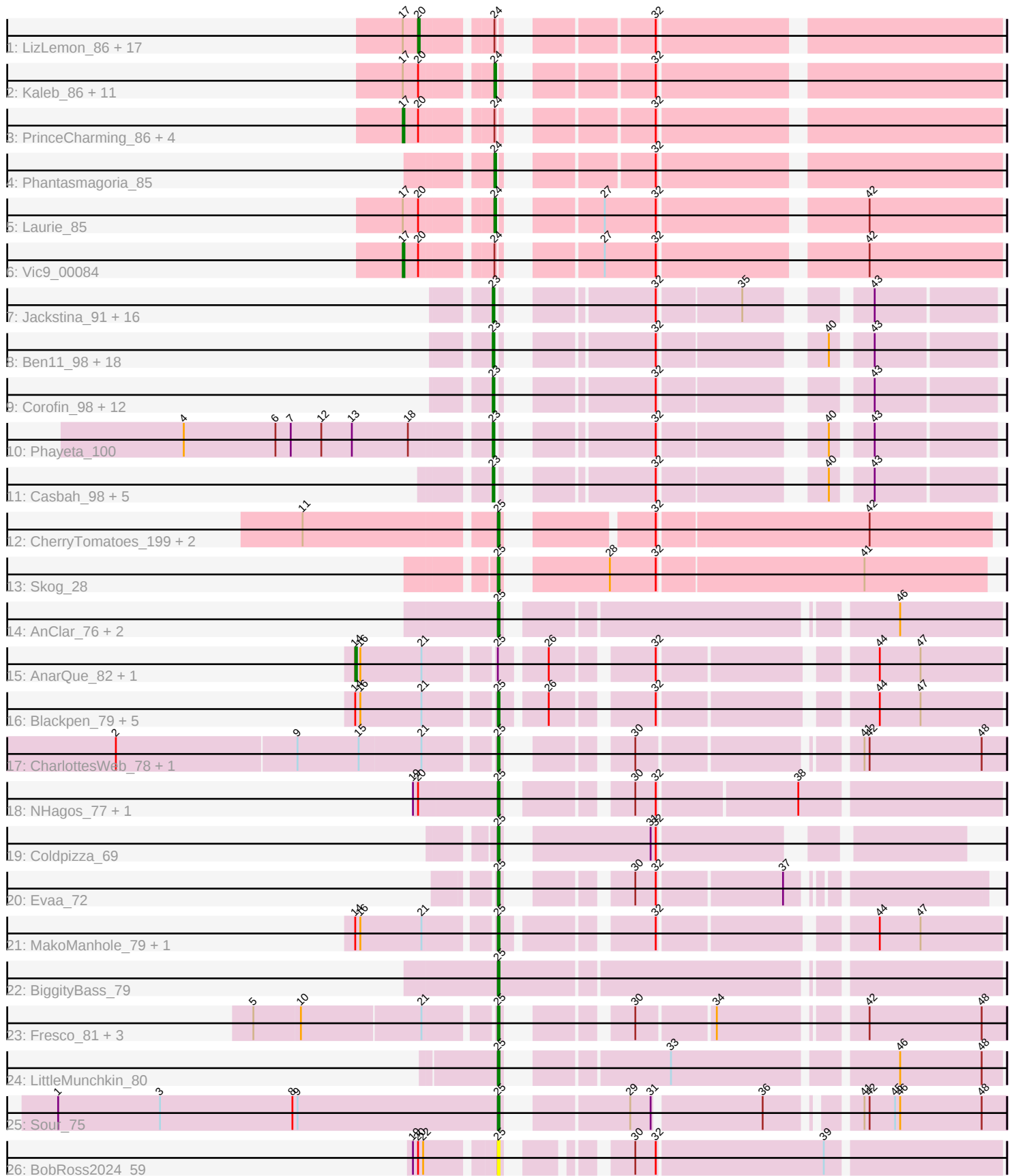


Pham 269361



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 269361 Report

This analysis was run 02/07/26 on database version 634.

Pham number 269361 has 125 members, 14 are drafts.

Phages represented in each track:

- Track 1 : LizLemon_86, Sabella_86, Godines_86, Arbiter_83, Glass_88, Brownie5_86, Qyrzula_77, Ares_86, ItsyBitsy1_83, FrenchFry_87, MasterPo_87, Tinciduntolum_87, Lephleur_86, Hedgerow_86, Holeinone_86, TA17A_89, Kheth_86, Blocker23_86
- Track 2 : Kaleb_86, Rhinoforte_86, Kolhan_87, Boyle_86, Eaglehorse_87, Calamitous_87, Faze9_85, Coffee_85, Lars_87, West99_86, Allegro_86, Rosebush_84
- Track 3 : PrinceCharming_86, LilSmirk_86, Opia_87, Bananafish_87, Tres_86
- Track 4 : Phantasmagoria_85
- Track 5 : Laurie_85
- Track 6 : Vic9_00084
- Track 7 : Jackstina_91, Tydolla_94, Marley1013_96, Halfpint_97, SynergyX_99, Chandler_98, RagingRooster_98, GlenHope_99, Heathcliff_98, Baloo_97, Morty007_96, Devonte_96, Deenasa_99, Yahalom_96, Daisy_97, Pipefish_97, Compostia_97
- Track 8 : Ben11_98, Akoma_99, Yinz_96, Philly_97, Mulaychimus_99, Audrey_98, Rita1961_99, Gadget_97, Glubnar_98, Bernardo_95, SwainyDoc_98, MmasiCarm_99, Athena_100, Chentzyk_100, RomaT_98, Phaedrus_93, Gervas_99, Kamiyu_98, Marlia_98
- Track 9 : Corofin_98, Neos5_97, OrangeOswald_97, SlippinJimmy_101, Phlyer_98, HarveySr_95, LestyG_96, Briakila_99, Chalmers_98, Shenandoah_98, Abinghost_98, Nozo_98, ChaChing_98
- Track 10 : Phayeta_100
- Track 11 : Casbah_98, TinyTerror_99, Kronus_98, Obutu_100, Olivio_98, Mortcellus_98
- Track 12 : CherryTomatoes_199, Pupper_197, SCentae_196
- Track 13 : Skog_28
- Track 14 : AnClar_76, Yago84_78, Sisko_79
- Track 15 : AnarQue_82, CloverMinnie_80
- Track 16 : Blackpen_79, FelixTres_82, Yeshua_81, CaiB_81, Wooper_82, MossRose_80
- Track 17 : CharlottesWeb_78, Mariokart_78
- Track 18 : NHagos_77, AksarBAT_81
- Track 19 : Coldpizza_69
- Track 20 : Evaa_72
- Track 21 : MakoManhole_79, TraderJ_81
- Track 22 : BiggityBass_79

