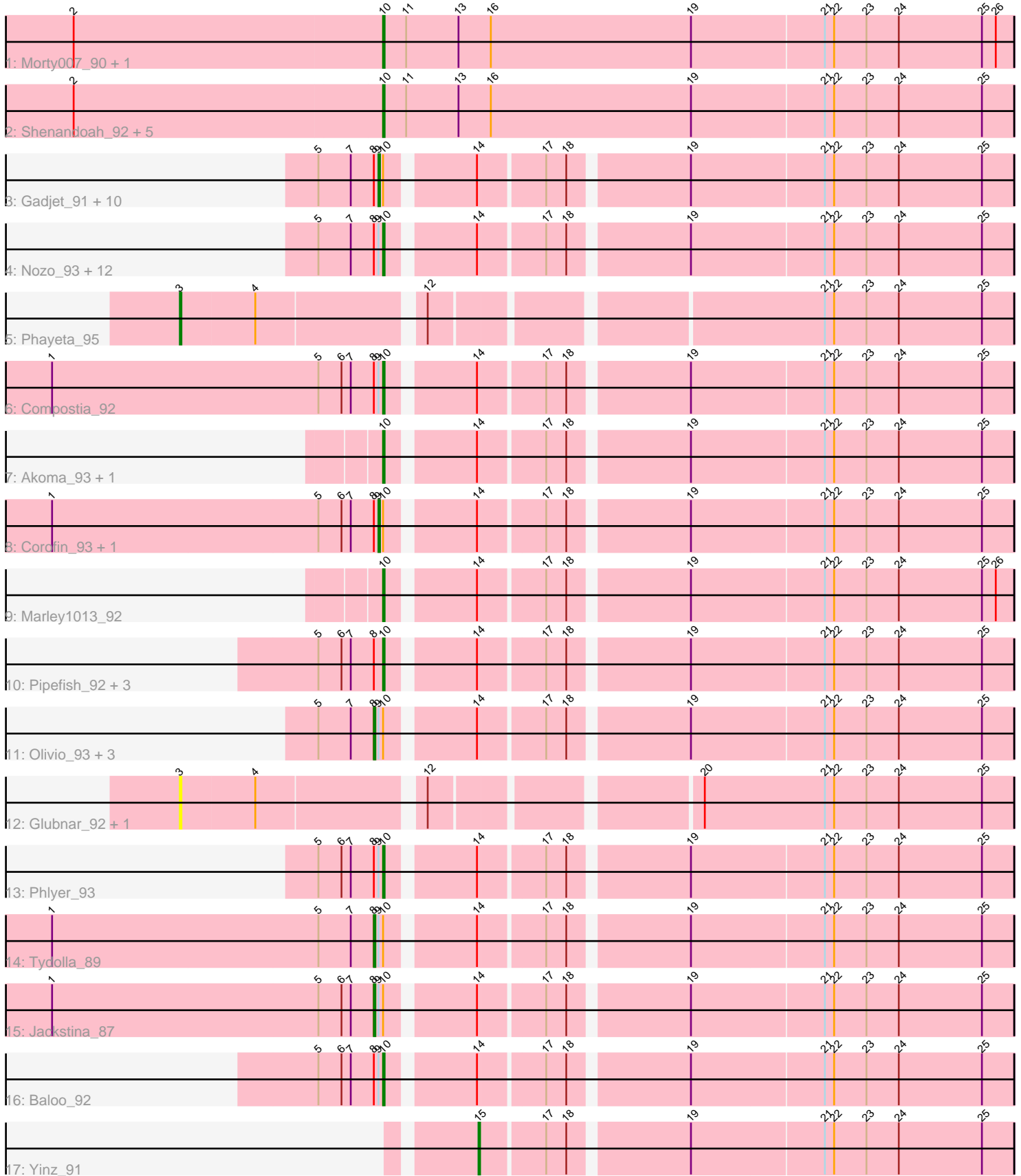


Pham 211139



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 211139 Report

This analysis was run 02/22/25 on database version 588.

Pham number 211139 has 54 members, 9 are drafts.

