 : Phlyer_13, Heathcliff_13, GlenHope_14, Bernardo_13
- Track 13 : Pipefish_13
- Track 14 : BobbyK_11, Hangman_11, Waleliano_11, VioletZ_11
- Track 15 : Heath_11, Apex_10, Lolalove_11
- Track 16 : JaguarMi_12
- Track 17 : Poster_10, ChrisnMich_10, Nanao_10
- Track 18 : RawrgerThat_11
- Track 19 : Fortunato_11, Frederick_11
- Track 20 : AlanGrant_12, Vincenzo_12
- Track 21 : JAMaL_10
- Track 22 : Magpie_11, BrownCNA_12
- Track 23 : Hydro_11, Zemanar_12
- Track 24 : Austelle_11
- Track 25 : Prince_12, Mudslide_11, Mithril_11
- Track 26 : Nigel_9, Stinger_9
- Track 27 : Cooper_11

- Track 28 : DigitDog_12, Serendipitous_12, Mysterious_12, Nangang_12, EastView9101_12, StinkyVeggy_13
- Track 29 : Rich_12, Bae_12
- Track 30 : Suigeneris_12, Donny_12, Acadian_12
- Track 31 : SirJeffery_12
- Track 32 : Phelemich_12, Reprobate_12
- Track 33 : 40BC_09, Jolie1_09, 39HC_09, KayaCho_9, Hosp_07
- Track 34 : Saguaro_13
- Track 35 : Thonko_9
- Track 36 : Quesadilla_13
- Track 37 : PenguinLover67_14
- Track 38 : CRB2_14
- Track 39 : Funsized_16
- Track 40 : Knocker_16

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

The start number called the most often in the published annotations is 11, it was called in 42 of the 104 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_13, Acadian_12, Akoma_13, Athena_14, Audrey_13, Bae_12, Baloo_13, Ben11_12, Bernardo_13, Briakila_13, Casbah_12, ChaChing_13, Corofin_13, Deenasa_13, Devonte_13, DigitDog_12, Donny_12, EastView9101_12, Gadget_14, GlenHope_14, Halfpint_12, HarveySr_13, Heathcliff_13, Jackstina_12, Kamiyu_13, Kronus_12, LestyG_13, MmasiCarm_13, Mortcellus_12, Mysterious_12, Nangang_12, Neos5_13, Nozo_13, OrangeOswald_13, Phaedrus_12, Phayeta_13, Phelemich_12, Philly_12, Phlyer_13, Pipefish_13, RagingRooster_13, Reprobate_12, Rich_12, Serendipitous_12, SlippinJimmy_13, StinkyVeggy_13, Suigeneris_12, SynergyX_13, Tydolla_13, Yinz_13,

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

- SirJeffery_12,

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

- 39HC_09, 40BC_09, Aelin_10, AlanGrant_12, Antonia_10, Apex_10, Ashraf_10, Austelle_11, BatteryCK_10, BirdsNest_15, BobbyK_11, BrownCNA_12, CRB2_14, CharlieGBrown_10, ChrisnMich_10, Cooper_11, Cornobble_10, Crownjwl_11, Derpp_10, DuchessDung_10, Fortunato_11, Frederick_11, Funsized_16, Hangman_11, Hashim76_15, Heath_11, Hosp_07, Hydro_11, ImtiyazSitla_10, Imvubu_7, Indlovu_11, JAMaL_10, JaguarMi_12, Jiminy_10, Jolie1_09, KayaCho_9, Knocker_16, Kwksand96_10, Labeoufcaum_10, LilMcDreamy_12, Lolalove_11, Lopsy_10, Magpie_11, Manad_10, Maskar_10, MelsMeow_10, MichaelPhcott_10, Mithril_11, Mudslide_11, Nanao_10, Nigel_9, Oline_10, PenguinLover67_14, PhenghisKhan_10, Phergie_10, Phleuron_10, PhrankReynolds_10, Pinkman_10, Poster_10, Prince_12, Quesadilla_13, RawrgerThat_11, Robyn_10, Saguaro_13, Schadenfreude_10, Stinger_9, Struggle_10, Thonko_9, TyrionL_10, Vincenzo_12, VioletZ_11, Waleliano_11, Zemanar_12, Zenteno07_15,

Summary by start number:

Start 10:

- Found in 1 of 125 (0.8%) of genes in pham
- Manual Annotations of this start: 1 of 104
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Thonko_9 (B8),

Start 11:

- Found in 51 of 125 (40.8%) of genes in pham
- Manual Annotations of this start: 42 of 104
- Called 98.0% of time when present
- Phage (with cluster) where this start called: Abinghost_13 (B3), Acadian_12 (B5), Akoma_13 (B3), Athena_14 (B3), Audrey_13 (B3), Bae_12 (B5), Baloo_13 (B3), Ben11_12 (B3), Bernardo_13 (B3), Briakila_13 (B3), Casbah_12 (B3), ChaChing_13 (B3), Corofin_13 (B3), Deenasa_13 (B3), Devonte_13 (B3), DigitDog_12 (B5), Donny_12 (B5), EastView9101_12 (B5), Gadget_14 (B3), GlenHope_14 (B3), Halfpint_12 (B3), HarveySr_13 (B3), Heathcliff_13 (B3), Jackstina_12 (B3), Kamiyu_13 (B3), Kronus_12 (B3), LestyG_13 (B3), MmasiCarm_13 (B3), Mortcellus_12 (B3), Mysterious_12 (B5), Nangang_12 (B5), Neos5_13 (B3), Nozo_13 (B3), OrangeOswald_13 (B3), Phaedrus_12 (B3), Phayeta_13 (B3), Phelemich_12 (B5), Philly_12 (B3), Phlyer_13 (B3), Pipefish_13 (B3), RagingRooster_13 (B3), Reprobate_12 (B5), Rich_12 (B5), Serendipitous_12 (B5), SlippinJimmy_13 (B3), StinkyVeggy_13 (B5), Suigeneris_12 (B5), SynergyX_13 (B3), Tydolla_13 (B3), Yinz_13 (B3),

Start 12:

- Found in 28 of 125 (22.4%) of genes in pham
- Manual Annotations of this start: 27 of 104
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Aelin_10 (B1), Antonia_10 (B1), Ashraf_10 (B1), BatteryCK_10 (B1), CharlieGBrown_10 (B1), Cornobble_10 (B1), Crownjwl_11 (B1), Derpp_10 (B1), DuchessDung_10 (B1), ImtiyazSitla_10 (B1), Jiminy_10 (B1), Kwksand96_10 (B1), Labeouficaum_10 (B1), Lopsy_10 (B1), Manad_10 (B1), Maskar_10 (B1), MelsMeow_10 (B1), MichaelPhcott_10 (B1), Oline_10 (B1), PhenghisKhan_10 (B1), Phergie_10 (B1), Phleuron_10 (B1), PhrankReynolds_10 (B1), Pinkman_10 (B1), Robyn_10 (B1), Schadenfreude_10 (B1), Struggle_10 (B1), TyrionL_10 (B1),

Start 13:

- Found in 17 of 125 (13.6%) of genes in pham
- Manual Annotations of this start: 4 of 104
- Called 23.5% of time when present
- Phage (with cluster) where this start called: BrownCNA_12 (B4), Hydro_11 (B4), Magpie_11 (B4), Zemanar_12 (B4),

Start 14:

- Found in 40 of 125 (32.0%) of genes in pham
- Manual Annotations of this start: 29 of 104
- Called 90.0% of time when present
- Phage (with cluster) where this start called: AlanGrant_12 (B4), Apex_10 (B4), Austelle_11 (B4), BirdsNest_15 (B13), BobbyK_11 (B4), CRB2_14 (B9), ChrisnMich_10 (B4), Cooper_11 (B4), Fortunato_11 (B4), Frederick_11 (B4), Funsized_16 (B9), Hangman_11 (B4), Hashim76_15 (B13), Heath_11 (B4),

Imvubu_7 (B10), Indlovu_11 (B11), JAMaL_10 (B4), JaguarMi_12 (B4), Knocker_16 (B9), LiiMcDreamy_12 (B12), Lolalove_11 (B4), Mithril_11 (B4), Mudslide_11 (B4), Nanao_10 (B4), Nigel_9 (B4), PenguinLover67_14 (B9), Poster_10 (B4), Prince_12 (B4), Quesadilla_13 (B9), RawrgerThat_11 (B4), Saguaro_13 (B7), Stinger_9 (B4), Vincenzo_12 (B4), VioletZ_11 (B4), Waleliano_11 (B4), Zenteno07_15 (B13),

Start 15:

- Found in 5 of 125 (4.0%) of genes in pham
- Manual Annotations of this start: 1 of 104
- Called 100.0% of time when present
- Phage (with cluster) where this start called: 39HC_09 (B6), 40BC_09 (B6), Hosp_07 (B6), Jolie1_09 (B6), KayaCho_9 (B6),

Start 17:

- Found in 9 of 125 (7.2%) of genes in pham
- No Manual Annotations of this start.
- Called 11.1% of time when present
- Phage (with cluster) where this start called: SirJeffery_12 (B5),

Summary by clusters:

There are 12 clusters represented in this pham: B11, B4, B5, B6, B7, B12, B1, B10, B3, B8, B9, B13,

Info for manual annotations of cluster B1:

- Start number 12 was manually annotated 27 times for cluster B1.

Info for manual annotations of cluster B10:

- Start number 14 was manually annotated 1 time for cluster B10.

Info for manual annotations of cluster B11:

- Start number 14 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:

- Start number 14 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B13:

- Start number 14 was manually annotated 2 times for cluster B13.

Info for manual annotations of cluster B3:

- Start number 11 was manually annotated 34 times for cluster B3.