- Track 23 : Fresco_81, Axumite_81, Shatter_81, Ligma_81
- Track 24 : LittleMunchkin_80
- Track 25 : Sour_75
- Track 26 : BobRoss2024_59

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

The start number called the most often in the published annotations is 23, it was called in 50 of the 111 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_98, Akoma_99, Athena_100, Audrey_98, Baloo_97, Ben11_98, Bernardo_95, Briakila_99, Casbah_98, ChaChing_98, Chalmers_98, Chandler_98, Chentzyk_100, Compostia_97, Corofin_98, Daisy_97, Deenasa_99, Devonte_96, Gadget_97, Gervas_99, GlenHope_99, Glubnar_98, Halfpint_97, HarveySr_95, Heathcliff_98, Jackstina_91, Kamiyu_98, Kronus_98, LestyG_96, Marley1013_96, Marlia_98, MmasiCarm_99, Mortcellus_98, Morty007_96, Mulaychimus_99, Neos5_97, Nozo_98, Obutu_100, Olivio_98, OrangeOswald_97, Phaedrus_93, Phayeta_100, Philly_97, Phlyer_98, Pipefish_97, RagingRooster_98, Rita1961_99, RomaT_98, Shenandoah_98, SlippinJimmy_101, SwainyDoc_98, SynergyX_99, TinyTerror_99, Tydolla_94, Yahalom_96, Yinz_96,

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

-

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

- AksarBAT_81, Allegro_86, AnClar_76, AnarQue_82, Arbiter_83, Ares_86, Axumite_81, Bananafish_87, BiggityBass_79, Blackpen_79, Blocker23_86, BobRoss2024_59, Boyle_86, Brownie5_86, CaiB_81, Calamitous_87, CharlottesWeb_78, CherryTomatoes_199, CloverMinnie_80, Coffee_85, Coldpizza_69, Eaglehorse_87, Evaas_72, Faze9_85, FelixTres_82, FrenchFry_87, Fresco_81, Glass_88, Godines_86, Hedgerow_86, Holeinone_86, ItsyBitsy1_83, Kaleb_86, Kheth_86, Kolhan_87, Lars_87, Laurie_85, Lephleur_86, Ligma_81, LilSmirk_86, LittleMunchkin_80, LizLemon_86, MakoManhole_79, Mariokart_78, MasterPo_87, MossRose_80, NHagos_77, Opia_87, Phantasmagoria_85, PrinceCharming_86, Pupper_197, Qyrzula_77, Rhinoforte_86, Rosebush_84, SCentae_196, Sabella_86, Shatter_81, Sisko_79, Skog_28, Sour_75, TA17A_89, Tinciduntolum_87, TraderJ_81, Tres_86, Vic9_00084, West99_86, Wooper_82, Yago84_78, Yeshua_81,

Summary by start number:

Start 14:

- Found in 10 of 125 (8.0%) of genes in pham
- Manual Annotations of this start: 2 of 111
- Called 20.0% of time when present
- Phage (with cluster) where this start called: AnarQue_82 (DR), CloverMinnie_80 (DR),

Start 17:

- Found in 37 of 125 (29.6%) of genes in pham
- Manual Annotations of this start: 5 of 111
- Called 16.2% of time when present
- Phage (with cluster) where this start called: Bananafish_87 (B2), LilSmirk_86 (B2), Opia_87 (B2), PrinceCharming_86 (B2), Tres_86 (B2), Vic9_00084 (B2),

Start 20:

- Found in 40 of 125 (32.0%) of genes in pham
- Manual Annotations of this start: 18 of 111
- Called 45.0% of time when present
- Phage (with cluster) where this start called: Arbiter_83 (B2), Ares_86 (B2), Blocker23_86 (B2), Brownie5_86 (B2), FrenchFry_87 (B2), Glass_88 (B2), Godines_86 (B2), Hedgerow_86 (B2), Holeinone_86 (B2), ItsyBitsy1_83 (B2), Kheth_86 (B2), Lephleur_86 (B2), LizLemon_86 (B2), MasterPo_87 (B2), Qyrzula_77 (B2), Sabella_86 (B2), TA17A_89 (B2), Tinciduntolum_87 (B2),

Start 23:

- Found in 56 of 125 (44.8%) of genes in pham
- Manual Annotations of this start: 50 of 111
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost_98 (B3), Akoma_99 (B3), Athena_100 (B3), Audrey_98 (B3), Baloo_97 (B3), Ben11_98 (B3), Bernardo_95 (B3), Briakila_99 (B3), Casbah_98 (B3), ChaChing_98 (B3), Chalmers_98 (B3), Chandler_98 (B3), Chentzyk_100 (B3), Compostia_97 (B3), Corofin_98 (B3), Daisy_97 (B3), Deenasa_99 (B3), Devonte_96 (B3), Gadget_97 (B3), Gervas_99 (B3), GlenHope_99 (B3), Glubnar_98 (B3), Halfpint_97 (B3), HarveySr_95 (B3), Heathcliff_98 (B3), Jackstina_91 (B3), Kamiyu_98 (B3), Kronus_98 (B3), LestyG_96 (B3), Marley1013_96 (B3), Marlia_98 (B3), MmasiCarm_99 (B3), Mortcellus_98 (B3), Morty007_96 (B3), Mulaychimus_99 (B3), Neos5_97 (B3), Nozo_98 (B3), Obutu_100 (B3), Olivio_98 (B3), OrangeOswald_97 (B3), Phaedruss_93 (B3), Phayeta_100 (B3), Philly_97 (B3), Phlyer_98 (B3), Pipefish_97 (B3), RagingRooster_98 (B3), Rita1961_99 (B3), RomaT_98 (B3), Shenandoah_98 (B3), SlippinJimmy_101 (B3), SwainyDoc_98 (B3), SynergyX_99 (B3), TinyTerror_99 (B3), Tydolla_94 (B3), Yahalom_96 (B3), Yinz_96 (B3),