Phages represented in each track:

- Track 1 : Morty007_90, Neos5_91
- Track 2 : Shenandoah_92, Deenasa_93, RagingRooster_92, Chalmers_92, Briakila_93, SynergyX_93
- Track 3 : Gadget_91, Ben11_93, Chentzyk_95, Chandler_93, Kamiyu_93, Kronus_93, GlenHope_94, Yahalom_91, Mortcellus_93, Athena_95, HarveySr_90
- Track 4 : Nozo_93, RomaT_93, Daisy_92, Gervas_94, Casbah_93, Abinghost_93, Halfpint_92, Phaedrus_88, ChaChing_93, Obutu_95, Devonte_91, LestyG_91, MmasiCarm_94
- Track 5 : Phayeta_95
- Track 6 : Compostia_92
- Track 7 : Akoma_93, Bernardo_91
- Track 8 : Corofin_93, Philly_92
- Track 9 : Marley1013_92
- Track 10 : Pipefish_92, SlippinJimmy_96, Audrey_93, Rita1961_94
- Track 11 : Olivio_93, TinyTerror_94, Heathcliff_93, OrangeOswald_92
- Track 12 : Glubnar_92, SwainyDoc_93
- Track 13 : Phlyer_93
- Track 14 : Tydolla_89
- Track 15 : Jackstina_87
- Track 16 : Baloo_92
- Track 17 : Yinz_91

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

The start number called the most often in the published annotations is 10, it was called in 28 of the 45 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_93, Akoma_93, Audrey_93, Baloo_92, Bernardo_91, Briakila_93, Casbah_93, ChaChing_93, Chalmers_92, Compostia_92, Daisy_92, Deenasa_93, Devonte_91, Gervas_94, Halfpint_92, LestyG_91, Marley1013_92, MmasiCarm_94, Morty007_90, Neos5_91, Nozo_93, Obutu_95, Phaedrus_88, Phlyer_93, Pipefish_92, RagingRooster_92, Rita1961_94, RomaT_93, Shenandoah_92, SlippinJimmy_96, SynergyX_93,

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

- Athena_95, Ben11_93, Chandler_93, Chentzyk_95, Corofin_93, Gadget_91, GlenHope_94, HarveySr_90, Heathcliff_93, Jackstina_87, Kamiyu_93, Kronus_93, Mortcellus_93, Olivio_93, OrangeOswald_92, Philly_92, TinyTerror_94, Tydolla_89, Yahalom_91,

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

- Glubnar_92, Phayeta_95, SwainyDoc_93, Yinz_91,

Summary by start number:

Start 3:

- Found in 3 of 54 (5.6%) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Glubnar_92 (B3), Phayeta_95 (B3), SwainyDoc_93 (B3),

Start 8:

- Found in 39 of 54 (72.2%) of genes in pham
- Manual Annotations of this start: 4 of 45
- Called 15.4% of time when present
- Phage (with cluster) where this start called: Heathcliff_93 (B3), Jackstina_87 (B3), Olivio_93 (B3), OrangeOswald_92 (B3), TinyTerror_94 (B3), Tydolla_89 (B3),

Start 9:

- Found in 35 of 54 (64.8%) of genes in pham
- Manual Annotations of this start: 11 of 45
- Called 37.1% of time when present
- Phage (with cluster) where this start called: Athena_95 (B3), Ben11_93 (B3), Chandler_93 (B3), Chentzyk_95 (B3), Corofin_93 (B3), Gadget_91 (B3), GlenHope_94 (B3), HarveySr_90 (B3), Kamiyu_93 (B3), Kronus_93 (B3), Mortcellus_93 (B3), Philly_92 (B3), Yahalom_91 (B3),

Start 10:

- Found in 50 of 54 (92.6%) of genes in pham
- Manual Annotations of this start: 28 of 45
- Called 62.0% of time when present
- Phage (with cluster) where this start called: Abinghost_93 (B3), Akoma_93 (B3), Audrey_93 (B3), Baloo_92 (B3), Bernardo_91 (B3), Briakila_93 (B3), Casbah_93 (B3), ChaChing_93 (B3), Chalmers_92 (B3), Compostia_92 (B3), Daisy_92 (B3), Deenasa_93 (B3), Devonte_91 (B3), Gervas_94 (B3), Halfpint_92 (B3), LestyG_91 (B3), Marley1013_92 (B3), MmasiCarm_94 (B3), Morty007_90 (B3), Neos5_91 (B3), Nozo_93 (B3), Obutu_95 (B3), Phaedrus_88 (B3), Phlyer_93 (B3), Pipefish_92 (B3), RagingRooster_92 (B3), Rita1961_94 (B3), RomaT_93 (B3), Shenandoah_92 (B3), SlippinJimmy_96 (B3), SynergyX_93 (B3),

Start 15:

- Found in 1 of 54 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 45
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yinz_91 (B3),

Summary by clusters:

There is one cluster represented in this pham: B3

Info for manual annotations of cluster B3:

- Start number 3 was manually annotated 1 time for cluster B3.
- Start number 8 was manually annotated 4 times for cluster B3.
- Start number 9 was manually annotated 11 times for cluster B3.
- Start number 10 was manually annotated 28 times for cluster B3.
- Start number 15 was manually annotated 1 time for cluster B3.

Gene Information:

Gene: Abinghost_93 Start: 64507, Stop: 64127, Start Num: 10

Candidate Starts for Abinghost_93:

(5, 64549), (7, 64528), (Start: 8 @64513 has 4 MA's), (Start: 9 @64510 has 11 MA's), (Start: 10 @64507 has 28 MA's), (14, 64456), (17, 64417), (18, 64405), (19, 64333), (21, 64249), (22, 64243), (23, 64222), (24, 64201), (25, 64147),

Gene: Akoma_93 Start: 64546, Stop: 64166, Start Num: 10

Candidate Starts for Akoma_93:

(Start: 10 @64546 has 28 MA's), (14, 64495), (17, 64456), (18, 64444), (19, 64372), (21, 64288), (22, 64282), (23, 64261), (24, 64240), (25, 64186),

Gene: Athena_95 Start: 65283, Stop: 64900, Start Num: 9

Candidate Starts for Athena_95:

(5, 65322), (7, 65301), (Start: 8 @65286 has 4 MA's), (Start: 9 @65283 has 11 MA's), (Start: 10 @65280 has 28 MA's), (14, 65229), (17, 65190), (18, 65178), (19, 65106), (21, 65022), (22, 65016), (23, 64995), (24, 64974), (25, 64920),

Gene: Audrey_93 Start: 64534, Stop: 64154, Start Num: 10

Candidate Starts for Audrey_93:

(5, 64576), (6, 64561), (7, 64555), (Start: 8 @64540 has 4 MA's), (Start: 10 @64534 has 28 MA's), (14, 64483), (17, 64444), (18, 64432), (19, 64360), (21, 64276), (22, 64270), (23, 64249), (24, 64228), (25, 64174),

Gene: Baloo_92 Start: 64387, Stop: 64007, Start Num: 10

Candidate Starts for Baloo_92:

(5, 64429), (6, 64414), (7, 64408), (Start: 8 @64393 has 4 MA's), (Start: 9 @64390 has 11 MA's), (Start: 10 @64387 has 28 MA's), (14, 64336), (17, 64297), (18, 64285), (19, 64213), (21, 64129), (22, 64123), (23, 64102), (24, 64081), (25, 64027),

Gene: Ben11_93 Start: 64767, Stop: 64384, Start Num: 9

Candidate Starts for Ben11_93:

(5, 64806), (7, 64785), (Start: 8 @64770 has 4 MA's), (Start: 9 @64767 has 11 MA's), (Start: 10 @64764 has 28 MA's), (14, 64713), (17, 64674), (18, 64662), (19, 64590), (21, 64506), (22, 64500), (23, 64479), (24, 64458), (25, 64404),

Gene: Bernardo_91 Start: 64020, Stop: 63640, Start Num: 10

Candidate Starts for Bernardo_91:

(Start: 10 @64020 has 28 MA's), (14, 63969), (17, 63930), (18, 63918), (19, 63846), (21, 63762), (22, 63756), (23, 63735), (24, 63714), (25, 63660),