Info for manual annotations of cluster B4:

- Start number 13 was manually annotated 4 times for cluster B4.
- Start number 14 was manually annotated 18 times for cluster B4.

Info for manual annotations of cluster B5:

- Start number 11 was manually annotated 8 times for cluster B5.

Info for manual annotations of cluster B6:

- Start number 15 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster B7:

•Start number 14 was manually annotated 1 time for cluster B7.

Info for manual annotations of cluster B8:

•Start number 10 was manually annotated 1 time for cluster B8.

Info for manual annotations of cluster B9:

•Start number 14 was manually annotated 5 times for cluster B9.

Gene Information:

Gene: 39HC_09 Start: 9546, Stop: 9785, Start Num: 15

Candidate Starts for 39HC_09:

(9, 9468), (Start: 15 @9546 has 1 MA's), (17, 9594), (34, 9690), (39, 9717),

Gene: 40BC_09 Start: 9546, Stop: 9785, Start Num: 15

Candidate Starts for 40BC_09:

(9, 9468), (Start: 15 @9546 has 1 MA's), (17, 9594), (34, 9690), (39, 9717),

Gene: Abinghost_13 Start: 10640, Stop: 10846, Start Num: 11

Candidate Starts for Abinghost_13:

(7, 10166), (8, 10232), (Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: Acadian_12 Start: 11068, Stop: 11286, Start Num: 11

Candidate Starts for Acadian_12:

(Start: 11 @11068 has 42 MA's), (17, 11122), (33, 11212), (35, 11218),

Gene: Aelin_10 Start: 8930, Stop: 9193, Start Num: 12

Candidate Starts for Aelin_10:

(Start: 12 @8930 has 27 MA's), (26, 9056), (29, 9071), (38, 9104),

Gene: Akoma_13 Start: 10640, Stop: 10846, Start Num: 11

Candidate Starts for Akoma_13:

(Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: AlanGrant_12 Start: 11855, Stop: 12076, Start Num: 14

Candidate Starts for AlanGrant_12:

(6, 11213), (Start: 14 @11855 has 29 MA's), (19, 11918), (21, 11936), (39, 12017), (41, 12041), (42, 12059),

Gene: Antonia_10 Start: 8930, Stop: 9193, Start Num: 12

Candidate Starts for Antonia_10:

(Start: 12 @8930 has 27 MA's), (26, 9056), (29, 9071), (38, 9104),

Gene: Apex_10 Start: 10688, Stop: 10909, Start Num: 14

Candidate Starts for Apex_10:

(Start: 13 @10685 has 4 MA's), (Start: 14 @10688 has 29 MA's), (18, 10748), (19, 10751), (21, 10769), (39, 10850), (40, 10853), (41, 10874),

Gene: Ashraf_10 Start: 8927, Stop: 9190, Start Num: 12

Candidate Starts for Ashraf_10:

(Start: 12 @8927 has 27 MA's), (23, 9023), (26, 9053), (29, 9068), (38, 9101),

Gene: Athena_14 Start: 11403, Stop: 11609, Start Num: 11
Candidate Starts for Athena_14:
(Start: 11 @11403 has 42 MA's), (18, 11478), (31, 11553),

Gene: Audrey_13 Start: 10640, Stop: 10846, Start Num: 11
Candidate Starts for Audrey_13:
(Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: Austelle_11 Start: 11144, Stop: 11365, Start Num: 14
Candidate Starts for Austelle_11:
(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (25, 11240), (39, 11306), (41, 11330),

Gene: Bae_12 Start: 11074, Stop: 11298, Start Num: 11
Candidate Starts for Bae_12:
(Start: 11 @11074 has 42 MA's), (23, 11164), (33, 11218), (35, 11224), (39, 11248),

Gene: Baloo_13 Start: 10640, Stop: 10846, Start Num: 11
Candidate Starts for Baloo_13:
(Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: BatteryCK_10 Start: 8933, Stop: 9196, Start Num: 12
Candidate Starts for BatteryCK_10:
(Start: 12 @8933 has 27 MA's), (23, 9029), (26, 9059), (29, 9074), (38, 9107),

Gene: Ben11_12 Start: 10488, Stop: 10694, Start Num: 11
Candidate Starts for Ben11_12:
(7, 10014), (8, 10080), (Start: 11 @10488 has 42 MA's), (18, 10563), (31, 10638),

Gene: Bernardo_13 Start: 10662, Stop: 10868, Start Num: 11
Candidate Starts for Bernardo_13:
(4, 9978), (5, 9990), (6, 10014), (7, 10188), (8, 10254), (Start: 11 @10662 has 42 MA's), (18, 10737), (31, 10812),

Gene: BirdsNest_15 Start: 9740, Stop: 10039, Start Num: 14
Candidate Starts for BirdsNest_15:
(Start: 14 @9740 has 29 MA's), (21, 9827), (26, 9860), (29, 9875), (43, 10031),