Start 24:

- Found in 38 of 125 (30.4%) of genes in pham
- Manual Annotations of this start: 13 of 111
- Called 36.8% of time when present
- Phage (with cluster) where this start called: Allegro_86 (B2), Boyle_86 (B2), Calamitous_87 (B2), Coffee_85 (B2), Eaglehorse_87 (B2), Faze9_85 (B2), Kaleb_86 (B2), Kolhan_87 (B2), Lars_87 (B2), Laurie_85 (B2), Phantasmagoria_85 (B2), Rhinoforte_86 (B2), Rosebush_84 (B2), West99_86 (B2),

Start 25:

- Found in 31 of 125 (24.8%) of genes in pham
- Manual Annotations of this start: 23 of 111
- Called 93.5% of time when present
- Phage (with cluster) where this start called: AksarBAT_81 (DR), AnClar_76 (DR), Axumite_81 (DR), BiggityBass_79 (DR), Blackpen_79 (DR), BobRoss2024_59 (DR), CaiB_81 (DR), CharlottesWeb_78 (DR), CherryTomatoes_199 (DO), Coldpizza_69 (DR), Evaa_72 (DR), FelixTres_82 (DR), Fresco_81 (DR), Ligma_81 (DR), LittleMunchkin_80 (DR), MakoManhole_79 (DR), Mariokart_78 (DR), MossRose_80

(DR), NHagos_77 (DR), Pupper_197 (DO), SCentae_196 (DO), Shatter_81 (DR), Sisko_79 (DR), Skog_28 (DO), Sour_75 (DR), TraderJ_81 (DR), Wooper_82 (DR), Yago84_78 (DR), Yeshua_81 (DR),

Summary by clusters:

There are 4 clusters represented in this pham: DO, DR, B2, B3,

Info for manual annotations of cluster B2:

- Start number 17 was manually annotated 5 times for cluster B2.
- Start number 20 was manually annotated 18 times for cluster B2.
- Start number 24 was manually annotated 13 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 23 was manually annotated 50 times for cluster B3.

Info for manual annotations of cluster DO:

- Start number 25 was manually annotated 4 times for cluster DO.

Info for manual annotations of cluster DR:

- Start number 14 was manually annotated 2 times for cluster DR.
- Start number 25 was manually annotated 19 times for cluster DR.

Gene Information:

Gene: Abinghost_98 Start: 67232, Stop: 66996, Start Num: 23

Candidate Starts for Abinghost_98:

(Start: 23 @67232 has 50 MA's), (32, 67163), (43, 67064),

Gene: Akoma_99 Start: 67309, Stop: 67073, Start Num: 23

Candidate Starts for Akoma_99:

(Start: 23 @67309 has 50 MA's), (32, 67240), (40, 67159), (43, 67141),

Gene: AksarBAT_81 Start: 59268, Stop: 59008, Start Num: 25

Candidate Starts for AksarBAT_81:

(19, 59316), (Start: 20 @59313 has 18 MA's), (Start: 25 @59268 has 23 MA's), (30, 59211), (32, 59199), (38, 59121),

Gene: Allegro_86 Start: 65189, Stop: 64932, Start Num: 24

Candidate Starts for Allegro_86:

(Start: 17 @65234 has 5 MA's), (Start: 20 @65225 has 18 MA's), (Start: 24 @65189 has 13 MA's), (32, 65120),

Gene: AnClar_76 Start: 59906, Stop: 59643, Start Num: 25

Candidate Starts for AnClar_76:

(Start: 25 @59906 has 23 MA's), (46, 59702),

Gene: AnarQue_82 Start: 60514, Stop: 60182, Start Num: 14

Candidate Starts for AnarQue_82:

(Start: 14 @60514 has 2 MA's), (16, 60511), (21, 60475), (Start: 25 @60439 has 23 MA's), (26, 60415), (32, 60364), (44, 60253), (47, 60229),

Gene: Arbiter_83 Start: 65266, Stop: 64973, Start Num: 20
Candidate Starts for Arbiter_83:
(Start: 17 @65275 has 5 MA's), (Start: 20 @65266 has 18 MA's), (Start: 24 @65230 has 13 MA's), (32, 65161),

Gene: Ares_86 Start: 65225, Stop: 64932, Start Num: 20
Candidate Starts for Ares_86:
(Start: 17 @65234 has 5 MA's), (Start: 20 @65225 has 18 MA's), (Start: 24 @65189 has 13 MA's), (32, 65120),

Gene: Athena_100 Start: 68005, Stop: 67769, Start Num: 23
Candidate Starts for Athena_100:
(Start: 23 @68005 has 50 MA's), (32, 67936), (40, 67855), (43, 67837),

Gene: Audrey_98 Start: 67259, Stop: 67023, Start Num: 23
Candidate Starts for Audrey_98:
(Start: 23 @67259 has 50 MA's), (32, 67190), (40, 67109), (43, 67091),

Gene: Axumite_81 Start: 59787, Stop: 59539, Start Num: 25
Candidate Starts for Axumite_81:
(5, 59919), (10, 59892), (21, 59823), (Start: 25 @59787 has 23 MA's), (30, 59736), (34, 59694), (42, 59619), (48, 59553),