Gene: Briakila_93 Start: 64757, Stop: 64353, Start Num: 10

Candidate Starts for Briakila_93:

(2, 64955), (Start: 10 @64757 has 28 MA's), (11, 64742), (13, 64709), (16, 64688), (19, 64559), (21, 64475), (22, 64469), (23, 64448), (24, 64427), (25, 64373),

Gene: Casbah_93 Start: 64849, Stop: 64469, Start Num: 10

Candidate Starts for Casbah_93:

(5, 64891), (7, 64870), (Start: 8 @64855 has 4 MA's), (Start: 9 @64852 has 11 MA's), (Start: 10 @64849 has 28 MA's), (14, 64798), (17, 64759), (18, 64747), (19, 64675), (21, 64591), (22, 64585), (23, 64564), (24, 64543), (25, 64489),

Gene: ChaChing_93 Start: 64547, Stop: 64167, Start Num: 10

Candidate Starts for ChaChing_93:

(5, 64589), (7, 64568), (Start: 8 @64553 has 4 MA's), (Start: 9 @64550 has 11 MA's), (Start: 10 @64547 has 28 MA's), (14, 64496), (17, 64457), (18, 64445), (19, 64373), (21, 64289), (22, 64283), (23, 64262), (24, 64241), (25, 64187),

Gene: Chalmers_92 Start: 65004, Stop: 64600, Start Num: 10

Candidate Starts for Chalmers_92:

(2, 65202), (Start: 10 @65004 has 28 MA's), (11, 64989), (13, 64956), (16, 64935), (19, 64806), (21, 64722), (22, 64716), (23, 64695), (24, 64674), (25, 64620),

Gene: Chandler_93 Start: 65326, Stop: 64943, Start Num: 9

Candidate Starts for Chandler_93:

(5, 65365), (7, 65344), (Start: 8 @65329 has 4 MA's), (Start: 9 @65326 has 11 MA's), (Start: 10 @65323 has 28 MA's), (14, 65272), (17, 65233), (18, 65221), (19, 65149), (21, 65065), (22, 65059), (23, 65038), (24, 65017), (25, 64963),

Gene: Chentzyk_95 Start: 65482, Stop: 65099, Start Num: 9

Candidate Starts for Chentzyk_95:

(5, 65521), (7, 65500), (Start: 8 @65485 has 4 MA's), (Start: 9 @65482 has 11 MA's), (Start: 10 @65479 has 28 MA's), (14, 65428), (17, 65389), (18, 65377), (19, 65305), (21, 65221), (22, 65215), (23, 65194), (24, 65173), (25, 65119),

Gene: Compostia_92 Start: 65001, Stop: 64621, Start Num: 10

Candidate Starts for Compostia_92:

(1, 65214), (5, 65043), (6, 65028), (7, 65022), (Start: 8 @65007 has 4 MA's), (Start: 9 @65004 has 11 MA's), (Start: 10 @65001 has 28 MA's), (14, 64950), (17, 64911), (18, 64899), (19, 64827), (21, 64743), (22, 64737), (23, 64716), (24, 64695), (25, 64641),

Gene: Corofin_93 Start: 64561, Stop: 64178, Start Num: 9

Candidate Starts for Corofin_93:

(1, 64771), (5, 64600), (6, 64585), (7, 64579), (Start: 8 @64564 has 4 MA's), (Start: 9 @64561 has 11 MA's), (Start: 10 @64558 has 28 MA's), (14, 64507), (17, 64468), (18, 64456), (19, 64384), (21, 64300), (22, 64294), (23, 64273), (24, 64252), (25, 64198),

Gene: Daisy_92 Start: 64107, Stop: 63727, Start Num: 10

Candidate Starts for Daisy_92:

(5, 64149), (7, 64128), (Start: 8 @64113 has 4 MA's), (Start: 9 @64110 has 11 MA's), (Start: 10 @64107 has 28 MA's), (14, 64056), (17, 64017), (18, 64005), (19, 63933), (21, 63849), (22, 63843),

(23, 63822), (24, 63801), (25, 63747),

Gene: Deenasa_93 Start: 65480, Stop: 65076, Start Num: 10

Candidate Starts for Deenasa_93:

(2, 65678), (Start: 10 @65480 has 28 MA's), (11, 65465), (13, 65432), (16, 65411), (19, 65282), (21, 65198), (22, 65192), (23, 65171), (24, 65150), (25, 65096),

Gene: Devonte_91 Start: 64173, Stop: 63793, Start Num: 10

Candidate Starts for Devonte_91:

(5, 64215), (7, 64194), (Start: 8 @64179 has 4 MA's), (Start: 9 @64176 has 11 MA's), (Start: 10 @64173 has 28 MA's), (14, 64122), (17, 64083), (18, 64071), (19, 63999), (21, 63915), (22, 63909), (23, 63888), (24, 63867), (25, 63813),

Gene: Gadget_91 Start: 64208, Stop: 63825, Start Num: 9

Candidate Starts for Gadget_91:

(5, 64247), (7, 64226), (Start: 8 @64211 has 4 MA's), (Start: 9 @64208 has 11 MA's), (Start: 10 @64205 has 28 MA's), (14, 64154), (17, 64115), (18, 64103), (19, 64031), (21, 63947), (22, 63941), (23, 63920), (24, 63899), (25, 63845),

Gene: Gervas_94 Start: 65002, Stop: 64622, Start Num: 10

Candidate Starts for Gervas_94:

(5, 65044), (7, 65023), (Start: 8 @65008 has 4 MA's), (Start: 9 @65005 has 11 MA's), (Start: 10 @65002 has 28 MA's), (14, 64951), (17, 64912), (18, 64900), (19, 64828), (21, 64744), (22, 64738), (23, 64717), (24, 64696), (25, 64642),

Gene: GlenHope_94 Start: 64580, Stop: 64197, Start Num: 9

Candidate Starts for GlenHope_94:

(5, 64619), (7, 64598), (Start: 8 @64583 has 4 MA's), (Start: 9 @64580 has 11 MA's), (Start: 10 @64577 has 28 MA's), (14, 64526), (17, 64487), (18, 64475), (19, 64403), (21, 64319), (22, 64313), (23, 64292), (24, 64271), (25, 64217),

Gene: Glubnar_92 Start: 64455, Stop: 63952, Start Num: 3

Candidate Starts for Glubnar_92:

(Start: 3 @64455 has 1 MA's), (4, 64407), (12, 64308), (20, 64152), (21, 64074), (22, 64068), (23, 64047), (24, 64026), (25, 63972),

Gene: Halfpint_92 Start: 64322, Stop: 63942, Start Num: 10

Candidate Starts for Halfpint_92:

(5, 64364), (7, 64343), (Start: 8 @64328 has 4 MA's), (Start: 9 @64325 has 11 MA's), (Start: 10 @64322 has 28 MA's), (14, 64271), (17, 64232), (18, 64220), (19, 64148), (21, 64064), (22, 64058), (23, 64037), (24, 64016), (25, 63962),

Gene: HarveySr_90 Start: 63649, Stop: 63266, Start Num: 9

Candidate Starts for HarveySr_90:

(5, 63688), (7, 63667), (Start: 8 @63652 has 4 MA's), (Start: 9 @63649 has 11 MA's), (Start: 10 @63646 has 28 MA's), (14, 63595), (17, 63556), (18, 63544), (19, 63472), (21, 63388), (22, 63382), (23, 63361), (24, 63340), (25, 63286),

Gene: Heathcliff_93 Start: 64507, Stop: 64121, Start Num: 8

Candidate Starts for Heathcliff_93:

(5, 64543), (7, 64522), (Start: 8 @64507 has 4 MA's), (Start: 9 @64504 has 11 MA's), (Start: 10 @64501 has 28 MA's), (14, 64450), (17, 64411), (18, 64399), (19, 64327), (21, 64243), (22, 64237), (23, 64216), (24, 64195), (25, 64141),

Gene: Jackstina_87 Start: 64424, Stop: 64038, Start Num: 8

Candidate Starts for Jackstina_87:

(1, 64631), (5, 64460), (6, 64445), (7, 64439), (Start: 8 @64424 has 4 MA's), (Start: 9 @64421 has 11 MA's), (Start: 10 @64418 has 28 MA's), (14, 64367), (17, 64328), (18, 64316), (19, 64244), (21, 64160), (22, 64154), (23, 64133), (24, 64112), (25, 64058),

Gene: Kamiyu_93 Start: 64508, Stop: 64125, Start Num: 9

Candidate Starts for Kamiyu_93:

(5, 64547), (7, 64526), (Start: 8 @64511 has 4 MA's), (Start: 9 @64508 has 11 MA's), (Start: 10 @64505 has 28 MA's), (14, 64454), (17, 64415), (18, 64403), (19, 64331), (21, 64247), (22, 64241), (23, 64220), (24, 64199), (25, 64145),

Gene: Kronus_93 Start: 65592, Stop: 65209, Start Num: 9

Candidate Starts for Kronus_93:

(5, 65631), (7, 65610), (Start: 8 @65595 has 4 MA's), (Start: 9 @65592 has 11 MA's), (Start: 10 @65589 has 28 MA's), (14, 65538), (17, 65499), (18, 65487), (19, 65415), (21, 65331), (22, 65325), (23, 65304), (24, 65283), (25, 65229),

Gene: LestyG_91 Start: 64076, Stop: 63696, Start Num: 10

Candidate Starts for LestyG_91:

(5, 64118), (7, 64097), (Start: 8 @64082 has 4 MA's), (Start: 9 @64079 has 11 MA's), (Start: 10 @64076 has 28 MA's), (14, 64025), (17, 63986), (18, 63974), (19, 63902), (21, 63818), (22, 63812), (23, 63791), (24, 63770), (25, 63716),

Gene: Marley1013_92 Start: 64998, Stop: 64618, Start Num: 10

Candidate Starts for Marley1013_92:

(Start: 10 @64998 has 28 MA's), (14, 64947), (17, 64908), (18, 64896), (19, 64824), (21, 64740), (22, 64734), (23, 64713), (24, 64692), (25, 64638), (26, 64629),

Gene: MmasiCarm_94 Start: 64933, Stop: 64553, Start Num: 10

Candidate Starts for MmasiCarm_94:

(5, 64975), (7, 64954), (Start: 8 @64939 has 4 MA's), (Start: 9 @64936 has 11 MA's), (Start: 10 @64933 has 28 MA's), (14, 64882), (17, 64843), (18, 64831), (19, 64759), (21, 64675), (22, 64669), (23, 64648), (24, 64627), (25, 64573),

Gene: Mortcellus_93 Start: 65674, Stop: 65291, Start Num: 9

Candidate Starts for Mortcellus_93:

(5, 65713), (7, 65692), (Start: 8 @65677 has 4 MA's), (Start: 9 @65674 has 11 MA's), (Start: 10 @65671 has 28 MA's), (14, 65620), (17, 65581), (18, 65569), (19, 65497), (21, 65413), (22, 65407), (23, 65386), (24, 65365), (25, 65311),

Gene: Morty007_90 Start: 65022, Stop: 64618, Start Num: 10

Candidate Starts for Morty007_90:

(2, 65220), (Start: 10 @65022 has 28 MA's), (11, 65007), (13, 64974), (16, 64953), (19, 64824), (21, 64740), (22, 64734), (23, 64713), (24, 64692), (25, 64638), (26, 64629),

Gene: Neos5_91 Start: 64478, Stop: 64074, Start Num: 10

Candidate Starts for Neos5_91:

(2, 64676), (Start: 10 @64478 has 28 MA's), (11, 64463), (13, 64430), (16, 64409), (19, 64280), (21, 64196), (22, 64190), (23, 64169), (24, 64148), (25, 64094), (26, 64085),

Gene: Nozo_93 Start: 65312, Stop: 64932, Start Num: 10

Candidate Starts for Nozo_93:

(5, 65354), (7, 65333), (Start: 8 @65318 has 4 MA's), (Start: 9 @65315 has 11 MA's), (Start: 10 @65312 has 28 MA's), (14, 65261), (17, 65222), (18, 65210), (19, 65138), (21, 65054), (22, 65048), (23, 65027), (24, 65006), (25, 64952),