Gene: BobbyK_11 Start: 11141, Stop: 11362, Start Num: 14
Candidate Starts for BobbyK_11:
(Start: 13 @11138 has 4 MA's), (Start: 14 @11141 has 29 MA's), (18, 11201), (19, 11204), (21, 11222), (25, 11237), (40, 11306), (41, 11327),

Gene: Briakila_13 Start: 11429, Stop: 11635, Start Num: 11
Candidate Starts for Briakila_13:
(Start: 11 @11429 has 42 MA's), (18, 11504), (31, 11579),

Gene: BrownCNA_12 Start: 11392, Stop: 11616, Start Num: 13
Candidate Starts for BrownCNA_12:
(Start: 13 @11392 has 4 MA's), (Start: 14 @11395 has 29 MA's), (18, 11455), (19, 11458), (21, 11476), (39, 11557), (40, 11560), (41, 11581),

Gene: CRB2_14 Start: 11939, Stop: 12169, Start Num: 14
Candidate Starts for CRB2_14:
(Start: 14 @11939 has 29 MA's), (19, 12002), (21, 12020), (40, 12104),

Gene: Casbah_12 Start: 10492, Stop: 10698, Start Num: 11
Candidate Starts for Casbah_12:
(Start: 11 @10492 has 42 MA's), (18, 10567), (31, 10642),

Gene: ChaChing_13 Start: 10655, Stop: 10861, Start Num: 11
Candidate Starts for ChaChing_13:
(Start: 11 @10655 has 42 MA's), (18, 10730), (31, 10805),

Gene: CharlieGBrown_10 Start: 8951, Stop: 9214, Start Num: 12
Candidate Starts for CharlieGBrown_10:
(Start: 12 @8951 has 27 MA's), (23, 9047), (26, 9077), (29, 9092), (38, 9125),

Gene: ChrisnMich_10 Start: 10039, Stop: 10260, Start Num: 14
Candidate Starts for ChrisnMich_10:
(Start: 14 @10039 has 29 MA's), (18, 10099), (19, 10102), (22, 10120), (25, 10135), (41, 10225),

Gene: Cooper_11 Start: 10112, Stop: 10336, Start Num: 14
Candidate Starts for Cooper_11:
(Start: 14 @10112 has 29 MA's), (18, 10172), (19, 10175), (23, 10199), (25, 10211), (39, 10277), (41, 10301),

Gene: Cornobble_10 Start: 8931, Stop: 9194, Start Num: 12
Candidate Starts for Cornobble_10:
(Start: 12 @8931 has 27 MA's), (26, 9057), (29, 9072), (38, 9105),

Gene: Corofin_13 Start: 10665, Stop: 10871, Start Num: 11
Candidate Starts for Corofin_13:
(Start: 11 @10665 has 42 MA's), (18, 10740), (31, 10815),

Gene: Crownjwl_11 Start: 9165, Stop: 9428, Start Num: 12
Candidate Starts for Crownjwl_11:
(Start: 12 @9165 has 27 MA's), (26, 9291), (29, 9306), (38, 9339),

Gene: Deenasa_13 Start: 11403, Stop: 11609, Start Num: 11
Candidate Starts for Deenasa_13:
(Start: 11 @11403 has 42 MA's), (18, 11478), (31, 11553),

Gene: Derpp_10 Start: 8939, Stop: 9202, Start Num: 12
Candidate Starts for Derpp_10:
(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Devonte_13 Start: 10640, Stop: 10846, Start Num: 11
Candidate Starts for Devonte_13:
(Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: DigitDog_12 Start: 11071, Stop: 11283, Start Num: 11
Candidate Starts for DigitDog_12:
(Start: 11 @11071 has 42 MA's), (23, 11161), (33, 11215), (35, 11221),

Gene: Donny_12 Start: 11070, Stop: 11288, Start Num: 11
Candidate Starts for Donny_12:
(Start: 11 @11070 has 42 MA's), (17, 11124), (33, 11214), (35, 11220),

Gene: DuchessDung_10 Start: 8933, Stop: 9196, Start Num: 12
Candidate Starts for DuchessDung_10:
(Start: 12 @8933 has 27 MA's), (23, 9029), (26, 9059), (29, 9074), (38, 9107),

Gene: EastView9101_12 Start: 11073, Stop: 11291, Start Num: 11
Candidate Starts for EastView9101_12:
(Start: 11 @11073 has 42 MA's), (23, 11163), (33, 11217), (35, 11223),

Gene: Fortunato_11 Start: 11135, Stop: 11356, Start Num: 14
Candidate Starts for Fortunato_11:
(Start: 13 @11132 has 4 MA's), (Start: 14 @11135 has 29 MA's), (18, 11195), (19, 11198), (21, 11216), (40, 11300), (41, 11321),

Gene: Frederick_11 Start: 11144, Stop: 11365, Start Num: 14
Candidate Starts for Frederick_11:
(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (40, 11309), (41, 11330),