Gene: Baloo_97 Start: 67112, Stop: 66876, Start Num: 23
Candidate Starts for Baloo_97:
(Start: 23 @67112 has 50 MA's), (32, 67043), (35, 66998), (43, 66944),

Gene: Bananafish_87 Start: 65171, Stop: 64869, Start Num: 17
Candidate Starts for Bananafish_87:
(Start: 17 @65171 has 5 MA's), (Start: 20 @65162 has 18 MA's), (Start: 24 @65126 has 13 MA's), (32, 65057),

Gene: Ben11_98 Start: 67489, Stop: 67253, Start Num: 23
Candidate Starts for Ben11_98:
(Start: 23 @67489 has 50 MA's), (32, 67420), (40, 67339), (43, 67321),

Gene: Bernardo_95 Start: 66783, Stop: 66547, Start Num: 23
Candidate Starts for Bernardo_95:
(Start: 23 @66783 has 50 MA's), (32, 66714), (40, 66633), (43, 66615),

Gene: BiggityBass_79 Start: 61390, Stop: 61115, Start Num: 25
Candidate Starts for BiggityBass_79:
(Start: 25 @61390 has 23 MA's),

Gene: Blackpen_79 Start: 58903, Stop: 58646, Start Num: 25
Candidate Starts for Blackpen_79:
(Start: 14 @58978 has 2 MA's), (16, 58975), (21, 58939), (Start: 25 @58903 has 23 MA's), (26, 58879), (32, 58828), (44, 58717), (47, 58693),

Gene: Blocker23_86 Start: 65227, Stop: 64934, Start Num: 20
Candidate Starts for Blocker23_86:

(Start: 17 @65236 has 5 MA's), (Start: 20 @65227 has 18 MA's), (Start: 24 @65191 has 13 MA's), (32, 65122),

Gene: BobRoss2024_59 Start: 49011, Stop: 48754, Start Num: 25

Candidate Starts for BobRoss2024_59:

(19, 49053), (Start: 20 @49050 has 18 MA's), (22, 49047), (Start: 25 @49011 has 23 MA's), (30, 48960), (32, 48948), (39, 48852),

Gene: Boyle_86 Start: 65238, Stop: 64981, Start Num: 24

Candidate Starts for Boyle_86:

(Start: 17 @65283 has 5 MA's), (Start: 20 @65274 has 18 MA's), (Start: 24 @65238 has 13 MA's), (32, 65169),

Gene: Briakila_99 Start: 67763, Stop: 67527, Start Num: 23

Candidate Starts for Briakila_99:

(Start: 23 @67763 has 50 MA's), (32, 67694), (43, 67595),

Gene: Brownie5_86 Start: 65274, Stop: 64981, Start Num: 20

Candidate Starts for Brownie5_86:

(Start: 17 @65283 has 5 MA's), (Start: 20 @65274 has 18 MA's), (Start: 24 @65238 has 13 MA's), (32, 65169),

Gene: CaiB_81 Start: 60237, Stop: 59980, Start Num: 25

Candidate Starts for CaiB_81:

(Start: 14 @60312 has 2 MA's), (16, 60309), (21, 60273), (Start: 25 @60237 has 23 MA's), (26, 60213), (32, 60162), (44, 60051), (47, 60027),

Gene: Calamitous_87 Start: 65121, Stop: 64864, Start Num: 24

Candidate Starts for Calamitous_87:

(Start: 17 @65166 has 5 MA's), (Start: 20 @65157 has 18 MA's), (Start: 24 @65121 has 13 MA's), (32, 65052),

Gene: Casbah_98 Start: 67574, Stop: 67338, Start Num: 23

Candidate Starts for Casbah_98:

(Start: 23 @67574 has 50 MA's), (32, 67505), (40, 67424), (43, 67406),

Gene: ChaChing_98 Start: 67266, Stop: 67036, Start Num: 23

Candidate Starts for ChaChing_98:

(Start: 23 @67266 has 50 MA's), (32, 67203), (43, 67104),

Gene: Chalmers_98 Start: 68004, Stop: 67774, Start Num: 23

Candidate Starts for Chalmers_98:

(Start: 23 @68004 has 50 MA's), (32, 67941), (43, 67842),

Gene: Chandler_98 Start: 68048, Stop: 67812, Start Num: 23

Candidate Starts for Chandler_98:

(Start: 23 @68048 has 50 MA's), (32, 67979), (35, 67934), (43, 67880),

Gene: CharlottesWeb_78 Start: 58743, Stop: 58495, Start Num: 25

Candidate Starts for CharlottesWeb_78:

(2, 58956), (9, 58851), (15, 58815), (21, 58779), (Start: 25 @58743 has 23 MA's), (30, 58692), (41, 58578), (42, 58575), (48, 58509),

Gene: Chentzyk_100 Start: 68204, Stop: 67968, Start Num: 23
Candidate Starts for Chentzyk_100:
(Start: 23 @68204 has 50 MA's), (32, 68135), (40, 68054), (43, 68036),

Gene: CherryTomatoes_199 Start: 137102, Stop: 137362, Start Num: 25
Candidate Starts for CherryTomatoes_199:
(11, 136994), (Start: 25 @137102 has 23 MA's), (32, 137171), (42, 137291),

Gene: CloverMinnie_80 Start: 59790, Stop: 59458, Start Num: 14
Candidate Starts for CloverMinnie_80:
(Start: 14 @59790 has 2 MA's), (16, 59787), (21, 59751), (Start: 25 @59715 has 23 MA's), (26, 59691),
(32, 59640), (44, 59529), (47, 59505),

Gene: Coffee_85 Start: 65231, Stop: 64974, Start Num: 24
Candidate Starts for Coffee_85:
(Start: 17 @65276 has 5 MA's), (Start: 20 @65267 has 18 MA's), (Start: 24 @65231 has 13 MA's), (32, 65162),

Gene: Coldpizza_69 Start: 56370, Stop: 56140, Start Num: 25
Candidate Starts for Coldpizza_69:
(Start: 25 @56370 has 23 MA's), (31, 56298), (32, 56295),