Gene: Obutu_95 Start: 65116, Stop: 64736, Start Num: 10

Candidate Starts for Obutu_95:

(5, 65158), (7, 65137), (Start: 8 @65122 has 4 MA's), (Start: 9 @65119 has 11 MA's), (Start: 10 @65116 has 28 MA's), (14, 65065), (17, 65026), (18, 65014), (19, 64942), (21, 64858), (22, 64852), (23, 64831), (24, 64810), (25, 64756),

Gene: Olivio_93 Start: 64758, Stop: 64372, Start Num: 8

Candidate Starts for Olivio_93:

(5, 64794), (7, 64773), (Start: 8 @64758 has 4 MA's), (Start: 9 @64755 has 11 MA's), (Start: 10 @64752 has 28 MA's), (14, 64701), (17, 64662), (18, 64650), (19, 64578), (21, 64494), (22, 64488), (23, 64467), (24, 64446), (25, 64392),

Gene: OrangeOswald_92 Start: 64553, Stop: 64167, Start Num: 8

Candidate Starts for OrangeOswald_92:

(5, 64589), (7, 64568), (Start: 8 @64553 has 4 MA's), (Start: 9 @64550 has 11 MA's), (Start: 10 @64547 has 28 MA's), (14, 64496), (17, 64457), (18, 64445), (19, 64373), (21, 64289), (22, 64283), (23, 64262), (24, 64241), (25, 64187),

Gene: Phaedrus_88 Start: 63962, Stop: 63582, Start Num: 10

Candidate Starts for Phaedrus_88:

(5, 64004), (7, 63983), (Start: 8 @63968 has 4 MA's), (Start: 9 @63965 has 11 MA's), (Start: 10 @63962 has 28 MA's), (14, 63911), (17, 63872), (18, 63860), (19, 63788), (21, 63704), (22, 63698), (23, 63677), (24, 63656), (25, 63602),

Gene: Phayeta_95 Start: 64759, Stop: 64256, Start Num: 3

Candidate Starts for Phayeta_95:

(Start: 3 @64759 has 1 MA's), (4, 64711), (12, 64612), (21, 64378), (22, 64372), (23, 64351), (24, 64330), (25, 64276),

Gene: Philly_92 Start: 64398, Stop: 64015, Start Num: 9

Candidate Starts for Philly_92:

(1, 64608), (5, 64437), (6, 64422), (7, 64416), (Start: 8 @64401 has 4 MA's), (Start: 9 @64398 has 11 MA's), (Start: 10 @64395 has 28 MA's), (14, 64344), (17, 64305), (18, 64293), (19, 64221), (21, 64137), (22, 64131), (23, 64110), (24, 64089), (25, 64035),

Gene: Phlyer_93 Start: 65257, Stop: 64877, Start Num: 10

Candidate Starts for Phlyer_93:

(5, 65299), (6, 65284), (7, 65278), (Start: 8 @65263 has 4 MA's), (Start: 9 @65260 has 11 MA's), (Start: 10 @65257 has 28 MA's), (14, 65206), (17, 65167), (18, 65155), (19, 65083), (21, 64999), (22, 64993), (23, 64972), (24, 64951), (25, 64897),

Gene: Pipefish_92 Start: 64949, Stop: 64569, Start Num: 10

Candidate Starts for Pipefish_92:

(5, 64991), (6, 64976), (7, 64970), (Start: 8 @64955 has 4 MA's), (Start: 10 @64949 has 28 MA's), (14, 64898), (17, 64859), (18, 64847), (19, 64775), (21, 64691), (22, 64685), (23, 64664), (24, 64643), (25, 64589),

Gene: RagingRooster_92 Start: 64262, Stop: 63858, Start Num: 10

Candidate Starts for RagingRooster_92:

(2, 64460), (Start: 10 @64262 has 28 MA's), (11, 64247), (13, 64214), (16, 64193), (19, 64064), (21, 63980), (22, 63974), (23, 63953), (24, 63932), (25, 63878),