Gene: Funsized_16 Start: 13096, Stop: 13326, Start Num: 14
Candidate Starts for Funsized_16:
(4, 12424), (5, 12436), (6, 12460), (7, 12634), (8, 12700), (Start: 14 @13096 has 29 MA's), (18, 13156), (20, 13162), (28, 13228), (29, 13231), (39, 13270),

Gene: Gadget_14 Start: 10644, Stop: 10850, Start Num: 11
Candidate Starts for Gadget_14:
(Start: 11 @10644 has 42 MA's), (18, 10719), (31, 10794),

Gene: GlenHope_14 Start: 10654, Stop: 10860, Start Num: 11
Candidate Starts for GlenHope_14:
(4, 9970), (5, 9982), (6, 10006), (7, 10180), (8, 10246), (Start: 11 @10654 has 42 MA's), (18, 10729), (31, 10804),

Gene: Halfpint_12 Start: 10489, Stop: 10695, Start Num: 11
Candidate Starts for Halfpint_12:
(Start: 11 @10489 has 42 MA's), (18, 10564), (31, 10639),

Gene: Hangman_11 Start: 11144, Stop: 11365, Start Num: 14
Candidate Starts for Hangman_11:
(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (25, 11240), (40, 11309), (41, 11330),

Gene: HarveySr_13 Start: 10641, Stop: 10847, Start Num: 11
Candidate Starts for HarveySr_13:
(Start: 11 @10641 has 42 MA's), (18, 10716), (31, 10791),

Gene: Hashim76_15 Start: 10023, Stop: 10322, Start Num: 14
Candidate Starts for Hashim76_15:
(8, 9615), (Start: 14 @10023 has 29 MA's), (21, 10110), (26, 10143), (29, 10158), (43, 10314),

Gene: Heath_11 Start: 11144, Stop: 11365, Start Num: 14

Candidate Starts for Heath_11:

(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (39, 11306), (40, 11309), (41, 11330),

Gene: Heathcliff_13 Start: 10626, Stop: 10832, Start Num: 11

Candidate Starts for Heathcliff_13:

(4, 9942), (5, 9954), (6, 9978), (7, 10152), (8, 10218), (Start: 11 @10626 has 42 MA's), (18, 10701), (31, 10776),

Gene: Hosp_07 Start: 7748, Stop: 7987, Start Num: 15

Candidate Starts for Hosp_07:

(9, 7670), (Start: 15 @7748 has 1 MA's), (17, 7796), (34, 7892), (39, 7919),

Gene: Hydro_11 Start: 11138, Stop: 11362, Start Num: 13

Candidate Starts for Hydro_11:

(Start: 13 @11138 has 4 MA's), (Start: 14 @11141 has 29 MA's), (18, 11201), (19, 11204), (21, 11222), (25, 11237), (40, 11306), (41, 11327),

Gene: ImtiyazSitla_10 Start: 8927, Stop: 9190, Start Num: 12

Candidate Starts for ImtiyazSitla_10:

(Start: 12 @8927 has 27 MA's), (23, 9023), (26, 9053), (29, 9068), (38, 9101),

Gene: Imvubu_7 Start: 7957, Stop: 8193, Start Num: 14

Candidate Starts for Imvubu_7:

(4, 7288), (6, 7324), (7, 7498), (8, 7564), (Start: 14 @7957 has 29 MA's), (19, 8020), (39, 8134),

Gene: Indlovu_11 Start: 10773, Stop: 11009, Start Num: 14

Candidate Starts for Indlovu_11:

(Start: 14 @10773 has 29 MA's), (19, 10842), (27, 10902), (39, 10941),

Gene: JAMaL_10 Start: 10664, Stop: 10885, Start Num: 14

Candidate Starts for JAMaL_10:

(Start: 14 @10664 has 29 MA's), (18, 10724), (25, 10760), (41, 10850),

Gene: Jackstina_12 Start: 10557, Stop: 10763, Start Num: 11

Candidate Starts for Jackstina_12:

(Start: 11 @10557 has 42 MA's), (18, 10632), (31, 10707),

Gene: JaguarMi_12 Start: 10965, Stop: 11189, Start Num: 14

Candidate Starts for JaguarMi_12:

(Start: 14 @10965 has 29 MA's), (18, 11025), (19, 11028), (22, 11049), (23, 11052), (40, 11133), (41, 11154),

Gene: Jiminy_10 Start: 8935, Stop: 9198, Start Num: 12

Candidate Starts for Jiminy_10:

(Start: 12 @8935 has 27 MA's), (23, 9031), (26, 9061), (29, 9076), (38, 9109),

Gene: Jolie1_09 Start: 9546, Stop: 9785, Start Num: 15

Candidate Starts for Jolie1_09:

(9, 9468), (Start: 15 @9546 has 1 MA's), (17, 9594), (34, 9690), (39, 9717),

Gene: Kamiyu_13 Start: 10635, Stop: 10841, Start Num: 11

Candidate Starts for Kamiyu_13:
(Start: 11 @10635 has 42 MA's), (18, 10710), (31, 10785),