Gene: Compostia_97 Start: 67726, Stop: 67490, Start Num: 23
Candidate Starts for Compostia_97:
(Start: 23 @67726 has 50 MA's), (32, 67657), (35, 67612), (43, 67558),

Gene: Corofin_98 Start: 67283, Stop: 67047, Start Num: 23
Candidate Starts for Corofin_98:
(Start: 23 @67283 has 50 MA's), (32, 67214), (43, 67115),

Gene: Daisy_97 Start: 66832, Stop: 66596, Start Num: 23
Candidate Starts for Daisy_97:
(Start: 23 @66832 has 50 MA's), (32, 66763), (35, 66718), (43, 66664),

Gene: Deenasa_99 Start: 68486, Stop: 68250, Start Num: 23
Candidate Starts for Deenasa_99:
(Start: 23 @68486 has 50 MA's), (32, 68417), (35, 68372), (43, 68318),

Gene: Devonte_96 Start: 66898, Stop: 66662, Start Num: 23
Candidate Starts for Devonte_96:
(Start: 23 @66898 has 50 MA's), (32, 66829), (35, 66784), (43, 66730),

Gene: Eaglehorse_87 Start: 65116, Stop: 64859, Start Num: 24
Candidate Starts for Eaglehorse_87:
(Start: 17 @65161 has 5 MA's), (Start: 20 @65152 has 18 MA's), (Start: 24 @65116 has 13 MA's), (32, 65047),

Gene: Evaa_72 Start: 54428, Stop: 54195, Start Num: 25
Candidate Starts for Evaa_72:
(Start: 25 @54428 has 23 MA's), (30, 54377), (32, 54365), (37, 54296),

Gene: Faze9_85 Start: 65253, Stop: 64996, Start Num: 24
Candidate Starts for Faze9_85:

(Start: 17 @65298 has 5 MA's), (Start: 20 @65289 has 18 MA's), (Start: 24 @65253 has 13 MA's), (32, 65184),

Gene: FelixTres_82 Start: 59681, Stop: 59424, Start Num: 25

Candidate Starts for FelixTres_82:

(Start: 14 @59756 has 2 MA's), (16, 59753), (21, 59717), (Start: 25 @59681 has 23 MA's), (26, 59657), (32, 59606), (44, 59495), (47, 59471),

Gene: FrenchFry_87 Start: 65277, Stop: 64984, Start Num: 20

Candidate Starts for FrenchFry_87:

(Start: 17 @65286 has 5 MA's), (Start: 20 @65277 has 18 MA's), (Start: 24 @65241 has 13 MA's), (32, 65172),

Gene: Fresco_81 Start: 59793, Stop: 59545, Start Num: 25

Candidate Starts for Fresco_81:

(5, 59925), (10, 59898), (21, 59829), (Start: 25 @59793 has 23 MA's), (30, 59742), (34, 59700), (42, 59625), (48, 59559),

Gene: Gadget_97 Start: 66536, Stop: 66300, Start Num: 23

Candidate Starts for Gadget_97:

(Start: 23 @66536 has 50 MA's), (32, 66467), (40, 66386), (43, 66368),

Gene: Gervas_99 Start: 67727, Stop: 67491, Start Num: 23

Candidate Starts for Gervas_99:

(Start: 23 @67727 has 50 MA's), (32, 67658), (40, 67577), (43, 67559),

Gene: Glass_88 Start: 65283, Stop: 64990, Start Num: 20

Candidate Starts for Glass_88:

(Start: 17 @65292 has 5 MA's), (Start: 20 @65283 has 18 MA's), (Start: 24 @65247 has 13 MA's), (32, 65178),

Gene: GlenHope_99 Start: 67302, Stop: 67066, Start Num: 23

Candidate Starts for GlenHope_99:

(Start: 23 @67302 has 50 MA's), (32, 67233), (35, 67188), (43, 67134),

Gene: Glubnar_98 Start: 67218, Stop: 66982, Start Num: 23

Candidate Starts for Glubnar_98:

(Start: 23 @67218 has 50 MA's), (32, 67149), (40, 67068), (43, 67050),

Gene: Godines_86 Start: 65188, Stop: 64895, Start Num: 20

Candidate Starts for Godines_86:

(Start: 17 @65197 has 5 MA's), (Start: 20 @65188 has 18 MA's), (Start: 24 @65152 has 13 MA's), (32, 65083),

Gene: Halfpint_97 Start: 67047, Stop: 66811, Start Num: 23

Candidate Starts for Halfpint_97:

(Start: 23 @67047 has 50 MA's), (32, 66978), (35, 66933), (43, 66879),

Gene: HarveySr_95 Start: 66371, Stop: 66135, Start Num: 23

Candidate Starts for HarveySr_95:

(Start: 23 @66371 has 50 MA's), (32, 66302), (43, 66203),

Gene: Heathcliff_98 Start: 67226, Stop: 66990, Start Num: 23

Candidate Starts for Heathcliff_98:

(Start: 23 @67226 has 50 MA's), (32, 67157), (35, 67112), (43, 67058),

Gene: Hedgerow_86 Start: 65240, Stop: 64947, Start Num: 20

Candidate Starts for Hedgerow_86:

(Start: 17 @65249 has 5 MA's), (Start: 20 @65240 has 18 MA's), (Start: 24 @65204 has 13 MA's), (32, 65135),

Gene: Holeinone_86 Start: 65129, Stop: 64836, Start Num: 20

Candidate Starts for Holeinone_86:

(Start: 17 @65138 has 5 MA's), (Start: 20 @65129 has 18 MA's), (Start: 24 @65093 has 13 MA's), (32, 65024),

Gene: ItsyBitsy1_83 Start: 65356, Stop: 65063, Start Num: 20

Candidate Starts for ItsyBitsy1_83:

(Start: 17 @65365 has 5 MA's), (Start: 20 @65356 has 18 MA's), (Start: 24 @65320 has 13 MA's), (32, 65251),

