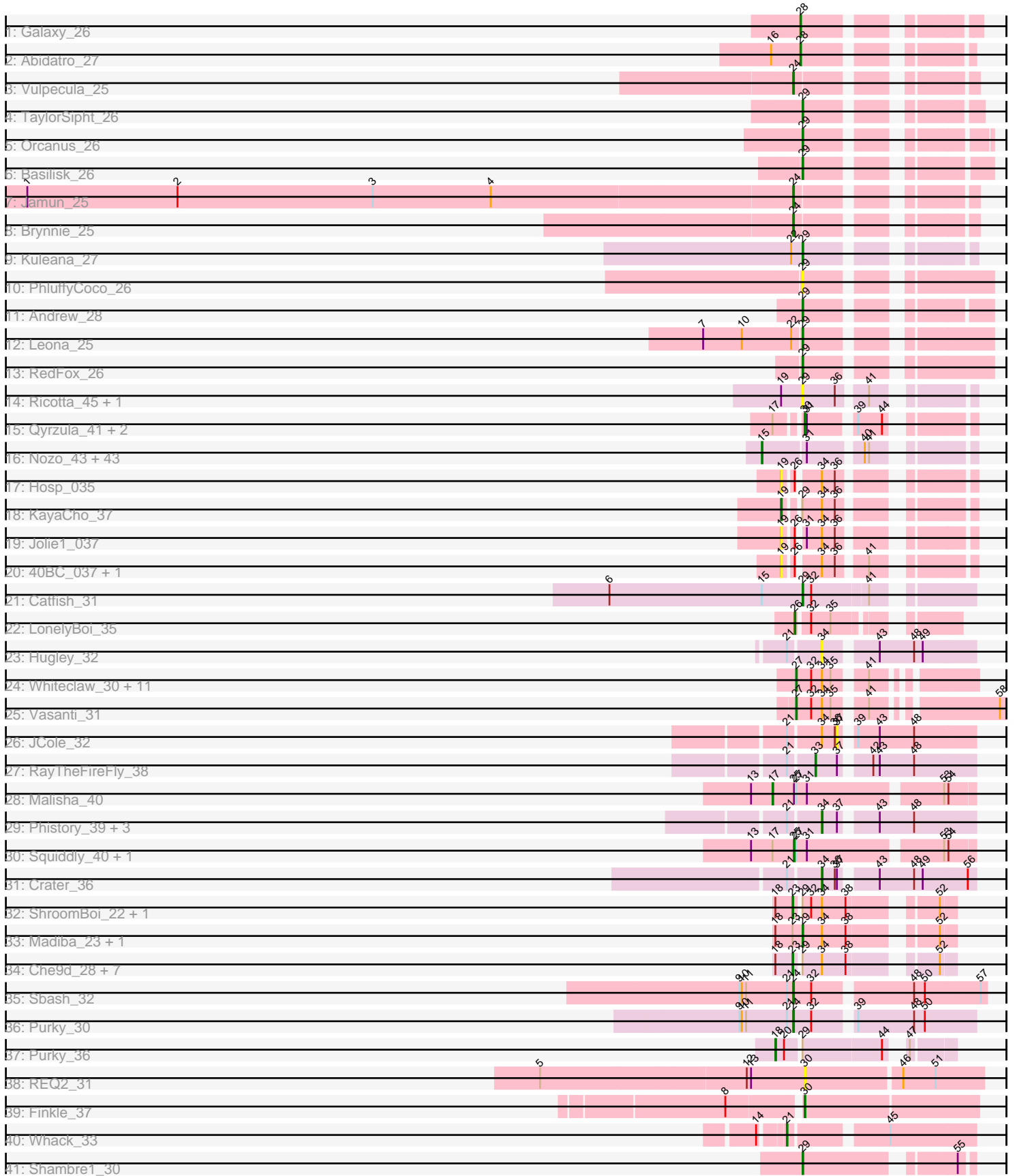


Pham 157726



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 157726 Report

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

Pham number 157726 has 112 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Galaxy_26
- Track 2 : Abidatro_27
- Track 3 : Vulpecula_25
- Track 4 : TaylorSipht_26
- Track 5 : Orcanus_26
- Track 6 : Basilisk_26
- Track 7 : Jamun_25
- Track 8 : Brynnie_25
- Track 9 : Kuleana_27
- Track 10 : PhluffyCoco_26
- Track 11 : Andrew_28
- Track 12 : Leona_25
- Track 13 : RedFox_26
- Track 14 : Ricotta_45, Dice_46
- Track 15 : Qyrzula_41, Arbiter_43, Rosebush_43
- Track 16 : Nozo_43, Halfpint_42, Yahalom_43, MmasiCarm_43, Phayeta_44, Chandler_43, Briakila_44, Daisy_43, Abinghost_43, Gadget_44, Devonte_43, Deenasa_43, Casbah_42, Rita1961_43, Kamiyu_43, Neos5_43, Obutu_43, Phaedrus_41, OrangeOswald_43, Athena_44, Jackstina_40, Gervas_43, Philly_42, HarveySr_43, RomaT_43, Phlyer_43, Yinz_43, Compostia_44, ChaChing_43, Corofin_43, Akoma_43, LestyG_43, Ben11_42, Marley1013_43, Heathcliff_43, GlenHope_44, SynergyX_43, Tydolla_43, RagingRooster_43, SlippinJimmy_43, Baloo_43, Audrey_43, Morty007_43, Kronus_42
- Track 17 : Hosp_035
- Track 18 : KayaCho_37
- Track 19 : Jolie1_037
- Track 20 : 40BC_037, 39HC_037
- Track 21 : Catfish_31
- Track 22 : LonelyBoi_35
- Track 23 : Hugley_32
- Track 24 : Whiteclaw_30, Clap_30, TuertoX_30, Savage_30, Sahara_29, Haley23_30, GemG_30, Sproutie_30, Mocha12_30, Cynthia_30, Ebert_31, Gizermo_30
- Track 25 : Vasanti_31
- Track 26 : JCole_32
- Track 27 : RayTheFireFly_38
- Track 28 : Malisha_40