Gene: Rita1961_94 Start: 64888, Stop: 64508, Start Num: 10

Candidate Starts for Rita1961_94:

(5, 64930), (6, 64915), (7, 64909), (Start: 8 @64894 has 4 MA's), (Start: 10 @64888 has 28 MA's), (14, 64837), (17, 64798), (18, 64786), (19, 64714), (21, 64630), (22, 64624), (23, 64603), (24, 64582), (25, 64528),

Gene: RomaT_93 Start: 65111, Stop: 64731, Start Num: 10

Candidate Starts for RomaT_93:

(5, 65153), (7, 65132), (Start: 8 @65117 has 4 MA's), (Start: 9 @65114 has 11 MA's), (Start: 10 @65111 has 28 MA's), (14, 65060), (17, 65021), (18, 65009), (19, 64937), (21, 64853), (22, 64847), (23, 64826), (24, 64805), (25, 64751),

Gene: Shenandoah_92 Start: 64182, Stop: 63778, Start Num: 10

Candidate Starts for Shenandoah_92:

(2, 64380), (Start: 10 @64182 has 28 MA's), (11, 64167), (13, 64134), (16, 64113), (19, 63984), (21, 63900), (22, 63894), (23, 63873), (24, 63852), (25, 63798),

Gene: SlippinJimmy_96 Start: 65911, Stop: 65531, Start Num: 10

Candidate Starts for SlippinJimmy_96:

(5, 65953), (6, 65938), (7, 65932), (Start: 8 @65917 has 4 MA's), (Start: 10 @65911 has 28 MA's), (14, 65860), (17, 65821), (18, 65809), (19, 65737), (21, 65653), (22, 65647), (23, 65626), (24, 65605), (25, 65551),

Gene: SwainyDoc_93 Start: 64939, Stop: 64436, Start Num: 3

Candidate Starts for SwainyDoc_93:

(Start: 3 @64939 has 1 MA's), (4, 64891), (12, 64792), (20, 64636), (21, 64558), (22, 64552), (23, 64531), (24, 64510), (25, 64456),

Gene: SynergyX_93 Start: 64572, Stop: 64168, Start Num: 10

Candidate Starts for SynergyX_93:

(2, 64770), (Start: 10 @64572 has 28 MA's), (11, 64557), (13, 64524), (16, 64503), (19, 64374), (21, 64290), (22, 64284), (23, 64263), (24, 64242), (25, 64188),

Gene: TinyTerror_94 Start: 64980, Stop: 64594, Start Num: 8

Candidate Starts for TinyTerror_94:

(5, 65016), (7, 64995), (Start: 8 @64980 has 4 MA's), (Start: 9 @64977 has 11 MA's), (Start: 10 @64974 has 28 MA's), (14, 64923), (17, 64884), (18, 64872), (19, 64800), (21, 64716), (22, 64710), (23, 64689), (24, 64668), (25, 64614),

Gene: Tydolla_89 Start: 64535, Stop: 64149, Start Num: 8

Candidate Starts for Tydolla_89:

(1, 64742), (5, 64571), (7, 64550), (Start: 8 @64535 has 4 MA's), (Start: 9 @64532 has 11 MA's), (Start: 10 @64529 has 28 MA's), (14, 64478), (17, 64439), (18, 64427), (19, 64355), (21, 64271), (22, 64265), (23, 64244), (24, 64223), (25, 64169),

Gene: Yahalom_91 Start: 64357, Stop: 63974, Start Num: 9

Candidate Starts for Yahalom_91:

(5, 64396), (7, 64375), (Start: 8 @64360 has 4 MA's), (Start: 9 @64357 has 11 MA's), (Start: 10 @64354 has 28 MA's), (14, 64303), (17, 64264), (18, 64252), (19, 64180), (21, 64096), (22, 64090),

(23, 64069), (24, 64048), (25, 63994),

Gene: Yinz_91 Start: 63899, Stop: 63570, Start Num: 15

Candidate Starts for Yinz_91:

(Start: 15 @63899 has 1 MA's), (17, 63860), (18, 63848), (19, 63776), (21, 63692), (22, 63686), (23, 63665), (24, 63644), (25, 63590),