Gene: Jackstina_91 Start: 67143, Stop: 66907, Start Num: 23

Candidate Starts for Jackstina_91:

(Start: 23 @67143 has 50 MA's), (32, 67074), (35, 67029), (43, 66975),

Gene: Kaleb_86 Start: 65250, Stop: 64993, Start Num: 24

Candidate Starts for Kaleb_86:

(Start: 17 @65295 has 5 MA's), (Start: 20 @65286 has 18 MA's), (Start: 24 @65250 has 13 MA's), (32, 65181),

Gene: Kamiyu_98 Start: 67230, Stop: 66994, Start Num: 23

Candidate Starts for Kamiyu_98:

(Start: 23 @67230 has 50 MA's), (32, 67161), (40, 67080), (43, 67062),

Gene: Kheth_86 Start: 65192, Stop: 64899, Start Num: 20

Candidate Starts for Kheth_86:

(Start: 17 @65201 has 5 MA's), (Start: 20 @65192 has 18 MA's), (Start: 24 @65156 has 13 MA's), (32, 65087),

Gene: Kolhan_87 Start: 65143, Stop: 64886, Start Num: 24

Candidate Starts for Kolhan_87:

(Start: 17 @65188 has 5 MA's), (Start: 20 @65179 has 18 MA's), (Start: 24 @65143 has 13 MA's), (32, 65074),

Gene: Kronus_98 Start: 68315, Stop: 68079, Start Num: 23

Candidate Starts for Kronus_98:

(Start: 23 @68315 has 50 MA's), (32, 68246), (40, 68165), (43, 68147),

Gene: Lars_87 Start: 65218, Stop: 64961, Start Num: 24

Candidate Starts for Lars_87:

(Start: 17 @65263 has 5 MA's), (Start: 20 @65254 has 18 MA's), (Start: 24 @65218 has 13 MA's), (32, 65149),

Gene: Laurie_85 Start: 64565, Stop: 64305, Start Num: 24

Candidate Starts for Laurie_85:

(Start: 17 @64610 has 5 MA's), (Start: 20 @64601 has 18 MA's), (Start: 24 @64565 has 13 MA's), (27, 64523), (32, 64493), (42, 64382),

Gene: Lephleur_86 Start: 65111, Stop: 64818, Start Num: 20

Candidate Starts for Lephleur_86:

(Start: 17 @65120 has 5 MA's), (Start: 20 @65111 has 18 MA's), (Start: 24 @65075 has 13 MA's), (32, 65006),

Gene: LestyG_96 Start: 66795, Stop: 66565, Start Num: 23

Candidate Starts for LestyG_96:

(Start: 23 @66795 has 50 MA's), (32, 66732), (43, 66633),

Gene: Ligma_81 Start: 59787, Stop: 59539, Start Num: 25

Candidate Starts for Ligma_81:

(5, 59919), (10, 59892), (21, 59823), (Start: 25 @59787 has 23 MA's), (30, 59736), (34, 59694), (42, 59619), (48, 59553),

Gene: LilSmirk_86 Start: 65158, Stop: 64856, Start Num: 17

Candidate Starts for LilSmirk_86:

(Start: 17 @65158 has 5 MA's), (Start: 20 @65149 has 18 MA's), (Start: 24 @65113 has 13 MA's), (32, 65044),

Gene: LittleMunchkin_80 Start: 61488, Stop: 61228, Start Num: 25

Candidate Starts for LittleMunchkin_80:

(Start: 25 @61488 has 23 MA's), (33, 61410), (46, 61287), (48, 61239),

Gene: LizLemon_86 Start: 65282, Stop: 64989, Start Num: 20

Candidate Starts for LizLemon_86:

(Start: 17 @65291 has 5 MA's), (Start: 20 @65282 has 18 MA's), (Start: 24 @65246 has 13 MA's), (32, 65177),

Gene: MakoManhole_79 Start: 60210, Stop: 59953, Start Num: 25

Candidate Starts for MakoManhole_79:

(Start: 14 @60285 has 2 MA's), (16, 60282), (21, 60246), (Start: 25 @60210 has 23 MA's), (32, 60135), (44, 60024), (47, 60000),

Gene: Mariokart_78 Start: 58981, Stop: 58733, Start Num: 25

Candidate Starts for Mariokart_78:

(2, 59194), (9, 59089), (15, 59053), (21, 59017), (Start: 25 @58981 has 23 MA's), (30, 58930), (41, 58816), (42, 58813), (48, 58747),

Gene: Marley1013_96 Start: 67761, Stop: 67525, Start Num: 23

Candidate Starts for Marley1013_96:

(Start: 23 @67761 has 50 MA's), (32, 67692), (35, 67647), (43, 67593),

Gene: Marlia_98 Start: 67323, Stop: 67087, Start Num: 23

Candidate Starts for Marlia_98:

(Start: 23 @67323 has 50 MA's), (32, 67254), (40, 67173), (43, 67155),

Gene: MasterPo_87 Start: 65150, Stop: 64857, Start Num: 20

Candidate Starts for MasterPo_87:

(Start: 17 @65159 has 5 MA's), (Start: 20 @65150 has 18 MA's), (Start: 24 @65114 has 13 MA's), (32, 65045),

Gene: MmasiCarm_99 Start: 67658, Stop: 67422, Start Num: 23
Candidate Starts for MmasiCarm_99:
(Start: 23 @67658 has 50 MA's), (32, 67589), (40, 67508), (43, 67490),

Gene: Mortcellus_98 Start: 68396, Stop: 68160, Start Num: 23
Candidate Starts for Mortcellus_98:
(Start: 23 @68396 has 50 MA's), (32, 68327), (40, 68246), (43, 68228),

Gene: Morty007_96 Start: 68028, Stop: 67792, Start Num: 23
Candidate Starts for Morty007_96:
(Start: 23 @68028 has 50 MA's), (32, 67959), (35, 67914), (43, 67860),