- Track 29 : Phistory_39, Frickyeah_39, Apricot_38, BENtherdunthat_38
- Track 30 : Squiddly_40, Spooky_39
- Track 31 : Crater_36
- Track 32 : ShroomBoi_22, Avani_28
- Track 33 : Madiba_23, ThetaBob_24
- Track 34 : Che9d_28, Kersh_23, Ogopogo_25, Bipolar_22, Kenuha5_22, Demsculpinboyz_28, Pollywog_25, Yoshi_28
- Track 35 : Sbash_32
- Track 36 : Purky_30
- Track 37 : Purky_36
- Track 38 : REQ2_31
- Track 39 : Finkle_37
- Track 40 : Whack_33
- Track 41 : Shambre1_30

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

The start number called the most often in the published annotations is 15, it was called in 41 of the 98 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_43, Akoma_43, Athena_44, Audrey_43, Baloo_43, Ben11_42, Briakila_44, Casbah_42, ChaChing_43, Chandler_43, Compostia_44, Corofin_43, Daisy_43, Deenasa_43, Devonte_43, Gadget_44, Gervas_43, GlenHope_44, Halfpint_42, HarveySr_43, Heathcliff_43, Jackstina_40, Kamiyu_43, Kronus_42, LestyG_43, Marley1013_43, MmasiCarm_43, Morty007_43, Neos5_43, Nozo_43, Obutu_43, OrangeOswald_43, Phaedrus_41, Phayeta_44, Philly_42, Phlyer_43, RagingRooster_43, Rita1961_43, RomaT_43, SlippinJimmy_43, SynergyX_43, Tydolla_43, Yahalom_43, Yinz_43,

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

- Catfish_31,

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

- 39HC_037, 40BC_037, Abidatro_27, Andrew_28, Apricot_38, Arbiter_43, Avani_28, BENtherdunthat_38, Basilisk_26, Bipolar_22, Brynnie_25, Che9d_28, Clap_30, Crater_36, Cynthia_30, Demsculpinboyz_28, Dice_46, Ebert_31, Finkle_37, Frickyeah_39, Galaxy_26, GemG_30, Gizermo_30, Haley23_30, Hosp_035, Hugley_32, JCole_32, Jamun_25, Jolie1_037, KayaCho_37, Kenuha5_22, Kersh_23, Kuleana_27, Leona_25, LonelyBoi_35, Madiba_23, Malisha_40, Mocha12_30, Ogopogo_25, Orcanus_26, Phistory_39, PhluffyCoco_26, Pollywog_25, Purky_30, Purky_36, Qyrzula_41, REQ2_31, RayTheFireFly_38, RedFox_26, Ricotta_45, Rosebush_43, Sahara_29, Savage_30, Sbash_32, Shambre1_30, ShroomBoi_22, Spooky_39, Sproutie_30, Squiddly_40, TaylorSipht_26, ThetaBob_24, TuertoX_30, Vasanti_31, Vulpecula_25, Whack_33, Whiteclaw_30, Yoshi_28,

Summary by start number:

Start 15:

- Found in 45 of 112 (40.2%) of genes in pham

- Manual Annotations of this start: 41 of 98
- Called 97.8% of time when present
- Phage (with cluster) where this start called: Abinghost_43 (B3), Akoma_43 (B3), Athena_44 (B3), Audrey_43 (B3), Baloo_43 (B3), Ben11_42 (B3), Briakila_44 (B3), Casbah_42 (B3), ChaChing_43 (B3), Chandler_43 (B3), Compostia_44 (B3), Corofin_43 (B3), Daisy_43 (B3), Deenasa_43 (B3), Devonte_43 (B3), Gadget_44 (B3), Gervas_43 (B3), GlenHope_44 (B3), Halfpint_42 (B3), HarveySr_43 (B3), Heathcliff_43 (B3), Jackstina_40 (B3), Kamiyu_43 (B3), Kronus_42 (B3), LestyG_43 (B3), Marley1013_43 (B3), MmasiCarm_43 (B3), Morty007_43 (B3), Neos5_43 (B3), Nozo_43 (B3), Obutu_43 (B3), OrangeOswald_43 (B3), Phaedrus_41 (B3), Phayeta_44 (B3), Philly_42 (B3), Phlyer_43 (B3), RagingRooster_43 (B3), Rita1961_43 (B3), RomaT_43 (B3), SlippinJimmy_43 (B3), SynergyX_43 (B3), Tydolla_43 (B3), Yahalom_43 (B3), Yinz_43 (B3),

Start 17:

- Found in 6 of 112 (5.4%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Malisha_40 (DN),

Start 18:

- Found in 13 of 112 (11.6%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 7.7% of time when present
- Phage (with cluster) where this start called: Purky_36 (P6),

Start 19:

- Found in 7 of 112 (6.2%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 71.4% of time when present
- Phage (with cluster) where this start called: 39HC_037 (B6), 40BC_037 (B6), Hosp_035 (B6), Jolie1_037 (B6), KayaCho_37 (B6),

Start 21:

- Found in 11 of 112 (9.8%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 9.1% of time when present
- Phage (with cluster) where this start called: Whack_33 (singleton),

Start 23:

- Found in 12 of 112 (10.7%) of genes in pham
- Manual Annotations of this start: 10 of 98
- Called 83.3% of time when present
- Phage (with cluster) where this start called: Avani_28 (F2), Bipolar_22 (F1), Che9d_28 (F2), Demsculpinboyz_28 (F2), Kenuha5_22 (F1), Kersh_23 (F1), Ogopogo_25 (F1), Pollywog_25 (F1), ShroomBoi_22 (F1), Yoshi_28 (F2),

Start 24:

- Found in 5 of 112 (4.5%) of genes in pham
- Manual Annotations of this start: 5 of 98
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Brynnie_25 (AS1), Jamun_25 (AS1), Purky_30 (P6), Sbash_32 (I2), Vulpecula_25 (AS1),

Start 25:

- Found in 3 of 112 (2.7%) of genes in pham
- Manual Annotations of this start: 2 of 98
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Spooky_39 (DN2), Squiddly_40 (DN2),

Start 26:

- Found in 5 of 112 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 20.0% of time when present
- Phage (with cluster) where this start called: LonelyBoi_35 (CY),

Start 27:

- Found in 16 of 112 (14.3%) of genes in pham
- Manual Annotations of this start: 13 of 98
- Called 81.2% of time when present
- Phage (with cluster) where this start called: Clap_30 (CZ2), Cynthia_30 (CZ2), Ebert_31 (CZ2), GemG_30 (CZ2), Gizermo_30 (CZ2), Haley23_30 (CZ2), Mocha12_30 (CZ2), Sahara_29 (CZ2), Savage_30 (CZ2), Sproutie_30 (CZ2), TuertoX_30 (CZ2), Vasanti_31 (CZ2), Whiteclaw_30 (CZ2),

Start 28:

- Found in 2 of 112 (1.8%) of genes in pham
- Manual Annotations of this start: 2 of 98
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abidatro_27 (AS1), Galaxy_26 (AS1),

Start 29:

- Found in 26 of 112 (23.2%) of genes in pham
- Manual Annotations of this start: 11 of 98
- Called 53.8% of time when present
- Phage (with cluster) where this start called: Andrew_28 (AS3), Basilisk_26 (AS1), Catfish_31 (CU5), Dice_46 (B1), Kuleana_27 (AS2), Leona_25 (AS3), Madiba_23 (F1), Orcanus_26 (AS1), PhluffyCoco_26 (AS3), RedFox_26 (AS3), Ricotta_45 (B1), Shambre1_30 (singleton), TaylorSipt_26 (AS1), ThetaBob_24 (F4),

Start 30:

- Found in 5 of 112 (4.5%) of genes in pham
- Manual Annotations of this start: 4 of 98
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arbiter_43 (B2), Finkle_37 (singleton), Qyrzula_41 (B2), REQ2_31 (singleton), Rosebush_43 (B2),

Start 33:

- Found in 1 of 112 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 98
- Called 100.0% of time when present
- Phage (with cluster) where this start called: RayTheFireFly_38 (DB),

Start 34:

- Found in 37 of 112 (33.0%) of genes in pham
- Manual Annotations of this start: 4 of 98

- Called 16.2% of time when present
- Phage (with cluster) where this start called: Apricot_38 (DN3), BENtherdunthat_38 (DN1), Crater_36 (DN3), Frickyeah_39 (DN1), Hugley_32 (CZ1), Phistory_39 (DN1),

Start 37:

- Found in 7 of 112 (6.2%) of genes in pham
- No Manual Annotations of this start.
- Called 14.3% of time when present
- Phage (with cluster) where this start called: JCole_32 (CZ2),

Summary by clusters:

There are 22 clusters represented in this pham: DN, singleton, CZ2, CZ1, DB, CU5, I2, DN1, DN3, DN2, AS3, AS2, AS1, P6, CY, F1, F2, F4, B6, B1, B2, B3,

Info for manual annotations of cluster AS1:

- Start number 24 was manually annotated 3 times for cluster AS1.
- Start number 28 was manually annotated 2 times for cluster AS1.
- Start number 29 was manually annotated 3 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 29 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 29 was manually annotated 3 times for cluster AS3.

Info for manual annotations of cluster B2:

- Start number 30 was manually annotated 3 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 15 was manually annotated 41 times for cluster B3.

Info for manual annotations of cluster B6:

- Start number 19 was manually annotated 1 time for cluster B6.

Info for manual annotations of cluster CU5:

- Start number 29 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CY:

- Start number 26 was manually annotated 1 time for cluster CY.

Info for manual annotations of cluster CZ2:

- Start number 27 was manually annotated 13 times for cluster CZ2.

Info for manual annotations of cluster DB:

- Start number 33 was manually annotated 1 time for cluster DB.

Info for manual annotations of cluster DN:

- Start number 17 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster DN1:

- Start number 34 was manually annotated 2 times for cluster DN1.

Info for manual annotations of cluster DN2:

- Start number 25 was manually annotated 2 times for cluster DN2.

Info for manual annotations of cluster DN3:

- Start number 34 was manually annotated 2 times for cluster DN3.