Gene: KayaCho_9 Start: 9549, Stop: 9788, Start Num: 15
Candidate Starts for KayaCho_9:
(9, 9471), (Start: 15 @9549 has 1 MA's), (17, 9597), (34, 9693), (39, 9720),

Gene: Knocker_16 Start: 13569, Stop: 13811, Start Num: 14
Candidate Starts for Knocker_16:
(4, 12882), (5, 12894), (6, 12918), (7, 13092), (8, 13158), (Start: 14 @13569 has 29 MA's), (18, 13635), (29, 13713), (39, 13752),

Gene: Kronus_12 Start: 11247, Stop: 11453, Start Num: 11
Candidate Starts for Kronus_12:
(Start: 11 @11247 has 42 MA's), (18, 11322), (31, 11397),

Gene: Kwksand96_10 Start: 8933, Stop: 9196, Start Num: 12
Candidate Starts for Kwksand96_10:
(Start: 12 @8933 has 27 MA's), (23, 9029), (26, 9059), (29, 9074), (38, 9107),

Gene: Labeouficaum_10 Start: 8939, Stop: 9202, Start Num: 12
Candidate Starts for Labeouficaum_10:
(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: LestyG_13 Start: 10644, Stop: 10850, Start Num: 11
Candidate Starts for LestyG_13:
(Start: 11 @10644 has 42 MA's), (18, 10719), (31, 10794),

Gene: LilMcDreamy_12 Start: 11806, Stop: 12027, Start Num: 14
Candidate Starts for LilMcDreamy_12:
(4, 11131), (5, 11143), (6, 11167), (7, 11341), (Start: 14 @11806 has 29 MA's), (32, 11950), (40, 11983),

Gene: Lolalove_11 Start: 11141, Stop: 11362, Start Num: 14
Candidate Starts for Lolalove_11:
(Start: 13 @11138 has 4 MA's), (Start: 14 @11141 has 29 MA's), (18, 11201), (19, 11204), (21, 11222), (39, 11303), (40, 11306), (41, 11327),

Gene: Lopsy_10 Start: 8930, Stop: 9193, Start Num: 12
Candidate Starts for Lopsy_10:
(Start: 12 @8930 has 27 MA's), (26, 9056), (29, 9071), (38, 9104),

Gene: Magpie_11 Start: 11296, Stop: 11520, Start Num: 13
Candidate Starts for Magpie_11:
(Start: 13 @11296 has 4 MA's), (Start: 14 @11299 has 29 MA's), (18, 11359), (19, 11362), (21, 11380), (39, 11461), (40, 11464), (41, 11485),

Gene: Manad_10 Start: 8931, Stop: 9194, Start Num: 12
Candidate Starts for Manad_10:
(Start: 12 @8931 has 27 MA's), (26, 9057), (29, 9072), (38, 9105),

Gene: Maskar_10 Start: 8927, Stop: 9190, Start Num: 12
Candidate Starts for Maskar_10:

(Start: 12 @8927 has 27 MA's), (23, 9023), (26, 9053), (29, 9068), (38, 9101),

Gene: MelsMeow_10 Start: 8933, Stop: 9196, Start Num: 12

Candidate Starts for MelsMeow_10:

(Start: 12 @8933 has 27 MA's), (23, 9029), (26, 9059), (29, 9074), (38, 9107),

Gene: MichaelPhcott_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for MichaelPhcott_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Mithril_11 Start: 11144, Stop: 11365, Start Num: 14

Candidate Starts for Mithril_11:

(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (25, 11240), (39, 11306), (40, 11309), (41, 11330),

Gene: MmasiCarm_13 Start: 10640, Stop: 10846, Start Num: 11

Candidate Starts for MmasiCarm_13:

(Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: Mortcellus_12 Start: 11278, Stop: 11484, Start Num: 11

Candidate Starts for Mortcellus_12:

(Start: 11 @11278 has 42 MA's), (18, 11353), (31, 11428),

Gene: Mudslide_11 Start: 11392, Stop: 11613, Start Num: 14

Candidate Starts for Mudslide_11:

(Start: 13 @11389 has 4 MA's), (Start: 14 @11392 has 29 MA's), (18, 11452), (19, 11455), (21, 11473), (25, 11488), (39, 11554), (40, 11557), (41, 11578),

Gene: Mysterious_12 Start: 11310, Stop: 11528, Start Num: 11

Candidate Starts for Mysterious_12:

(Start: 11 @11310 has 42 MA's), (23, 11400), (33, 11454), (35, 11460),

Gene: Nanao_10 Start: 10039, Stop: 10260, Start Num: 14

Candidate Starts for Nanao_10:

(Start: 14 @10039 has 29 MA's), (18, 10099), (19, 10102), (22, 10120), (25, 10135), (41, 10225),

Gene: Nangang_12 Start: 11071, Stop: 11283, Start Num: 11

Candidate Starts for Nangang_12:

(Start: 11 @11071 has 42 MA's), (23, 11161), (33, 11215), (35, 11221),

Gene: Neos5_13 Start: 11430, Stop: 11636, Start Num: 11

Candidate Starts for Neos5_13:

(Start: 11 @11430 has 42 MA's), (18, 11505), (31, 11580),

Gene: Nigel_9 Start: 9942, Stop: 10163, Start Num: 14

Candidate Starts for Nigel_9:

(Start: 14 @9942 has 29 MA's), (18, 10002), (19, 10005), (25, 10038), (41, 10128),

Gene: Nozo_13 Start: 11405, Stop: 11611, Start Num: 11

Candidate Starts for Nozo_13:

(Start: 11 @11405 has 42 MA's), (18, 11480), (31, 11555),

Gene: Oline_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for Oline_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: OrangeOswald_13 Start: 10640, Stop: 10846, Start Num: 11

Candidate Starts for OrangeOswald_13:

(Start: 11 @10640 has 42 MA's), (18, 10715), (31, 10790),

Gene: PenguinLover67_14 Start: 11948, Stop: 12169, Start Num: 14

Candidate Starts for PenguinLover67_14:

(Start: 14 @11948 has 29 MA's), (19, 12011), (21, 12029), (40, 12113), (41, 12134),

Gene: Phaedrus_12 Start: 10557, Stop: 10763, Start Num: 11

Candidate Starts for Phaedrus_12:

(Start: 11 @10557 has 42 MA's), (18, 10632), (31, 10707),

Gene: Phayeta_13 Start: 10516, Stop: 10722, Start Num: 11

Candidate Starts for Phayeta_13:

(Start: 11 @10516 has 42 MA's), (18, 10591), (31, 10666),

Gene: Phelemich_12 Start: 11313, Stop: 11531, Start Num: 11

Candidate Starts for Phelemich_12:

(Start: 11 @11313 has 42 MA's), (33, 11457), (35, 11463),

Gene: PhenghisKhan_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for PhenghisKhan_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Phergie_10 Start: 8933, Stop: 9196, Start Num: 12

Candidate Starts for Phergie_10:

(Start: 12 @8933 has 27 MA's), (23, 9029), (26, 9059), (29, 9074), (38, 9107),

Gene: Philly_12 Start: 10530, Stop: 10736, Start Num: 11

Candidate Starts for Philly_12:

(4, 9846), (5, 9858), (6, 9882), (7, 10056), (8, 10122), (Start: 11 @10530 has 42 MA's), (18, 10605), (31, 10680),

Gene: Phleuron_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for Phleuron_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Phlyer_13 Start: 11397, Stop: 11603, Start Num: 11

Candidate Starts for Phlyer_13:

(4, 10713), (5, 10725), (6, 10749), (7, 10923), (8, 10989), (Start: 11 @11397 has 42 MA's), (18, 11472), (31, 11547),

Gene: PhrankReynolds_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for PhrankReynolds_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Pinkman_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for Pinkman_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Pipefish_13 Start: 11526, Stop: 11732, Start Num: 11

Candidate Starts for Pipefish_13:

(Start: 11 @11526 has 42 MA's), (18, 11601), (31, 11676),

Gene: Poster_10 Start: 10039, Stop: 10260, Start Num: 14

Candidate Starts for Poster_10:

(Start: 14 @10039 has 29 MA's), (18, 10099), (19, 10102), (22, 10120), (25, 10135), (41, 10225),

Gene: Prince_12 Start: 11304, Stop: 11525, Start Num: 14

Candidate Starts for Prince_12:

(Start: 13 @11301 has 4 MA's), (Start: 14 @11304 has 29 MA's), (18, 11364), (19, 11367), (21, 11385), (25, 11400), (39, 11466), (40, 11469), (41, 11490),

Gene: Quesadilla_13 Start: 11758, Stop: 11988, Start Num: 14

Candidate Starts for Quesadilla_13:

(Start: 14 @11758 has 29 MA's), (21, 11839), (27, 11881), (40, 11923), (41, 11944),

Gene: RagingRooster_13 Start: 10641, Stop: 10847, Start Num: 11

Candidate Starts for RagingRooster_13:

(Start: 11 @10641 has 42 MA's), (18, 10716), (31, 10791),

Gene: RawrgerThat_11 Start: 11135, Stop: 11356, Start Num: 14

Candidate Starts for RawrgerThat_11:

(1, 10139), (2, 10184), (3, 10187), (4, 10457), (6, 10493), (Start: 14 @11135 has 29 MA's), (18, 11195), (19, 11198), (21, 11216), (40, 11300), (41, 11321),

Gene: Reprobate_12 Start: 11310, Stop: 11528, Start Num: 11

Candidate Starts for Reprobate_12:

(Start: 11 @11310 has 42 MA's), (33, 11454), (35, 11460),

Gene: Rich_12 Start: 11071, Stop: 11295, Start Num: 11

Candidate Starts for Rich_12:

(Start: 11 @11071 has 42 MA's), (23, 11161), (33, 11215), (35, 11221), (39, 11245),