Gene: MossRose_80 Start: 59689, Stop: 59432, Start Num: 25
Candidate Starts for MossRose_80:
(Start: 14 @59764 has 2 MA's), (16, 59761), (21, 59725), (Start: 25 @59689 has 23 MA's), (26, 59665),
(32, 59614), (44, 59503), (47, 59479),

Gene: Mulaychimus_99 Start: 67837, Stop: 67601, Start Num: 23
Candidate Starts for Mulaychimus_99:
(Start: 23 @67837 has 50 MA's), (32, 67768), (40, 67687), (43, 67669),

Gene: NHagos_77 Start: 57942, Stop: 57682, Start Num: 25
Candidate Starts for NHagos_77:
(19, 57990), (Start: 20 @57987 has 18 MA's), (Start: 25 @57942 has 23 MA's), (30, 57885), (32, 57873), (38, 57795),

Gene: Neos5_97 Start: 67484, Stop: 67248, Start Num: 23
Candidate Starts for Neos5_97:
(Start: 23 @67484 has 50 MA's), (32, 67415), (43, 67316),

Gene: Nozo_98 Start: 68037, Stop: 67801, Start Num: 23
Candidate Starts for Nozo_98:
(Start: 23 @68037 has 50 MA's), (32, 67968), (43, 67869),

Gene: Obutu_100 Start: 67841, Stop: 67605, Start Num: 23
Candidate Starts for Obutu_100:
(Start: 23 @67841 has 50 MA's), (32, 67772), (40, 67691), (43, 67673),

Gene: Olivio_98 Start: 67477, Stop: 67241, Start Num: 23
Candidate Starts for Olivio_98:
(Start: 23 @67477 has 50 MA's), (32, 67408), (40, 67327), (43, 67309),

Gene: Opia_87 Start: 65184, Stop: 64882, Start Num: 17
Candidate Starts for Opia_87:
(Start: 17 @65184 has 5 MA's), (Start: 20 @65175 has 18 MA's), (Start: 24 @65139 has 13 MA's), (32, 65070),

Gene: OrangeOswald_97 Start: 67272, Stop: 67036, Start Num: 23
Candidate Starts for OrangeOswald_97:
(Start: 23 @67272 has 50 MA's), (32, 67203), (43, 67104),

Gene: Phaedrus_93 Start: 66687, Stop: 66451, Start Num: 23

Candidate Starts for Phaedruss_93:

(Start: 23 @66687 has 50 MA's), (32, 66618), (40, 66537), (43, 66519),

Gene: Phantasmagoria_85 Start: 65121, Stop: 64864, Start Num: 24

Candidate Starts for Phantasmagoria_85:

(Start: 24 @65121 has 13 MA's), (32, 65052),

Gene: Phayeta_100 Start: 67522, Stop: 67286, Start Num: 23

Candidate Starts for Phayeta_100:

(4, 67696), (6, 67642), (7, 67633), (12, 67615), (13, 67597), (18, 67564), (Start: 23 @67522 has 50 MA's), (32, 67453), (40, 67372), (43, 67354),

Gene: Philly_97 Start: 67120, Stop: 66884, Start Num: 23

Candidate Starts for Philly_97:

(Start: 23 @67120 has 50 MA's), (32, 67051), (40, 66970), (43, 66952),

Gene: Phlyer_98 Start: 67976, Stop: 67746, Start Num: 23

Candidate Starts for Phlyer_98:

(Start: 23 @67976 has 50 MA's), (32, 67913), (43, 67814),

Gene: Pipefish_97 Start: 67656, Stop: 67420, Start Num: 23

Candidate Starts for Pipefish_97:

(Start: 23 @67656 has 50 MA's), (32, 67587), (35, 67542), (43, 67488),

Gene: PrinceCharming_86 Start: 65212, Stop: 64910, Start Num: 17

Candidate Starts for PrinceCharming_86:

(Start: 17 @65212 has 5 MA's), (Start: 20 @65203 has 18 MA's), (Start: 24 @65167 has 13 MA's), (32, 65098),

Gene: Pupper_197 Start: 136964, Stop: 137224, Start Num: 25

Candidate Starts for Pupper_197:

(11, 136856), (Start: 25 @136964 has 23 MA's), (32, 137033), (42, 137153),

Gene: Qyrzula_77 Start: 65297, Stop: 65004, Start Num: 20

Candidate Starts for Qyrzula_77:

(Start: 17 @65306 has 5 MA's), (Start: 20 @65297 has 18 MA's), (Start: 24 @65261 has 13 MA's), (32, 65192),

Gene: RagingRooster_98 Start: 67268, Stop: 67032, Start Num: 23

Candidate Starts for RagingRooster_98:

(Start: 23 @67268 has 50 MA's), (32, 67199), (35, 67154), (43, 67100),

Gene: Rhinoforte_86 Start: 65158, Stop: 64901, Start Num: 24

Candidate Starts for Rhinoforte_86:

(Start: 17 @65203 has 5 MA's), (Start: 20 @65194 has 18 MA's), (Start: 24 @65158 has 13 MA's), (32, 65089),

Gene: Rita1961_99 Start: 67613, Stop: 67377, Start Num: 23

Candidate Starts for Rita1961_99:

(Start: 23 @67613 has 50 MA's), (32, 67544), (40, 67463), (43, 67445),

Gene: RomaT_98 Start: 67836, Stop: 67600, Start Num: 23

Candidate Starts for RomaT_98:

(Start: 23 @67836 has 50 MA's), (32, 67767), (40, 67686), (43, 67668),

Gene: Rosebush_84 Start: 65230, Stop: 64973, Start Num: 24

Candidate Starts for Rosebush_84:

(Start: 17 @65275 has 5 MA's), (Start: 20 @65266 has 18 MA's), (Start: 24 @65230 has 13 MA's), (32, 65161),

Gene: SCentae_196 Start: 137156, Stop: 137416, Start Num: 25

Candidate Starts for SCentae_196:

(11, 137048), (Start: 25 @137156 has 23 MA's), (32, 137225), (42, 137345),

Gene: Sabella_86 Start: 65102, Stop: 64809, Start Num: 20

Candidate Starts for Sabella_86:

(Start: 17 @65111 has 5 MA's), (Start: 20 @65102 has 18 MA's), (Start: 24 @65066 has 13 MA's), (32, 64997),

Gene: Shatter_81 Start: 59787, Stop: 59539, Start Num: 25

Candidate Starts for Shatter_81:

(5, 59919), (10, 59892), (21, 59823), (Start: 25 @59787 has 23 MA's), (30, 59736), (34, 59694), (42, 59619), (48, 59553),

Gene: Shenandoah_98 Start: 67188, Stop: 66952, Start Num: 23

Candidate Starts for Shenandoah_98:

(Start: 23 @67188 has 50 MA's), (32, 67119), (43, 67020),

Gene: Sisko_79 Start: 60232, Stop: 59969, Start Num: 25

Candidate Starts for Sisko_79:

(Start: 25 @60232 has 23 MA's), (46, 60028),

Gene: Skog_28 Start: 12845, Stop: 13108, Start Num: 25

Candidate Starts for Skog_28:

(Start: 25 @12845 has 23 MA's), (28, 12893), (32, 12920), (41, 13037),

Gene: SlippinJimmy_101 Start: 68636, Stop: 68400, Start Num: 23

Candidate Starts for SlippinJimmy_101:

(Start: 23 @68636 has 50 MA's), (32, 68567), (43, 68468),

Gene: Sour_75 Start: 59915, Stop: 59661, Start Num: 25

Candidate Starts for Sour_75:

(1, 60173), (3, 60113), (8, 60035), (9, 60032), (Start: 25 @59915 has 23 MA's), (29, 59858), (31, 59846), (36, 59786), (41, 59744), (42, 59741), (45, 59726), (46, 59723), (48, 59675),

Gene: SwainyDoc_98 Start: 67702, Stop: 67466, Start Num: 23

Candidate Starts for SwainyDoc_98:

(Start: 23 @67702 has 50 MA's), (32, 67633), (40, 67552), (43, 67534),

Gene: SynergyX_99 Start: 67578, Stop: 67342, Start Num: 23

Candidate Starts for SynergyX_99:

(Start: 23 @67578 has 50 MA's), (32, 67509), (35, 67464), (43, 67410),

Gene: TA17A_89 Start: 65109, Stop: 64816, Start Num: 20

Candidate Starts for TA17A_89:

(Start: 17 @65118 has 5 MA's), (Start: 20 @65109 has 18 MA's), (Start: 24 @65073 has 13 MA's), (32, 65004),

Gene: Tinciduntsum_87 Start: 65273, Stop: 64980, Start Num: 20

Candidate Starts for Tinciduntsum_87:

(Start: 17 @65282 has 5 MA's), (Start: 20 @65273 has 18 MA's), (Start: 24 @65237 has 13 MA's), (32, 65168),

Gene: TinyTerror_99 Start: 67699, Stop: 67463, Start Num: 23

Candidate Starts for TinyTerror_99:

(Start: 23 @67699 has 50 MA's), (32, 67630), (40, 67549), (43, 67531),

Gene: TraderJ_81 Start: 59782, Stop: 59525, Start Num: 25

Candidate Starts for TraderJ_81:

(Start: 14 @59857 has 2 MA's), (16, 59854), (21, 59818), (Start: 25 @59782 has 23 MA's), (32, 59707), (44, 59596), (47, 59572),

Gene: Tres_86 Start: 65135, Stop: 64833, Start Num: 17

Candidate Starts for Tres_86:

(Start: 17 @65135 has 5 MA's), (Start: 20 @65126 has 18 MA's), (Start: 24 @65090 has 13 MA's), (32, 65021),

Gene: Tydolla_94 Start: 67254, Stop: 67018, Start Num: 23

Candidate Starts for Tydolla_94:

(Start: 23 @67254 has 50 MA's), (32, 67185), (35, 67140), (43, 67086),

Gene: Vic9_00084 Start: 65670, Stop: 65365, Start Num: 17

Candidate Starts for Vic9_00084:

(Start: 17 @65670 has 5 MA's), (Start: 20 @65661 has 18 MA's), (Start: 24 @65625 has 13 MA's), (27, 65583), (32, 65553), (42, 65442),

Gene: West99_86 Start: 65260, Stop: 65003, Start Num: 24

Candidate Starts for West99_86:

(Start: 17 @65305 has 5 MA's), (Start: 20 @65296 has 18 MA's), (Start: 24 @65260 has 13 MA's), (32, 65191),

Gene: Wooper_82 Start: 59772, Stop: 59515, Start Num: 25

Candidate Starts for Wooper_82:

(Start: 14 @59847 has 2 MA's), (16, 59844), (21, 59808), (Start: 25 @59772 has 23 MA's), (26, 59748), (32, 59697), (44, 59586), (47, 59562),

Gene: Yago84_78 Start: 59931, Stop: 59668, Start Num: 25

Candidate Starts for Yago84_78:

(Start: 25 @59931 has 23 MA's), (46, 59727),

Gene: Yahalom_96 Start: 67079, Stop: 66843, Start Num: 23

Candidate Starts for Yahalom_96:

(Start: 23 @67079 has 50 MA's), (32, 67010), (35, 66965), (43, 66911),

Gene: Yeshua_81 Start: 59748, Stop: 59491, Start Num: 25

Candidate Starts for Yeshua_81:

(Start: 14 @59823 has 2 MA's), (16, 59820), (21, 59784), (Start: 25 @59748 has 23 MA's), (26, 59724), (32, 59673), (44, 59562), (47, 59538),

Gene: Yinz_96 Start: 66680, Stop: 66444, Start Num: 23

Candidate Starts for Yinz_96:

(Start: 23 @66680 has 50 MA's), (32, 66611), (40, 66530), (43, 66512),