Info for manual annotations of cluster F1:

- Start number 23 was manually annotated 6 times for cluster F1.
- Start number 29 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster F2:

- Start number 23 was manually annotated 4 times for cluster F2.

Info for manual annotations of cluster F4:

- Start number 29 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster I2:

- Start number 24 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster P6:

- Start number 18 was manually annotated 1 time for cluster P6.
- Start number 24 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: 39HC_037 Start: 36987, Stop: 36790, Start Num: 19

Candidate Starts for 39HC_037:

(Start: 19 @36987 has 1 MA's), (Start: 26 @36975 has 1 MA's), (Start: 34 @36948 has 4 MA's), (36, 36930), (41, 36897),

Gene: 40BC_037 Start: 36987, Stop: 36790, Start Num: 19

Candidate Starts for 40BC_037:

(Start: 19 @36987 has 1 MA's), (Start: 26 @36975 has 1 MA's), (Start: 34 @36948 has 4 MA's), (36, 36930), (41, 36897),

Gene: Abidatro_27 Start: 19710, Stop: 19528, Start Num: 28

Candidate Starts for Abidatro_27:

(16, 19749), (Start: 28 @19710 has 2 MA's),

Gene: Abinghost_43 Start: 39027, Stop: 38791, Start Num: 15

Candidate Starts for Abinghost_43:

(Start: 15 @39027 has 41 MA's), (31, 38970), (40, 38904), (41, 38898),

Gene: Akoma_43 Start: 39031, Stop: 38795, Start Num: 15

Candidate Starts for Akoma_43:

(Start: 15 @39031 has 41 MA's), (31, 38974), (40, 38908), (41, 38902),

Gene: Andrew_28 Start: 19161, Stop: 18955, Start Num: 29

Candidate Starts for Andrew_28:

(Start: 29 @19161 has 11 MA's),

Gene: Apricot_38 Start: 28904, Stop: 28710, Start Num: 34

Candidate Starts for Apricot_38:

(Start: 21 @28946 has 1 MA's), (Start: 34 @28904 has 4 MA's), (37, 28883), (43, 28841), (48, 28793),

Gene: Arbiter_43 Start: 39491, Stop: 39312, Start Num: 30

Candidate Starts for Arbiter_43:

(Start: 17 @39518 has 1 MA's), (Start: 30 @39491 has 4 MA's), (31, 39488), (39, 39434), (44, 39401),

Gene: Athena_44 Start: 39778, Stop: 39542, Start Num: 15

Candidate Starts for Athena_44:

(Start: 15 @39778 has 41 MA's), (31, 39721), (40, 39655), (41, 39649),

Gene: Audrey_43 Start: 39027, Stop: 38791, Start Num: 15

Candidate Starts for Audrey_43:

(Start: 15 @39027 has 41 MA's), (31, 38970), (40, 38904), (41, 38898),

Gene: Avani_28 Start: 24082, Stop: 23903, Start Num: 23

Candidate Starts for Avani_28:

(Start: 18 @24106 has 1 MA's), (Start: 23 @24082 has 10 MA's), (Start: 29 @24076 has 11 MA's), (32, 24064), (Start: 34 @24049 has 4 MA's), (38, 24016), (52, 23920),

Gene: BENtherdunthat_38 Start: 28707, Stop: 28513, Start Num: 34

Candidate Starts for BENtherdunthat_38:

(Start: 21 @28749 has 1 MA's), (Start: 34 @28707 has 4 MA's), (37, 28686), (43, 28644), (48, 28596),

Gene: Baloo_43 Start: 39030, Stop: 38794, Start Num: 15

Candidate Starts for Baloo_43:

(Start: 15 @39030 has 41 MA's), (31, 38973), (40, 38907), (41, 38901),

Gene: Basilisk_26 Start: 20189, Stop: 19986, Start Num: 29

Candidate Starts for Basilisk_26:

(Start: 29 @20189 has 11 MA's),

Gene: Ben11_42 Start: 38849, Stop: 38613, Start Num: 15

Candidate Starts for Ben11_42:

(Start: 15 @38849 has 41 MA's), (31, 38792), (40, 38726), (41, 38720),

Gene: Bipolar_22 Start: 24352, Stop: 24173, Start Num: 23

Candidate Starts for Bipolar_22:

(Start: 18 @24376 has 1 MA's), (Start: 23 @24352 has 10 MA's), (Start: 29 @24346 has 11 MA's), (Start: 34 @24319 has 4 MA's), (38, 24286), (52, 24190),

Gene: Briakila_44 Start: 39797, Stop: 39561, Start Num: 15

Candidate Starts for Briakila_44:

(Start: 15 @39797 has 41 MA's), (31, 39740), (40, 39674), (41, 39668),

Gene: Brynnie_25 Start: 19788, Stop: 19591, Start Num: 24

Candidate Starts for Brynnie_25:

(Start: 24 @19788 has 5 MA's),

Gene: Casbah_42 Start: 38879, Stop: 38643, Start Num: 15

Candidate Starts for Casbah_42:

(Start: 15 @38879 has 41 MA's), (31, 38822), (40, 38756), (41, 38750),

Gene: Catfish_31 Start: 25984, Stop: 25784, Start Num: 29

Candidate Starts for Catfish_31:

(6, 26254), (Start: 15 @26041 has 41 MA's), (Start: 29 @25984 has 11 MA's), (32, 25972), (41, 25897),

Gene: ChaChing_43 Start: 39042, Stop: 38806, Start Num: 15

Candidate Starts for ChaChing_43:

(Start: 15 @39042 has 41 MA's), (31, 38985), (40, 38919), (41, 38913),

Gene: Chandler_43 Start: 39810, Stop: 39574, Start Num: 15

Candidate Starts for Chandler_43:

(Start: 15 @39810 has 41 MA's), (31, 39753), (40, 39687), (41, 39681),

Gene: Che9d_28 Start: 24090, Stop: 23911, Start Num: 23

Candidate Starts for Che9d_28:

(Start: 18 @24114 has 1 MA's), (Start: 23 @24090 has 10 MA's), (Start: 29 @24084 has 11 MA's), (Start: 34 @24057 has 4 MA's), (38, 24024), (52, 23928),

Gene: Clap_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Clap_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Compostia_44 Start: 39458, Stop: 39222, Start Num: 15

Candidate Starts for Compostia_44:

(Start: 15 @39458 has 41 MA's), (31, 39401), (40, 39335), (41, 39329),

Gene: Corofin_43 Start: 39053, Stop: 38817, Start Num: 15

Candidate Starts for Corofin_43:

(Start: 15 @39053 has 41 MA's), (31, 38996), (40, 38930), (41, 38924),

Gene: Crater_36 Start: 28423, Stop: 28229, Start Num: 34

Candidate Starts for Crater_36:

(Start: 21 @28465 has 1 MA's), (Start: 34 @28423 has 4 MA's), (36, 28405), (37, 28402), (43, 28360), (48, 28312), (49, 28300), (56, 28240),

Gene: Cynthia_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Cynthia_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Daisy_43 Start: 39054, Stop: 38818, Start Num: 15

Candidate Starts for Daisy_43:

(Start: 15 @39054 has 41 MA's), (31, 38997), (40, 38931), (41, 38925),

Gene: Deenasa_43 Start: 39789, Stop: 39553, Start Num: 15

Candidate Starts for Deenasa_43:

(Start: 15 @39789 has 41 MA's), (31, 39732), (40, 39666), (41, 39660),

Gene: Demsculpinboyz_28 Start: 24075, Stop: 23896, Start Num: 23

Candidate Starts for Demsculpinboyz_28:

(Start: 18 @24099 has 1 MA's), (Start: 23 @24075 has 10 MA's), (Start: 29 @24069 has 11 MA's),
(Start: 34 @24042 has 4 MA's), (38, 24009), (52, 23913),

Gene: Devonte_43 Start: 39018, Stop: 38782, Start Num: 15

Candidate Starts for Devonte_43:

(Start: 15 @39018 has 41 MA's), (31, 38961), (40, 38895), (41, 38889),

Gene: Dice_46 Start: 38864, Stop: 38679, Start Num: 29

Candidate Starts for Dice_46:

(Start: 19 @38894 has 1 MA's), (Start: 29 @38864 has 11 MA's), (36, 38819), (41, 38786),

Gene: Ebert_31 Start: 25587, Stop: 25387, Start Num: 27

Candidate Starts for Ebert_31:

(Start: 27 @25587 has 13 MA's), (32, 25566), (Start: 34 @25551 has 4 MA's), (35, 25539), (41, 25503),

Gene: Finkle_37 Start: 29834, Stop: 29601, Start Num: 30

Candidate Starts for Finkle_37:

(8, 29927), (Start: 30 @29834 has 4 MA's),

Gene: Frickyeah_39 Start: 28597, Stop: 28403, Start Num: 34

Candidate Starts for Frickyeah_39:

(Start: 21 @28639 has 1 MA's), (Start: 34 @28597 has 4 MA's), (37, 28576), (43, 28534), (48, 28486),

Gene: Gadget_44 Start: 39041, Stop: 38805, Start Num: 15

Candidate Starts for Gadget_44:

(Start: 15 @39041 has 41 MA's), (31, 38984), (40, 38918), (41, 38912),

Gene: Galaxy_26 Start: 19656, Stop: 19465, Start Num: 28

Candidate Starts for Galaxy_26:

(Start: 28 @19656 has 2 MA's),

Gene: GemG_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for GemG_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Gervas_43 Start: 39008, Stop: 38772, Start Num: 15

Candidate Starts for Gervas_43:

(Start: 15 @39008 has 41 MA's), (31, 38951), (40, 38885), (41, 38879),

Gene: Gizermo_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Gizermo_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: GlenHope_44 Start: 39021, Stop: 38785, Start Num: 15

Candidate Starts for GlenHope_44:

(Start: 15 @39021 has 41 MA's), (31, 38964), (40, 38898), (41, 38892),

Gene: Haley23_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Haley23_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Halfpint_42 Start: 38847, Stop: 38611, Start Num: 15
Candidate Starts for Halfpint_42:
(Start: 15 @38847 has 41 MA's), (31, 38790), (40, 38724), (41, 38718),

Gene: HarveySr_43 Start: 39014, Stop: 38778, Start Num: 15
Candidate Starts for HarveySr_43:
(Start: 15 @39014 has 41 MA's), (31, 38957), (40, 38891), (41, 38885),

Gene: Heathcliff_43 Start: 38992, Stop: 38756, Start Num: 15
Candidate Starts for Heathcliff_43:
(Start: 15 @38992 has 41 MA's), (31, 38935), (40, 38869), (41, 38863),

Gene: Hosp_035 Start: 35180, Stop: 34983, Start Num: 19
Candidate Starts for Hosp_035:
(Start: 19 @35180 has 1 MA's), (Start: 26 @35168 has 1 MA's), (Start: 34 @35141 has 4 MA's), (36, 35123),

