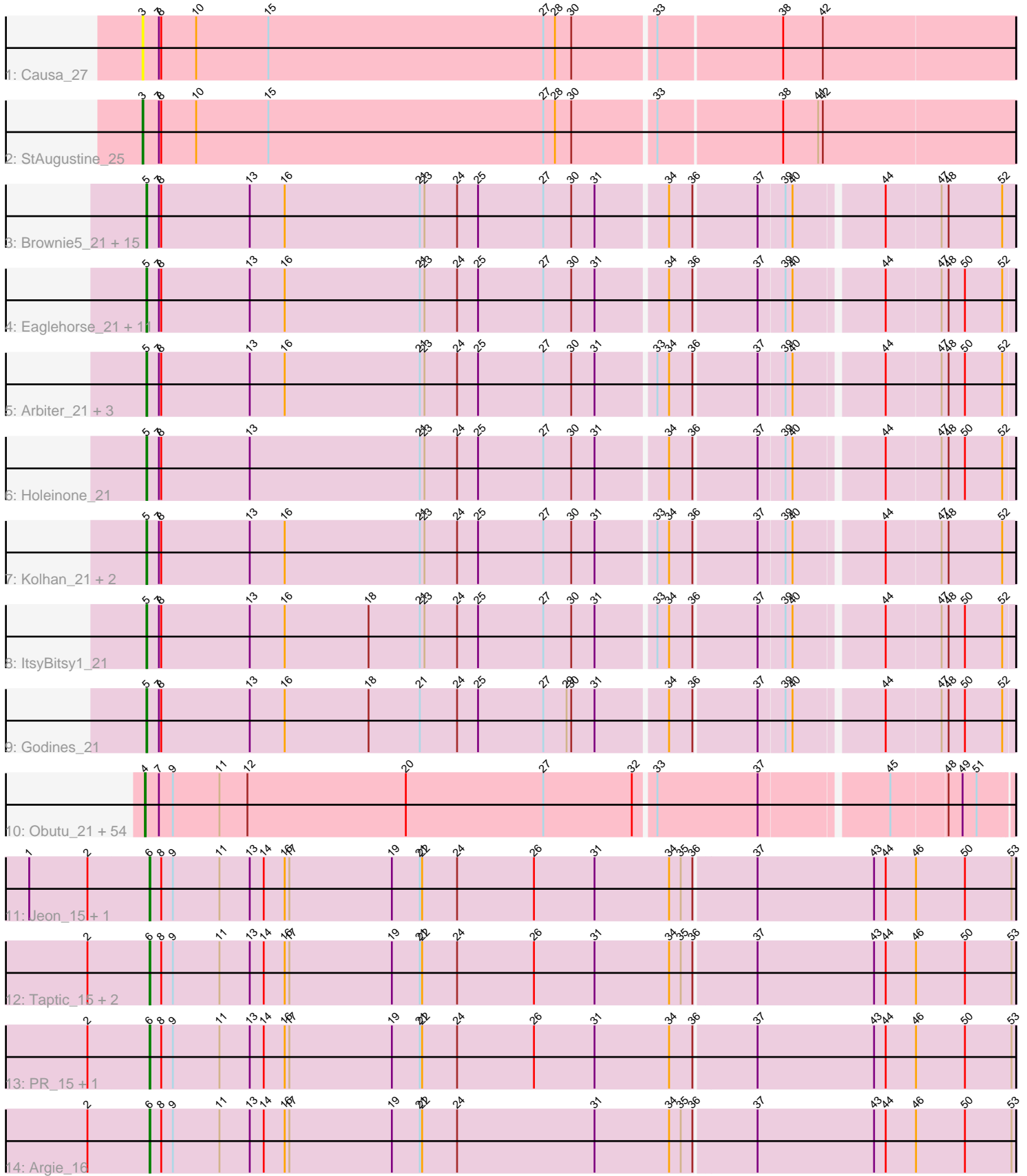


Pham 216026



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 216026 Report

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

Pham number 216026 has 103 members, 15 are drafts.

Phages represented in each track:

- Track 1 : Causa_27
- Track 2 : StAugustine_25
- Track 3 : Brownie5_21, Boyle_21, Tres_21, Opia_21, Rosebush_21, Hedgerow_21, LilSmirk_21, Tinciduntolum_22, Glass_21, West99_21, Sabella_21, Blocker23_21, Ares_21, Kheth_21, Lars_21, MasterPo_21
- Track 4 : Eaglehorse_21, Coffee_21, Laurie_21, Kaleb_21, PrinceCharming_21, Vic9_00021, Allegro_21, Calamitous_21, Lephleur_21, TA17A_21, Rhinoforte_21, Bananafish_21
- Track 5 : Arbitrator_21, Phantasmagoria_21, Qyrzula_20, LizLemon_21
- Track 6 : Holeinone_21
- Track 7 : Kolhan_21, Faze9_21, FrenchFry_21
- Track 8 : ItsyBitsy1_21
- Track 9 : Godines_21
- Track 10 : Obutu_21, Neos5_21, Bernardo_21, RagingRooster_21, Tydolla_21, Baloo_21, Gervas_21, HarveySr_21, Briakila_21, OrangeOswald_21, Morty007_21, RomaT_21, Chentzyk_20, Audrey_21, Rita1961_21, Phlyer_21, Shenandoah_21, ChaChing_21, Phayeta_21, Athena_22, Mortcellus_20, Daisy_21, Marley1013_21, SwainyDoc_21, Ben11_20, Glubnar_21, Devonte_21, TinyTerror_21, Marlia_21, Heathcliff_21, Olivio_20, GlenHope_22, SynergyX_21, Akoma_21, LestyG_21, Philly_20, Jackstina_20, Deenasa_21, Kronus_20, Pipefish_21, Casbah_20, Yahalom_21, Halfpint_20, MmasiCarm_21, Yinz_21, SlippinJimmy_21, Chandler_21, Compostia_22, Phaedrus_20, Chalmers_21, Abinghost_21, Gadjet_22, Corofin_21, Nozo_21, Kamiyu_21
- Track 11 : Jeon_15, GodPhather_16
- Track 12 : Taptic_15, Megabear_15, Cepens_15
- Track 13 : PR_15, D12_15
- Track 14 : Argie_16