Gene: Robyn_10 Start: 8932, Stop: 9195, Start Num: 12

Candidate Starts for Robyn_10:

(Start: 12 @8932 has 27 MA's), (26, 9058), (29, 9073), (38, 9106),

Gene: Saguaro_13 Start: 12000, Stop: 12221, Start Num: 14

Candidate Starts for Saguaro_13:

(Start: 14 @12000 has 29 MA's), (19, 12063), (23, 12084), (39, 12162), (41, 12186),

Gene: Schadenfreude_10 Start: 8928, Stop: 9191, Start Num: 12

Candidate Starts for Schadenfreude_10:

(Start: 12 @8928 has 27 MA's), (26, 9054), (29, 9069), (38, 9102),

Gene: Serendipitous_12 Start: 11113, Stop: 11331, Start Num: 11

Candidate Starts for Serendipitous_12:

(Start: 11 @11113 has 42 MA's), (23, 11203), (33, 11257), (35, 11263),

Gene: SirJeffery_12 Start: 11124, Stop: 11288, Start Num: 17

Candidate Starts for SirJeffery_12:

(Start: 11 @11070 has 42 MA's), (17, 11124), (33, 11214), (35, 11220),

Gene: SlippinJimmy_13 Start: 11402, Stop: 11608, Start Num: 11

Candidate Starts for SlippinJimmy_13:

(Start: 11 @11402 has 42 MA's), (18, 11477), (31, 11552),

Gene: Stinger_9 Start: 9575, Stop: 9799, Start Num: 14

Candidate Starts for Stinger_9:

(Start: 14 @9575 has 29 MA's), (18, 9635), (19, 9638), (25, 9674), (41, 9764),

Gene: StinkyVeggy_13 Start: 11235, Stop: 11447, Start Num: 11

Candidate Starts for StinkyVeggy_13:

(Start: 11 @11235 has 42 MA's), (23, 11325), (33, 11379), (35, 11385),

Gene: Struggle_10 Start: 8933, Stop: 9196, Start Num: 12

Candidate Starts for Struggle_10:

(Start: 12 @8933 has 27 MA's), (23, 9029), (26, 9059), (29, 9074), (38, 9107),

Gene: Suigeneris_12 Start: 11070, Stop: 11288, Start Num: 11

Candidate Starts for Suigeneris_12:

(Start: 11 @11070 has 42 MA's), (17, 11124), (33, 11214), (35, 11220),

Gene: SynergyX_13 Start: 10641, Stop: 10847, Start Num: 11

Candidate Starts for SynergyX_13:

(Start: 11 @10641 has 42 MA's), (18, 10716), (31, 10791),

Gene: Thonko_9 Start: 8053, Stop: 8286, Start Num: 10

Candidate Starts for Thonko_9:

(Start: 10 @8053 has 1 MA's), (16, 8101), (23, 8155), (24, 8164), (30, 8203), (36, 8227), (37, 8230),

Gene: Tydolla_13 Start: 11402, Stop: 11608, Start Num: 11

Candidate Starts for Tydolla_13:

(Start: 11 @11402 has 42 MA's), (18, 11477), (31, 11552),

Gene: TyrionL_10 Start: 8939, Stop: 9202, Start Num: 12

Candidate Starts for TyrionL_10:

(Start: 12 @8939 has 27 MA's), (23, 9035), (26, 9065), (29, 9080), (38, 9113),

Gene: Vincenzo_12 Start: 11855, Stop: 12076, Start Num: 14

Candidate Starts for Vincenzo_12:

(6, 11213), (Start: 14 @11855 has 29 MA's), (19, 11918), (21, 11936), (39, 12017), (41, 12041), (42, 12059),

Gene: VioletZ_11 Start: 11144, Stop: 11365, Start Num: 14

Candidate Starts for VioletZ_11:

(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (25, 11240), (40, 11309), (41, 11330),

Gene: Waleliano_11 Start: 11144, Stop: 11365, Start Num: 14

Candidate Starts for Waleliano_11:

(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (25, 11240), (40, 11309), (41, 11330),

Gene: Yinz_13 Start: 10670, Stop: 10876, Start Num: 11

Candidate Starts for Yinz_13:

(Start: 11 @10670 has 42 MA's), (18, 10745), (31, 10820),

Gene: Zemanar_12 Start: 11141, Stop: 11365, Start Num: 13

Candidate Starts for Zemanar_12:

(Start: 13 @11141 has 4 MA's), (Start: 14 @11144 has 29 MA's), (18, 11204), (19, 11207), (21, 11225), (25, 11240), (40, 11309), (41, 11330),

Gene: Zenteno07_15 Start: 10050, Stop: 10349, Start Num: 14

Candidate Starts for Zenteno07_15:

(4, 9366), (5, 9378), (6, 9402), (8, 9642), (Start: 14 @10050 has 29 MA's), (21, 10137), (26, 10170), (29, 10185), (43, 10341),