Gene: Hugley_32 Start: 29478, Stop: 29284, Start Num: 34
Candidate Starts for Hugley_32:
(Start: 21 @29520 has 1 MA's), (Start: 34 @29478 has 4 MA's), (43, 29415), (48, 29367), (49, 29355),

Gene: JCole_32 Start: 26114, Stop: 25941, Start Num: 37
Candidate Starts for JCole_32:
(Start: 21 @26177 has 1 MA's), (Start: 34 @26135 has 4 MA's), (36, 26117), (37, 26114), (39, 26102), (43, 26072), (48, 26024),

Gene: Jackstina_40 Start: 38951, Stop: 38715, Start Num: 15
Candidate Starts for Jackstina_40:
(Start: 15 @38951 has 41 MA's), (31, 38894), (40, 38828), (41, 38822),

Gene: Jamun_25 Start: 19385, Stop: 19188, Start Num: 24
Candidate Starts for Jamun_25:
(1, 20447), (2, 20237), (3, 19964), (4, 19799), (Start: 24 @19385 has 5 MA's),

Gene: Jolie1_037 Start: 36967, Stop: 36770, Start Num: 19
Candidate Starts for Jolie1_037:
(Start: 19 @36967 has 1 MA's), (Start: 26 @36955 has 1 MA's), (31, 36949), (Start: 34 @36928 has 4 MA's), (36, 36910),

Gene: Kamiyu_43 Start: 39000, Stop: 38764, Start Num: 15
Candidate Starts for Kamiyu_43:
(Start: 15 @39000 has 41 MA's), (31, 38943), (40, 38877), (41, 38871),

Gene: KayaCho_37 Start: 36966, Stop: 36766, Start Num: 19
Candidate Starts for KayaCho_37:
(Start: 19 @36966 has 1 MA's), (Start: 29 @36951 has 11 MA's), (Start: 34 @36924 has 4 MA's), (36, 36906),

Gene: Kenuha5_22 Start: 24468, Stop: 24289, Start Num: 23
Candidate Starts for Kenuha5_22:

(Start: 18 @24492 has 1 MA's), (Start: 23 @24468 has 10 MA's), (Start: 29 @24462 has 11 MA's),
(Start: 34 @24435 has 4 MA's), (38, 24402), (52, 24306),

Gene: Kersh_23 Start: 24511, Stop: 24332, Start Num: 23

Candidate Starts for Kersh_23:

(Start: 18 @24535 has 1 MA's), (Start: 23 @24511 has 10 MA's), (Start: 29 @24505 has 11 MA's),
(Start: 34 @24478 has 4 MA's), (38, 24445), (52, 24349),

Gene: Kronus_42 Start: 39610, Stop: 39374, Start Num: 15

Candidate Starts for Kronus_42:

(Start: 15 @39610 has 41 MA's), (31, 39553), (40, 39487), (41, 39481),

Gene: Kuleana_27 Start: 19065, Stop: 18880, Start Num: 29

Candidate Starts for Kuleana_27:

(22, 19077), (Start: 29 @19065 has 11 MA's),

Gene: Leona_25 Start: 18655, Stop: 18440, Start Num: 29

Candidate Starts for Leona_25:

(7, 18790), (10, 18736), (22, 18667), (Start: 29 @18655 has 11 MA's),

Gene: LestyG_43 Start: 39031, Stop: 38795, Start Num: 15

Candidate Starts for LestyG_43:

(Start: 15 @39031 has 41 MA's), (31, 38974), (40, 38908), (41, 38902),

Gene: LonelyBoi_35 Start: 30866, Stop: 30690, Start Num: 26

Candidate Starts for LonelyBoi_35:

(Start: 26 @30866 has 1 MA's), (32, 30851), (35, 30824),

Gene: Madiba_23 Start: 24209, Stop: 24036, Start Num: 29

Candidate Starts for Madiba_23:

(Start: 18 @24239 has 1 MA's), (Start: 23 @24215 has 10 MA's), (Start: 29 @24209 has 11 MA's),
(Start: 34 @24182 has 4 MA's), (38, 24149), (52, 24053),

Gene: Malisha_40 Start: 30125, Stop: 29862, Start Num: 17

Candidate Starts for Malisha_40:

(13, 30155), (Start: 17 @30125 has 1 MA's), (Start: 25 @30095 has 2 MA's), (Start: 27 @30092 has
13 MA's), (31, 30077), (53, 29903), (54, 29897),

Gene: Marley1013_43 Start: 39809, Stop: 39573, Start Num: 15

Candidate Starts for Marley1013_43:

(Start: 15 @39809 has 41 MA's), (31, 39752), (40, 39686), (41, 39680),

Gene: MmasiCarm_43 Start: 39013, Stop: 38777, Start Num: 15

Candidate Starts for MmasiCarm_43:

(Start: 15 @39013 has 41 MA's), (31, 38956), (40, 38890), (41, 38884),

Gene: Mocha12_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Mocha12_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41,
25579),

Gene: Morty007_43 Start: 39809, Stop: 39573, Start Num: 15

Candidate Starts for Morty007_43:

(Start: 15 @39809 has 41 MA's), (31, 39752), (40, 39686), (41, 39680),

Gene: Neos5_43 Start: 39824, Stop: 39588, Start Num: 15

Candidate Starts for Neos5_43:

(Start: 15 @39824 has 41 MA's), (31, 39767), (40, 39701), (41, 39695),

Gene: Nozo_43 Start: 39789, Stop: 39553, Start Num: 15

Candidate Starts for Nozo_43:

(Start: 15 @39789 has 41 MA's), (31, 39732), (40, 39666), (41, 39660),

Gene: Obutu_43 Start: 39013, Stop: 38777, Start Num: 15

Candidate Starts for Obutu_43:

(Start: 15 @39013 has 41 MA's), (31, 38956), (40, 38890), (41, 38884),

Gene: Ogopogo_25 Start: 24675, Stop: 24496, Start Num: 23

Candidate Starts for Ogopogo_25:

(Start: 18 @24699 has 1 MA's), (Start: 23 @24675 has 10 MA's), (Start: 29 @24669 has 11 MA's),

(Start: 34 @24642 has 4 MA's), (38, 24609), (52, 24513),

Gene: OrangeOswald_43 Start: 39030, Stop: 38794, Start Num: 15

Candidate Starts for OrangeOswald_43:

(Start: 15 @39030 has 41 MA's), (31, 38973), (40, 38907), (41, 38901),

Gene: Orcanus_26 Start: 19951, Stop: 19748, Start Num: 29

Candidate Starts for Orcanus_26:

(Start: 29 @19951 has 11 MA's),

Gene: Phaedrus_41 Start: 38950, Stop: 38714, Start Num: 15

Candidate Starts for Phaedrus_41:

(Start: 15 @38950 has 41 MA's), (31, 38893), (40, 38827), (41, 38821),

Gene: Phayeta_44 Start: 38895, Stop: 38659, Start Num: 15

Candidate Starts for Phayeta_44:

(Start: 15 @38895 has 41 MA's), (31, 38838), (40, 38772), (41, 38766),

Gene: Philly_42 Start: 38881, Stop: 38645, Start Num: 15

Candidate Starts for Philly_42:

(Start: 15 @38881 has 41 MA's), (31, 38824), (40, 38758), (41, 38752),

Gene: Phistory_39 Start: 29860, Stop: 29666, Start Num: 34

Candidate Starts for Phistory_39:

(Start: 21 @29902 has 1 MA's), (Start: 34 @29860 has 4 MA's), (37, 29839), (43, 29797), (48, 29749),

Gene: PhluffyCoco_26 Start: 18717, Stop: 18502, Start Num: 29

Candidate Starts for PhluffyCoco_26:

(Start: 29 @18717 has 11 MA's),

Gene: Phlyer_43 Start: 39769, Stop: 39533, Start Num: 15

Candidate Starts for Phlyer_43:

(Start: 15 @39769 has 41 MA's), (31, 39712), (40, 39646), (41, 39640),

Gene: Pollywog_25 Start: 25545, Stop: 25366, Start Num: 23

Candidate Starts for Pollywog_25:

(Start: 18 @25569 has 1 MA's), (Start: 23 @25545 has 10 MA's), (Start: 29 @25539 has 11 MA's),
(Start: 34 @25512 has 4 MA's), (38, 25479), (52, 25383),

Gene: Purky_30 Start: 26584, Stop: 26351, Start Num: 24

Candidate Starts for Purky_30:

(9, 26659), (10, 26656), (11, 26650), (Start: 21 @26593 has 1 MA's), (Start: 24 @26584 has 5 MA's),
(32, 26560), (39, 26512), (48, 26434), (50, 26419),

Gene: Purky_36 Start: 28450, Stop: 28653, Start Num: 18

Candidate Starts for Purky_36:

(Start: 18 @28450 has 1 MA's), (20, 28462), (Start: 29 @28480 has 11 MA's), (44, 28588), (47,
28600),

Gene: Qyrzula_41 Start: 39560, Stop: 39381, Start Num: 30

Candidate Starts for Qyrzula_41:

(Start: 17 @39587 has 1 MA's), (Start: 30 @39560 has 4 MA's), (31, 39557), (39, 39503), (44, 39470),

Gene: REQ2_31 Start: 26798, Stop: 26559, Start Num: 30

Candidate Starts for REQ2_31:

(5, 27161), (12, 26879), (13, 26873), (Start: 30 @26798 has 4 MA's), (46, 26669), (51, 26624),

Gene: RagingRooster_43 Start: 39031, Stop: 38795, Start Num: 15

Candidate Starts for RagingRooster_43:

(Start: 15 @39031 has 41 MA's), (31, 38974), (40, 38908), (41, 38902),

Gene: RayTheFireFly_38 Start: 29870, Stop: 29667, Start Num: 33

Candidate Starts for RayTheFireFly_38:

(Start: 21 @29903 has 1 MA's), (Start: 33 @29870 has 1 MA's), (37, 29840), (42, 29807), (43, 29798),
(48, 29750),

Gene: RedFox_26 Start: 18732, Stop: 18517, Start Num: 29

Candidate Starts for RedFox_26:

(Start: 29 @18732 has 11 MA's),

Gene: Ricotta_45 Start: 38891, Stop: 38706, Start Num: 29

Candidate Starts for Ricotta_45:

(Start: 19 @38921 has 1 MA's), (Start: 29 @38891 has 11 MA's), (36, 38846), (41, 38813),

Gene: Rita1961_43 Start: 39014, Stop: 38778, Start Num: 15

Candidate Starts for Rita1961_43:

(Start: 15 @39014 has 41 MA's), (31, 38957), (40, 38891), (41, 38885),

Gene: RomaT_43 Start: 39804, Stop: 39568, Start Num: 15

Candidate Starts for RomaT_43:

(Start: 15 @39804 has 41 MA's), (31, 39747), (40, 39681), (41, 39675),

Gene: Rosebush_43 Start: 39530, Stop: 39351, Start Num: 30

Candidate Starts for Rosebush_43:

(Start: 17 @39557 has 1 MA's), (Start: 30 @39530 has 4 MA's), (31, 39527), (39, 39473), (44, 39440),

Gene: Sahara_29 Start: 25333, Stop: 25133, Start Num: 27

Candidate Starts for Sahara_29:

(Start: 27 @25333 has 13 MA's), (32, 25312), (Start: 34 @25297 has 4 MA's), (35, 25285), (41, 25249),

Gene: Savage_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Savage_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Sbash_32 Start: 28849, Stop: 28601, Start Num: 24

Candidate Starts for Sbash_32:

(9, 28924), (10, 28921), (11, 28915), (Start: 21 @28858 has 1 MA's), (Start: 24 @28849 has 5 MA's), (32, 28825), (48, 28699), (50, 28684), (57, 28609),

Gene: Shambre1_30 Start: 22778, Stop: 22578, Start Num: 29

Candidate Starts for Shambre1_30:

(Start: 29 @22778 has 11 MA's), (55, 22595),

Gene: ShroomBoi_22 Start: 24354, Stop: 24175, Start Num: 23

Candidate Starts for ShroomBoi_22:

(Start: 18 @24378 has 1 MA's), (Start: 23 @24354 has 10 MA's), (Start: 29 @24348 has 11 MA's), (32, 24336), (Start: 34 @24321 has 4 MA's), (38, 24288), (52, 24192),

Gene: SlippinJimmy_43 Start: 39796, Stop: 39560, Start Num: 15

Candidate Starts for SlippinJimmy_43:

(Start: 15 @39796 has 41 MA's), (31, 39739), (40, 39673), (41, 39667),

Gene: Spooky_39 Start: 29741, Stop: 29508, Start Num: 25

Candidate Starts for Spooky_39:

(13, 29801), (Start: 17 @29771 has 1 MA's), (Start: 25 @29741 has 2 MA's), (Start: 27 @29738 has 13 MA's), (31, 29723), (53, 29549), (54, 29543),

Gene: Sproutie_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Sproutie_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Squiddly_40 Start: 31125, Stop: 30892, Start Num: 25

Candidate Starts for Squiddly_40:

(13, 31185), (Start: 17 @31155 has 1 MA's), (Start: 25 @31125 has 2 MA's), (Start: 27 @31122 has 13 MA's), (31, 31107), (53, 30933), (54, 30927),

Gene: SynergyX_43 Start: 39031, Stop: 38795, Start Num: 15

Candidate Starts for SynergyX_43:

(Start: 15 @39031 has 41 MA's), (31, 38974), (40, 38908), (41, 38902),

Gene: TaylorSipht_26 Start: 18969, Stop: 18775, Start Num: 29

Candidate Starts for TaylorSipht_26:

(Start: 29 @18969 has 11 MA's),

Gene: ThetaBob_24 Start: 24665, Stop: 24492, Start Num: 29

Candidate Starts for ThetaBob_24:

(Start: 18 @24695 has 1 MA's), (Start: 23 @24671 has 10 MA's), (Start: 29 @24665 has 11 MA's), (Start: 34 @24638 has 4 MA's), (38, 24605), (52, 24509),

Gene: TuertoX_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for TuertoX_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Tydolla_43 Start: 39765, Stop: 39529, Start Num: 15

Candidate Starts for Tydolla_43:

(Start: 15 @39765 has 41 MA's), (31, 39708), (40, 39642), (41, 39636),

Gene: Vasanti_31 Start: 26204, Stop: 25965, Start Num: 27

Candidate Starts for Vasanti_31:

(Start: 27 @26204 has 13 MA's), (32, 26183), (Start: 34 @26168 has 4 MA's), (35, 26156), (41, 26120), (58, 25973),

Gene: Vulpecula_25 Start: 19383, Stop: 19186, Start Num: 24

Candidate Starts for Vulpecula_25:

(Start: 24 @19383 has 5 MA's),

Gene: Whack_33 Start: 28160, Stop: 27924, Start Num: 21

Candidate Starts for Whack_33:

(14, 28187), (Start: 21 @28160 has 1 MA's), (45, 28040),

Gene: Whiteclaw_30 Start: 25663, Stop: 25463, Start Num: 27

Candidate Starts for Whiteclaw_30:

(Start: 27 @25663 has 13 MA's), (32, 25642), (Start: 34 @25627 has 4 MA's), (35, 25615), (41, 25579),

Gene: Yahalom_43 Start: 39041, Stop: 38805, Start Num: 15

Candidate Starts for Yahalom_43:

(Start: 15 @39041 has 41 MA's), (31, 38984), (40, 38918), (41, 38912),

Gene: Yinz_43 Start: 39067, Stop: 38831, Start Num: 15

Candidate Starts for Yinz_43:

(Start: 15 @39067 has 41 MA's), (31, 39010), (40, 38944), (41, 38938),

Gene: Yoshi_28 Start: 24080, Stop: 23901, Start Num: 23

Candidate Starts for Yoshi_28:

(Start: 18 @24104 has 1 MA's), (Start: 23 @24080 has 10 MA's), (Start: 29 @24074 has 11 MA's), (Start: 34 @24047 has 4 MA's), (38, 24014), (52, 23918),