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

The start number called the most often in the published annotations is 4, it was called in 45 of the 88 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abinghost_21, Akoma_21, Athena_22, Audrey_21, Baloo_21, Ben11_20, Bernardo_21, Briakila_21, Casbah_20, ChaChing_21, Chalmers_21, Chandler_21, Chentzyk_20, Compostia_22, Corofin_21, Daisy_21, Deenasa_21, Devonte_21, Gadget_22, Gervas_21, GlenHope_22, Glubnar_21, Halfpint_20, HarveySr_21, Heathcliff_21, Jackstina_20, Kamiyu_21, Kronus_20, LestyG_21, Marley1013_21, Marlia_21, MmasiCarm_21, Mortcellus_20, Morty007_21, Neos5_21, Nozo_21, Obutu_21, Olivio_20, OrangeOswald_21, Phaedrus_20, Phayeta_21, Philly_20, Phlyer_21, Pipefish_21, RagingRooster_21, Rita1961_21, RomaT_21, Shenandoah_21, SlippinJimmy_21, SwainyDoc_21, SynergyX_21, TinyTerror_21, Tydolla_21, Yahalom_21, Yinz_21,

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

-

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

- Allegro_21, Arbiter_21, Ares_21, Argie_16, Bananafish_21, Blocker23_21, Boyle_21, Brownie5_21, Calamitous_21, Causa_27, Cepens_15, Coffee_21, D12_15, Eaglehorse_21, Faze9_21, FrenchFry_21, Glass_21, GodPhather_16, Godines_21, Hedgerow_21, Holeinone_21, ItsyBitsy1_21, Jeon_15, Kaleb_21, Kheth_21, Kolhan_21, Lars_21, Laurie_21, Lephleur_21, LilSmirk_21, LizLemon_21, MasterPo_21, Megabear_15, Opia_21, PR_15, Phantasmagoria_21, PrinceCharming_21, Qyrzula_20, Rhinoforte_21, Rosebush_21, Sabella_21, StAugustine_25, TA17A_21, Taptic_15, Tinciduntolum_22, Tres_21, Vic9_00021, West99_21,

Summary by start number:

Start 3:

- Found in 2 of 103 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Causa_27 (A1), StAugustine_25 (A1),

Start 4:

- Found in 55 of 103 (53.4%) of genes in pham
- Manual Annotations of this start: 45 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abinghost_21 (B3), Akoma_21 (B3), Athena_22 (B3), Audrey_21 (B3), Baloo_21 (B3), Ben11_20 (B3), Bernardo_21 (B3), Briakila_21 (B3), Casbah_20 (B3), ChaChing_21 (B3), Chalmers_21 (B3), Chandler_21 (B3), Chentzyk_20 (B3), Compostia_22 (B3), Corofin_21 (B3), Daisy_21 (B3), Deenasa_21 (B3), Devonte_21 (B3), Gadget_22 (B3), Gervas_21 (B3), GlenHope_22 (B3), Glubnar_21 (B3), Halfpint_20 (B3), HarveySr_21 (B3), Heathcliff_21 (B3), Jackstina_20 (B3), Kamiyu_21 (B3), Kronus_20 (B3), LestyG_21 (B3), Marley1013_21 (B3), Marlia_21 (B3), MmasiCarm_21 (B3), Mortcellus_20 (B3), Morty007_21 (B3), Neos5_21 (B3), Nozo_21 (B3), Obutu_21 (B3), Olivio_20 (B3), OrangeOswald_21 (B3), Phaedrus_20 (B3), Phayeta_21 (B3), Philly_20 (B3), Phlyer_21 (B3), Pipefish_21 (B3), RagingRooster_21 (B3), Rita1961_21 (B3), RomaT_21 (B3), Shenandoah_21 (B3), SlippinJimmy_21 (B3), SwainyDoc_21 (B3), SynergyX_21 (B3), TinyTerror_21 (B3), Tydolla_21 (B3), Yahalom_21 (B3), Yinz_21 (B3),

Start 5:

- Found in 38 of 103 (36.9%) of genes in pham
- Manual Annotations of this start: 34 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Allegro_21 (B2), Arbiter_21 (B2), Ares_21 (B2), Bananafish_21 (B2), Blocker23_21 (B2), Boyle_21 (B2), Brownie5_21 (B2), Calamitous_21 (B2), Coffee_21 (B2), Eaglehorse_21 (B2), Faze9_21 (B2), FrenchFry_21 (B2), Glass_21 (B2), Godines_21 (B2), Hedgerow_21 (B2), Holeinone_21 (B2), ItsyBitsy1_21 (B2), Kaleb_21 (B2), Kheth_21 (B2), Kolhan_21 (B2), Lars_21 (B2), Laurie_21 (B2), Lephleur_21 (B2), LilSmirk_21 (B2), LizLemon_21 (B2), MasterPo_21 (B2), Opia_21 (B2), Phantasmagoria_21 (B2), PrinceCharming_21 (B2), Qyrzula_20 (B2), Rhinoforte_21 (B2), Rosebush_21 (B2), Sabella_21 (B2), TA17A_21 (B2), Tinciduntolum_22 (B2), Tres_21 (B2), Vic9_00021 (B2), West99_21 (B2),

Start 6:

- Found in 8 of 103 (7.8%) of genes in pham
- Manual Annotations of this start: 8 of 88
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argie_16 (W), Cepens_15 (W), D12_15 (W), GodPhather_16 (W), Jeon_15 (W), Megabear_15 (W), PR_15 (W), Taptic_15 (W),

Summary by clusters:

There are 4 clusters represented in this pham: AI, W, B2, B3,

Info for manual annotations of cluster AI:

- Start number 3 was manually annotated 1 time for cluster AI.

Info for manual annotations of cluster B2:

- Start number 5 was manually annotated 34 times for cluster B2.

Info for manual annotations of cluster B3:

- Start number 4 was manually annotated 45 times for cluster B3.

Info for manual annotations of cluster W:

- Start number 6 was manually annotated 8 times for cluster W.

Gene Information:

Gene: Abinghost_21 Start: 16357, Stop: 17436, Start Num: 4

Candidate Starts for Abinghost_21:

(Start: 4 @16357 has 45 MA's), (7, 16375), (9, 16393), (11, 16453), (12, 16489), (20, 16693), (27, 16870), (32, 16984), (33, 17008), (37, 17137), (45, 17290), (48, 17359), (49, 17377), (51, 17395),

Gene: Akoma_21 Start: 16357, Stop: 17436, Start Num: 4

Candidate Starts for Akoma_21:

(Start: 4 @16357 has 45 MA's), (7, 16375), (9, 16393), (11, 16453), (12, 16489), (20, 16693), (27, 16870), (32, 16984), (33, 17008), (37, 17137), (45, 17290), (48, 17359), (49, 17377), (51, 17395),

Gene: Allegro_21 Start: 17579, Stop: 18655, Start Num: 5

Candidate Starts for Allegro_21:

(Start: 5 @17579 has 34 MA's), (7, 17594), (8, 17597), (13, 17711), (16, 17756), (21, 17930), (23, 17936), (24, 17978), (25, 18005), (27, 18089), (30, 18125), (31, 18155), (34, 18242), (36, 18272), (37, 18350), (39, 18383), (40, 18392), (44, 18497), (47, 18566), (48, 18575), (50, 18596), (52, 18644),

Gene: Arbiter_21 Start: 17666, Stop: 18742, Start Num: 5

Candidate Starts for Arbiter_21:

(Start: 5 @17666 has 34 MA's), (7, 17681), (8, 17684), (13, 17798), (16, 17843), (21, 18017), (23, 18023), (24, 18065), (25, 18092), (27, 18176), (30, 18212), (31, 18242), (33, 18314), (34, 18329), (36, 18359), (37, 18437), (39, 18470), (40, 18479), (44, 18584), (47, 18653), (48, 18662), (50, 18683), (52, 18731),

Gene: Ares_21 Start: 17579, Stop: 18658, Start Num: 5

Candidate Starts for Ares_21:

(Start: 5 @17579 has 34 MA's), (7, 17594), (8, 17597), (13, 17711), (16, 17756), (21, 17930), (23, 17936), (24, 17978), (25, 18005), (27, 18089), (30, 18125), (31, 18155), (34, 18242), (36, 18272), (37, 18350), (39, 18383), (40, 18392), (44, 18497), (47, 18566), (48, 18575), (52, 18644),

Gene: Argie_16 Start: 15691, Stop: 16797, Start Num: 6

Candidate Starts for Argie_16:

(2, 15613), (Start: 6 @15691 has 8 MA's), (8, 15706), (9, 15721), (11, 15781), (13, 15820), (14, 15838), (16, 15865), (17, 15871), (19, 16003), (21, 16039), (22, 16042), (24, 16087), (31, 16264), (34, 16360), (35, 16375), (36, 16390), (37, 16465), (43, 16615), (44, 16630), (46, 16669), (50, 16732), (53, 16792),

Gene: Athena_22 Start: 17120, Stop: 18199, Start Num: 4

Candidate Starts for Athena_22:

(Start: 4 @17120 has 45 MA's), (7, 17138), (9, 17156), (11, 17216), (12, 17252), (20, 17456), (27, 17633), (32, 17747), (33, 17771), (37, 17900), (45, 18053), (48, 18122), (49, 18140), (51, 18158),

Gene: Audrey_21 Start: 16357, Stop: 17436, Start Num: 4

Candidate Starts for Audrey_21:

(Start: 4 @16357 has 45 MA's), (7, 16375), (9, 16393), (11, 16453), (12, 16489), (20, 16693), (27, 16870), (32, 16984), (33, 17008), (37, 17137), (45, 17290), (48, 17359), (49, 17377), (51, 17395),

Gene: Baloo_21 Start: 16354, Stop: 17433, Start Num: 4

Candidate Starts for Baloo_21:

(Start: 4 @16354 has 45 MA's), (7, 16372), (9, 16390), (11, 16450), (12, 16486), (20, 16690), (27, 16867), (32, 16981), (33, 17005), (37, 17134), (45, 17287), (48, 17356), (49, 17374), (51, 17392),

Gene: Bananafish_21 Start: 17576, Stop: 18652, Start Num: 5

Candidate Starts for Bananafish_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (50, 18593), (52, 18641),

Gene: Ben11_20 Start: 16181, Stop: 17260, Start Num: 4

Candidate Starts for Ben11_20:

(Start: 4 @16181 has 45 MA's), (7, 16199), (9, 16217), (11, 16277), (12, 16313), (20, 16517), (27, 16694), (32, 16808), (33, 16832), (37, 16961), (45, 17114), (48, 17183), (49, 17201), (51, 17219),

Gene: Bernardo_21 Start: 16356, Stop: 17435, Start Num: 4

Candidate Starts for Bernardo_21:

(Start: 4 @16356 has 45 MA's), (7, 16374), (9, 16392), (11, 16452), (12, 16488), (20, 16692), (27, 16869), (32, 16983), (33, 17007), (37, 17136), (45, 17289), (48, 17358), (49, 17376), (51, 17394),

Gene: Blocker23_21 Start: 17696, Stop: 18775, Start Num: 5

Candidate Starts for Blocker23_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (52, 18761),

Gene: Boyle_21 Start: 17697, Stop: 18776, Start Num: 5

Candidate Starts for Boyle_21:

(Start: 5 @17697 has 34 MA's), (7, 17712), (8, 17715), (13, 17829), (16, 17874), (21, 18048), (23, 18054), (24, 18096), (25, 18123), (27, 18207), (30, 18243), (31, 18273), (34, 18360), (36, 18390), (37, 18468), (39, 18501), (40, 18510), (44, 18615), (47, 18684), (48, 18693), (52, 18762),

Gene: Briakila_21 Start: 17122, Stop: 18201, Start Num: 4

Candidate Starts for Briakila_21:

(Start: 4 @17122 has 45 MA's), (7, 17140), (9, 17158), (11, 17218), (12, 17254), (20, 17458), (27, 17635), (32, 17749), (33, 17773), (37, 17902), (45, 18055), (48, 18124), (49, 18142), (51, 18160),

Gene: Brownie5_21 Start: 17696, Stop: 18775, Start Num: 5

Candidate Starts for Brownie5_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (52, 18761),

Gene: Calamitous_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for Calamitous_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (50, 18593), (52, 18641),

Gene: Casbah_20 Start: 16209, Stop: 17288, Start Num: 4

Candidate Starts for Casbah_20:

(Start: 4 @16209 has 45 MA's), (7, 16227), (9, 16245), (11, 16305), (12, 16341), (20, 16545), (27, 16722), (32, 16836), (33, 16860), (37, 16989), (45, 17142), (48, 17211), (49, 17229), (51, 17247),

Gene: Causa_27 Start: 18877, Stop: 19983, Start Num: 3

Candidate Starts for Causa_27:

(Start: 3 @18877 has 1 MA's), (7, 18898), (8, 18901), (10, 18946), (15, 19039), (27, 19393), (28, 19408), (30, 19429), (33, 19531), (38, 19687), (42, 19738),

Gene: Cepens_15 Start: 15415, Stop: 16521, Start Num: 6

Candidate Starts for Cepens_15:

(2, 15337), (Start: 6 @15415 has 8 MA's), (8, 15430), (9, 15445), (11, 15505), (13, 15544), (14, 15562), (16, 15589), (17, 15595), (19, 15727), (21, 15763), (22, 15766), (24, 15811), (26, 15910), (31, 15988), (34, 16084), (35, 16099), (36, 16114), (37, 16189), (43, 16339), (44, 16354), (46, 16393), (50, 16456), (53, 16516),

Gene: ChaChing_21 Start: 16372, Stop: 17451, Start Num: 4

Candidate Starts for ChaChing_21:

(Start: 4 @16372 has 45 MA's), (7, 16390), (9, 16408), (11, 16468), (12, 16504), (20, 16708), (27, 16885), (32, 16999), (33, 17023), (37, 17152), (45, 17305), (48, 17374), (49, 17392), (51, 17410),

Gene: Chalmers_21 Start: 17165, Stop: 18244, Start Num: 4

Candidate Starts for Chalmers_21:

(Start: 4 @17165 has 45 MA's), (7, 17183), (9, 17201), (11, 17261), (12, 17297), (20, 17501), (27, 17678), (32, 17792), (33, 17816), (37, 17945), (45, 18098), (48, 18167), (49, 18185), (51, 18203),

Gene: Chandler_21 Start: 17131, Stop: 18210, Start Num: 4

Candidate Starts for Chandler_21:

(Start: 4 @17131 has 45 MA's), (7, 17149), (9, 17167), (11, 17227), (12, 17263), (20, 17467), (27, 17644), (32, 17758), (33, 17782), (37, 17911), (45, 18064), (48, 18133), (49, 18151), (51, 18169),

Gene: Chentzyk_20 Start: 16227, Stop: 17306, Start Num: 4

Candidate Starts for Chentzyk_20:

(Start: 4 @16227 has 45 MA's), (7, 16245), (9, 16263), (11, 16323), (12, 16359), (20, 16563), (27, 16740), (32, 16854), (33, 16878), (37, 17007), (45, 17160), (48, 17229), (49, 17247), (51, 17265),

Gene: Coffee_21 Start: 17693, Stop: 18769, Start Num: 5

Candidate Starts for Coffee_21:

(Start: 5 @17693 has 34 MA's), (7, 17708), (8, 17711), (13, 17825), (16, 17870), (21, 18044), (23, 18050), (24, 18092), (25, 18119), (27, 18203), (30, 18239), (31, 18269), (34, 18356), (36, 18386), (37, 18464), (39, 18497), (40, 18506), (44, 18611), (47, 18680), (48, 18689), (50, 18710), (52, 18758),

Gene: Compostia_22 Start: 16790, Stop: 17869, Start Num: 4

Candidate Starts for Compostia_22:

(Start: 4 @16790 has 45 MA's), (7, 16808), (9, 16826), (11, 16886), (12, 16922), (20, 17126), (27, 17303), (32, 17417), (33, 17441), (37, 17570), (45, 17723), (48, 17792), (49, 17810), (51, 17828),

Gene: Corofin_21 Start: 16382, Stop: 17461, Start Num: 4

Candidate Starts for Corofin_21:

(Start: 4 @16382 has 45 MA's), (7, 16400), (9, 16418), (11, 16478), (12, 16514), (20, 16718), (27, 16895), (32, 17009), (33, 17033), (37, 17162), (45, 17315), (48, 17384), (49, 17402), (51, 17420),

Gene: D12_15 Start: 15408, Stop: 16514, Start Num: 6

Candidate Starts for D12_15:

(2, 15330), (Start: 6 @15408 has 8 MA's), (8, 15423), (9, 15438), (11, 15498), (13, 15537), (14, 15555), (16, 15582), (17, 15588), (19, 15720), (21, 15756), (22, 15759), (24, 15804), (26, 15903), (31, 15981), (34, 16077), (36, 16107), (37, 16182), (43, 16332), (44, 16347), (46, 16386), (50, 16449), (53, 16509),

Gene: Daisy_21 Start: 16378, Stop: 17457, Start Num: 4

Candidate Starts for Daisy_21:

(Start: 4 @16378 has 45 MA's), (7, 16396), (9, 16414), (11, 16474), (12, 16510), (20, 16714), (27, 16891), (32, 17005), (33, 17029), (37, 17158), (45, 17311), (48, 17380), (49, 17398), (51, 17416),

Gene: Deenasa_21 Start: 17120, Stop: 18199, Start Num: 4

Candidate Starts for Deenasa_21:

(Start: 4 @17120 has 45 MA's), (7, 17138), (9, 17156), (11, 17216), (12, 17252), (20, 17456), (27, 17633), (32, 17747), (33, 17771), (37, 17900), (45, 18053), (48, 18122), (49, 18140), (51, 18158),

Gene: Devonte_21 Start: 16357, Stop: 17436, Start Num: 4

Candidate Starts for Devonte_21:

(Start: 4 @16357 has 45 MA's), (7, 16375), (9, 16393), (11, 16453), (12, 16489), (20, 16693), (27, 16870), (32, 16984), (33, 17008), (37, 17137), (45, 17290), (48, 17359), (49, 17377), (51, 17395),

Gene: Eaglehorse_21 Start: 17600, Stop: 18676, Start Num: 5

Candidate Starts for Eaglehorse_21:

(Start: 5 @17600 has 34 MA's), (7, 17615), (8, 17618), (13, 17732), (16, 17777), (21, 17951), (23, 17957), (24, 17999), (25, 18026), (27, 18110), (30, 18146), (31, 18176), (34, 18263), (36, 18293), (37, 18371), (39, 18404), (40, 18413), (44, 18518), (47, 18587), (48, 18596), (50, 18617), (52, 18665),

Gene: Faze9_21 Start: 17693, Stop: 18772, Start Num: 5

Candidate Starts for Faze9_21:

(Start: 5 @17693 has 34 MA's), (7, 17708), (8, 17711), (13, 17825), (16, 17870), (21, 18044), (23, 18050), (24, 18092), (25, 18119), (27, 18203), (30, 18239), (31, 18269), (33, 18341), (34, 18356), (36, 18386), (37, 18464), (39, 18497), (40, 18506), (44, 18611), (47, 18680), (48, 18689), (52, 18758),

Gene: FrenchFry_21 Start: 17696, Stop: 18775, Start Num: 5

Candidate Starts for FrenchFry_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (33, 18344), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (52, 18761),

Gene: Gadget_22 Start: 16361, Stop: 17440, Start Num: 4

Candidate Starts for Gadget_22:

(Start: 4 @16361 has 45 MA's), (7, 16379), (9, 16397), (11, 16457), (12, 16493), (20, 16697), (27, 16874), (32, 16988), (33, 17012), (37, 17141), (45, 17294), (48, 17363), (49, 17381), (51, 17399),

Gene: Gervas_21 Start: 16340, Stop: 17419, Start Num: 4

Candidate Starts for Gervas_21:

(Start: 4 @16340 has 45 MA's), (7, 16358), (9, 16376), (11, 16436), (12, 16472), (20, 16676), (27, 16853), (32, 16967), (33, 16991), (37, 17120), (45, 17273), (48, 17342), (49, 17360), (51, 17378),

Gene: Glass_21 Start: 17696, Stop: 18775, Start Num: 5

Candidate Starts for Glass_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (52, 18761),

Gene: GlenHope_22 Start: 16347, Stop: 17426, Start Num: 4

Candidate Starts for GlenHope_22:

(Start: 4 @16347 has 45 MA's), (7, 16365), (9, 16383), (11, 16443), (12, 16479), (20, 16683), (27, 16860), (32, 16974), (33, 16998), (37, 17127), (45, 17280), (48, 17349), (49, 17367), (51, 17385),

Gene: Glubnar_21 Start: 16362, Stop: 17441, Start Num: 4

Candidate Starts for Glubnar_21:

(Start: 4 @16362 has 45 MA's), (7, 16380), (9, 16398), (11, 16458), (12, 16494), (20, 16698), (27, 16875), (32, 16989), (33, 17013), (37, 17142), (45, 17295), (48, 17364), (49, 17382), (51, 17400),

Gene: GodPhather_16 Start: 15673, Stop: 16779, Start Num: 6

Candidate Starts for GodPhather_16:

(1, 15520), (2, 15595), (Start: 6 @15673 has 8 MA's), (8, 15688), (9, 15703), (11, 15763), (13, 15802), (14, 15820), (16, 15847), (17, 15853), (19, 15985), (21, 16021), (22, 16024), (24, 16069), (26, 16168), (31, 16246), (34, 16342), (35, 16357), (36, 16372), (37, 16447), (43, 16597), (44, 16612), (46, 16651), (50, 16714), (53, 16774),

Gene: Godines_21 Start: 17591, Stop: 18667, Start Num: 5

Candidate Starts for Godines_21:

(Start: 5 @17591 has 34 MA's), (7, 17606), (8, 17609), (13, 17723), (16, 17768), (18, 17876), (21, 17942), (24, 17990), (25, 18017), (27, 18101), (29, 18131), (30, 18137), (31, 18167), (34, 18254), (36, 18284), (37, 18362), (39, 18395), (40, 18404), (44, 18509), (47, 18578), (48, 18587), (50, 18608), (52, 18656),

Gene: Halfpint_20 Start: 16182, Stop: 17261, Start Num: 4

Candidate Starts for Halfpint_20:

(Start: 4 @16182 has 45 MA's), (7, 16200), (9, 16218), (11, 16278), (12, 16314), (20, 16518), (27, 16695), (32, 16809), (33, 16833), (37, 16962), (45, 17115), (48, 17184), (49, 17202), (51, 17220),

Gene: HarveySr_21 Start: 16334, Stop: 17413, Start Num: 4

Candidate Starts for HarveySr_21:

(Start: 4 @16334 has 45 MA's), (7, 16352), (9, 16370), (11, 16430), (12, 16466), (20, 16670), (27, 16847), (32, 16961), (33, 16985), (37, 17114), (45, 17267), (48, 17336), (49, 17354), (51, 17372),

Gene: Heathcliff_21 Start: 16319, Stop: 17398, Start Num: 4

Candidate Starts for Heathcliff_21:

(Start: 4 @16319 has 45 MA's), (7, 16337), (9, 16355), (11, 16415), (12, 16451), (20, 16655), (27, 16832), (32, 16946), (33, 16970), (37, 17099), (45, 17252), (48, 17321), (49, 17339), (51, 17357),

Gene: Hedgerow_21 Start: 17678, Stop: 18757, Start Num: 5

Candidate Starts for Hedgerow_21:

(Start: 5 @17678 has 34 MA's), (7, 17693), (8, 17696), (13, 17810), (16, 17855), (21, 18029), (23, 18035), (24, 18077), (25, 18104), (27, 18188), (30, 18224), (31, 18254), (34, 18341), (36, 18371), (37, 18449), (39, 18482), (40, 18491), (44, 18596), (47, 18665), (48, 18674), (52, 18743),

Gene: Holeinone_21 Start: 17578, Stop: 18654, Start Num: 5

Candidate Starts for Holeinone_21:

(Start: 5 @17578 has 34 MA's), (7, 17593), (8, 17596), (13, 17710), (21, 17929), (23, 17935), (24, 17977), (25, 18004), (27, 18088), (30, 18124), (31, 18154), (34, 18241), (36, 18271), (37, 18349), (39, 18382), (40, 18391), (44, 18496), (47, 18565), (48, 18574), (50, 18595), (52, 18643),

Gene: ItsyBitsy1_21 Start: 17570, Stop: 18646, Start Num: 5

Candidate Starts for ItsyBitsy1_21:

(Start: 5 @17570 has 34 MA's), (7, 17585), (8, 17588), (13, 17702), (16, 17747), (18, 17855), (21, 17921), (23, 17927), (24, 17969), (25, 17996), (27, 18080), (30, 18116), (31, 18146), (33, 18218), (34, 18233), (36, 18263), (37, 18341), (39, 18374), (40, 18383), (44, 18488), (47, 18557), (48, 18566), (50, 18587), (52, 18635),

Gene: Jackstina_20 Start: 16283, Stop: 17362, Start Num: 4

Candidate Starts for Jackstina_20:

(Start: 4 @16283 has 45 MA's), (7, 16301), (9, 16319), (11, 16379), (12, 16415), (20, 16619), (27, 16796), (32, 16910), (33, 16934), (37, 17063), (45, 17216), (48, 17285), (49, 17303), (51, 17321),

Gene: Jeon_15 Start: 15415, Stop: 16521, Start Num: 6

Candidate Starts for Jeon_15:

(1, 15262), (2, 15337), (Start: 6 @15415 has 8 MA's), (8, 15430), (9, 15445), (11, 15505), (13, 15544), (14, 15562), (16, 15589), (17, 15595), (19, 15727), (21, 15763), (22, 15766), (24, 15811), (26, 15910), (31, 15988), (34, 16084), (35, 16099), (36, 16114), (37, 16189), (43, 16339), (44, 16354), (46, 16393), (50, 16456), (53, 16516),

Gene: Kaleb_21 Start: 17696, Stop: 18772, Start Num: 5

Candidate Starts for Kaleb_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (50, 18713), (52, 18761),

Gene: Kamiyu_21 Start: 16328, Stop: 17407, Start Num: 4

Candidate Starts for Kamiyu_21:

(Start: 4 @16328 has 45 MA's), (7, 16346), (9, 16364), (11, 16424), (12, 16460), (20, 16664), (27, 16841), (32, 16955), (33, 16979), (37, 17108), (45, 17261), (48, 17330), (49, 17348), (51, 17366),

Gene: Kheth_21 Start: 17579, Stop: 18658, Start Num: 5

Candidate Starts for Kheth_21:

(Start: 5 @17579 has 34 MA's), (7, 17594), (8, 17597), (13, 17711), (16, 17756), (21, 17930), (23, 17936), (24, 17978), (25, 18005), (27, 18089), (30, 18125), (31, 18155), (34, 18242), (36, 18272), (37, 18350), (39, 18383), (40, 18392), (44, 18497), (47, 18566), (48, 18575), (52, 18644),

Gene: Kolhan_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for Kolhan_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (33, 18224), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (52, 18641),

Gene: Kronus_20 Start: 16940, Stop: 18019, Start Num: 4

Candidate Starts for Kronus_20:

(Start: 4 @16940 has 45 MA's), (7, 16958), (9, 16976), (11, 17036), (12, 17072), (20, 17276), (27, 17453), (32, 17567), (33, 17591), (37, 17720), (45, 17873), (48, 17942), (49, 17960), (51, 17978),

Gene: Lars_21 Start: 17696, Stop: 18775, Start Num: 5

Candidate Starts for Lars_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (52, 18761),

Gene: Laurie_21 Start: 17574, Stop: 18650, Start Num: 5

Candidate Starts for Laurie_21:

(Start: 5 @17574 has 34 MA's), (7, 17589), (8, 17592), (13, 17706), (16, 17751), (21, 17925), (23, 17931), (24, 17973), (25, 18000), (27, 18084), (30, 18120), (31, 18150), (34, 18237), (36, 18267), (37, 18345), (39, 18378), (40, 18387), (44, 18492), (47, 18561), (48, 18570), (50, 18591), (52, 18639),

Gene: Lephleur_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for Lephleur_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (50, 18593), (52, 18641),

Gene: LestyG_21 Start: 16361, Stop: 17440, Start Num: 4

Candidate Starts for LestyG_21:

(Start: 4 @16361 has 45 MA's), (7, 16379), (9, 16397), (11, 16457), (12, 16493), (20, 16697), (27, 16874), (32, 16988), (33, 17012), (37, 17141), (45, 17294), (48, 17363), (49, 17381), (51, 17399),

Gene: LilSmirk_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for LilSmirk_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37,

18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (52, 18641),

Gene: LizLemon_21 Start: 17696, Stop: 18772, Start Num: 5

Candidate Starts for LizLemon_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (33, 18344), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (50, 18713), (52, 18761),

Gene: Marley1013_21 Start: 17141, Stop: 18220, Start Num: 4

Candidate Starts for Marley1013_21:

(Start: 4 @17141 has 45 MA's), (7, 17159), (9, 17177), (11, 17237), (12, 17273), (20, 17477), (27, 17654), (32, 17768), (33, 17792), (37, 17921), (45, 18074), (48, 18143), (49, 18161), (51, 18179),

Gene: Marlia_21 Start: 16343, Stop: 17422, Start Num: 4

Candidate Starts for Marlia_21:

(Start: 4 @16343 has 45 MA's), (7, 16361), (9, 16379), (11, 16439), (12, 16475), (20, 16679), (27, 16856), (32, 16970), (33, 16994), (37, 17123), (45, 17276), (48, 17345), (49, 17363), (51, 17381),

Gene: MasterPo_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for MasterPo_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (52, 18641),

Gene: Megabear_15 Start: 15358, Stop: 16464, Start Num: 6

Candidate Starts for Megabear_15:

(2, 15280), (Start: 6 @15358 has 8 MA's), (8, 15373), (9, 15388), (11, 15448), (13, 15487), (14, 15505), (16, 15532), (17, 15538), (19, 15670), (21, 15706), (22, 15709), (24, 15754), (26, 15853), (31, 15931), (34, 16027), (35, 16042), (36, 16057), (37, 16132), (43, 16282), (44, 16297), (46, 16336), (50, 16399), (53, 16459),

Gene: MmasiCarm_21 Start: 16354, Stop: 17433, Start Num: 4

Candidate Starts for MmasiCarm_21:

(Start: 4 @16354 has 45 MA's), (7, 16372), (9, 16390), (11, 16450), (12, 16486), (20, 16690), (27, 16867), (32, 16981), (33, 17005), (37, 17134), (45, 17287), (48, 17356), (49, 17374), (51, 17392),

Gene: Mortcellus_20 Start: 16995, Stop: 18074, Start Num: 4

Candidate Starts for Mortcellus_20:

(Start: 4 @16995 has 45 MA's), (7, 17013), (9, 17031), (11, 17091), (12, 17127), (20, 17331), (27, 17508), (32, 17622), (33, 17646), (37, 17775), (45, 17928), (48, 17997), (49, 18015), (51, 18033),

Gene: Morty007_21 Start: 17141, Stop: 18220, Start Num: 4

Candidate Starts for Morty007_21:

(Start: 4 @17141 has 45 MA's), (7, 17159), (9, 17177), (11, 17237), (12, 17273), (20, 17477), (27, 17654), (32, 17768), (33, 17792), (37, 17921), (45, 18074), (48, 18143), (49, 18161), (51, 18179),

Gene: Neos5_21 Start: 17149, Stop: 18228, Start Num: 4

Candidate Starts for Neos5_21:

(Start: 4 @17149 has 45 MA's), (7, 17167), (9, 17185), (11, 17245), (12, 17281), (20, 17485), (27, 17662), (32, 17776), (33, 17800), (37, 17929), (45, 18082), (48, 18151), (49, 18169), (51, 18187),

Gene: Nozo_21 Start: 17119, Stop: 18198, Start Num: 4

Candidate Starts for Nozo_21:

(Start: 4 @17119 has 45 MA's), (7, 17137), (9, 17155), (11, 17215), (12, 17251), (20, 17455), (27, 17632), (32, 17746), (33, 17770), (37, 17899), (45, 18052), (48, 18121), (49, 18139), (51, 18157),

Gene: Obutu_21 Start: 16352, Stop: 17431, Start Num: 4

Candidate Starts for Obutu_21:

(Start: 4 @16352 has 45 MA's), (7, 16370), (9, 16388), (11, 16448), (12, 16484), (20, 16688), (27, 16865), (32, 16979), (33, 17003), (37, 17132), (45, 17285), (48, 17354), (49, 17372), (51, 17390),

Gene: Olivio_20 Start: 16206, Stop: 17285, Start Num: 4

Candidate Starts for Olivio_20:

(Start: 4 @16206 has 45 MA's), (7, 16224), (9, 16242), (11, 16302), (12, 16338), (20, 16542), (27, 16719), (32, 16833), (33, 16857), (37, 16986), (45, 17139), (48, 17208), (49, 17226), (51, 17244),

Gene: Opia_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for Opia_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (52, 18641),

Gene: OrangeOswald_21 Start: 16357, Stop: 17436, Start Num: 4

Candidate Starts for OrangeOswald_21:

(Start: 4 @16357 has 45 MA's), (7, 16375), (9, 16393), (11, 16453), (12, 16489), (20, 16693), (27, 16870), (32, 16984), (33, 17008), (37, 17137), (45, 17290), (48, 17359), (49, 17377), (51, 17395),

Gene: PR_15 Start: 15385, Stop: 16491, Start Num: 6

Candidate Starts for PR_15:

(2, 15307), (Start: 6 @15385 has 8 MA's), (8, 15400), (9, 15415), (11, 15475), (13, 15514), (14, 15532), (16, 15559), (17, 15565), (19, 15697), (21, 15733), (22, 15736), (24, 15781), (26, 15880), (31, 15958), (34, 16054), (36, 16084), (37, 16159), (43, 16309), (44, 16324), (46, 16363), (50, 16426), (53, 16486),

Gene: Phaedrus_20 Start: 16275, Stop: 17354, Start Num: 4

Candidate Starts for Phaedrus_20:

(Start: 4 @16275 has 45 MA's), (7, 16293), (9, 16311), (11, 16371), (12, 16407), (20, 16611), (27, 16788), (32, 16902), (33, 16926), (37, 17055), (45, 17208), (48, 17277), (49, 17295), (51, 17313),

Gene: Phantasmagoria_21 Start: 17576, Stop: 18652, Start Num: 5

Candidate Starts for Phantasmagoria_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (33, 18224), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (50, 18593), (52, 18641),

Gene: Phayeta_21 Start: 16233, Stop: 17312, Start Num: 4

Candidate Starts for Phayeta_21:

(Start: 4 @16233 has 45 MA's), (7, 16251), (9, 16269), (11, 16329), (12, 16365), (20, 16569), (27, 16746), (32, 16860), (33, 16884), (37, 17013), (45, 17166), (48, 17235), (49, 17253), (51, 17271),

Gene: Philly_20 Start: 16223, Stop: 17302, Start Num: 4

Candidate Starts for Philly_20:

(Start: 4 @16223 has 45 MA's), (7, 16241), (9, 16259), (11, 16319), (12, 16355), (20, 16559), (27, 16736), (32, 16850), (33, 16874), (37, 17003), (45, 17156), (48, 17225), (49, 17243), (51, 17261),

Gene: Phlyer_21 Start: 17092, Stop: 18171, Start Num: 4

Candidate Starts for Phlyer_21:

(Start: 4 @17092 has 45 MA's), (7, 17110), (9, 17128), (11, 17188), (12, 17224), (20, 17428), (27, 17605), (32, 17719), (33, 17743), (37, 17872), (45, 18025), (48, 18094), (49, 18112), (51, 18130),

Gene: Pipefish_21 Start: 17241, Stop: 18320, Start Num: 4

Candidate Starts for Pipefish_21:

(Start: 4 @17241 has 45 MA's), (7, 17259), (9, 17277), (11, 17337), (12, 17373), (20, 17577), (27, 17754), (32, 17868), (33, 17892), (37, 18021), (45, 18174), (48, 18243), (49, 18261), (51, 18279),

Gene: PrinceCharming_21 Start: 17696, Stop: 18772, Start Num: 5

Candidate Starts for PrinceCharming_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (50, 18713), (52, 18761),

Gene: Qyrzula_20 Start: 17666, Stop: 18742, Start Num: 5

Candidate Starts for Qyrzula_20:

(Start: 5 @17666 has 34 MA's), (7, 17681), (8, 17684), (13, 17798), (16, 17843), (21, 18017), (23, 18023), (24, 18065), (25, 18092), (27, 18176), (30, 18212), (31, 18242), (33, 18314), (34, 18329), (36, 18359), (37, 18437), (39, 18470), (40, 18479), (44, 18584), (47, 18653), (48, 18662), (50, 18683), (52, 18731),

Gene: RagingRooster_21 Start: 16358, Stop: 17437, Start Num: 4

Candidate Starts for RagingRooster_21:

(Start: 4 @16358 has 45 MA's), (7, 16376), (9, 16394), (11, 16454), (12, 16490), (20, 16694), (27, 16871), (32, 16985), (33, 17009), (37, 17138), (45, 17291), (48, 17360), (49, 17378), (51, 17396),

Gene: Rhinoforte_21 Start: 17693, Stop: 18772, Start Num: 5

Candidate Starts for Rhinoforte_21:

(Start: 5 @17693 has 34 MA's), (7, 17708), (8, 17711), (13, 17825), (16, 17870), (21, 18044), (23, 18050), (24, 18092), (25, 18119), (27, 18203), (30, 18239), (31, 18269), (34, 18356), (36, 18386), (37, 18464), (39, 18497), (40, 18506), (44, 18611), (47, 18680), (48, 18689), (50, 18710), (52, 18758),

Gene: Rita1961_21 Start: 16353, Stop: 17432, Start Num: 4

Candidate Starts for Rita1961_21:

(Start: 4 @16353 has 45 MA's), (7, 16371), (9, 16389), (11, 16449), (12, 16485), (20, 16689), (27, 16866), (32, 16980), (33, 17004), (37, 17133), (45, 17286), (48, 17355), (49, 17373), (51, 17391),

Gene: RomaT_21 Start: 17139, Stop: 18218, Start Num: 4

Candidate Starts for RomaT_21:

(Start: 4 @17139 has 45 MA's), (7, 17157), (9, 17175), (11, 17235), (12, 17271), (20, 17475), (27, 17652), (32, 17766), (33, 17790), (37, 17919), (45, 18072), (48, 18141), (49, 18159), (51, 18177),

Gene: Rosebush_21 Start: 17693, Stop: 18772, Start Num: 5

Candidate Starts for Rosebush_21:

(Start: 5 @17693 has 34 MA's), (7, 17708), (8, 17711), (13, 17825), (16, 17870), (21, 18044), (23, 18050), (24, 18092), (25, 18119), (27, 18203), (30, 18239), (31, 18269), (34, 18356), (36, 18386), (37, 18464), (39, 18497), (40, 18506), (44, 18611), (47, 18680), (48, 18689), (52, 18758),

Gene: Sabella_21 Start: 17579, Stop: 18658, Start Num: 5

Candidate Starts for Sabella_21:

(Start: 5 @17579 has 34 MA's), (7, 17594), (8, 17597), (13, 17711), (16, 17756), (21, 17930), (23, 17936), (24, 17978), (25, 18005), (27, 18089), (30, 18125), (31, 18155), (34, 18242), (36, 18272), (37, 18350), (39, 18383), (40, 18392), (44, 18497), (47, 18566), (48, 18575), (52, 18644),

Gene: Shenandoah_21 Start: 16336, Stop: 17415, Start Num: 4

Candidate Starts for Shenandoah_21:

(Start: 4 @16336 has 45 MA's), (7, 16354), (9, 16372), (11, 16432), (12, 16468), (20, 16672), (27, 16849), (32, 16963), (33, 16987), (37, 17116), (45, 17269), (48, 17338), (49, 17356), (51, 17374),

Gene: SlippinJimmy_21 Start: 17122, Stop: 18201, Start Num: 4

Candidate Starts for SlippinJimmy_21:

(Start: 4 @17122 has 45 MA's), (7, 17140), (9, 17158), (11, 17218), (12, 17254), (20, 17458), (27, 17635), (32, 17749), (33, 17773), (37, 17902), (45, 18055), (48, 18124), (49, 18142), (51, 18160),

Gene: StAugustine_25 Start: 18871, Stop: 19977, Start Num: 3

Candidate Starts for StAugustine_25:

(Start: 3 @18871 has 1 MA's), (7, 18892), (8, 18895), (10, 18940), (15, 19033), (27, 19387), (28, 19402), (30, 19423), (33, 19525), (38, 19681), (41, 19726), (42, 19732),

Gene: SwainyDoc_21 Start: 16355, Stop: 17434, Start Num: 4

Candidate Starts for SwainyDoc_21:

(Start: 4 @16355 has 45 MA's), (7, 16373), (9, 16391), (11, 16451), (12, 16487), (20, 16691), (27, 16868), (32, 16982), (33, 17006), (37, 17135), (45, 17288), (48, 17357), (49, 17375), (51, 17393),

Gene: SynergyX_21 Start: 16358, Stop: 17437, Start Num: 4

Candidate Starts for SynergyX_21:

(Start: 4 @16358 has 45 MA's), (7, 16376), (9, 16394), (11, 16454), (12, 16490), (20, 16694), (27, 16871), (32, 16985), (33, 17009), (37, 17138), (45, 17291), (48, 17360), (49, 17378), (51, 17396),

Gene: TA17A_21 Start: 17576, Stop: 18652, Start Num: 5

Candidate Starts for TA17A_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (50, 18593), (52, 18641),

Gene: Taptic_15 Start: 15358, Stop: 16464, Start Num: 6

Candidate Starts for Taptic_15:

(2, 15280), (Start: 6 @15358 has 8 MA's), (8, 15373), (9, 15388), (11, 15448), (13, 15487), (14, 15505), (16, 15532), (17, 15538), (19, 15670), (21, 15706), (22, 15709), (24, 15754), (26, 15853), (31, 15931), (34, 16027), (35, 16042), (36, 16057), (37, 16132), (43, 16282), (44, 16297), (46, 16336), (50, 16399), (53, 16459),

Gene: Tinciduntolum_22 Start: 17695, Stop: 18774, Start Num: 5

Candidate Starts for Tinciduntolum_22:

(Start: 5 @17695 has 34 MA's), (7, 17710), (8, 17713), (13, 17827), (16, 17872), (21, 18046), (23, 18052), (24, 18094), (25, 18121), (27, 18205), (30, 18241), (31, 18271), (34, 18358), (36, 18388), (37, 18466), (39, 18499), (40, 18508), (44, 18613), (47, 18682), (48, 18691), (52, 18760),

Gene: TinyTerror_21 Start: 16357, Stop: 17436, Start Num: 4

Candidate Starts for TinyTerror_21:

(Start: 4 @16357 has 45 MA's), (7, 16375), (9, 16393), (11, 16453), (12, 16489), (20, 16693), (27, 16870), (32, 16984), (33, 17008), (37, 17137), (45, 17290), (48, 17359), (49, 17377), (51, 17395),

Gene: Tres_21 Start: 17576, Stop: 18655, Start Num: 5

Candidate Starts for Tres_21:

(Start: 5 @17576 has 34 MA's), (7, 17591), (8, 17594), (13, 17708), (16, 17753), (21, 17927), (23, 17933), (24, 17975), (25, 18002), (27, 18086), (30, 18122), (31, 18152), (34, 18239), (36, 18269), (37, 18347), (39, 18380), (40, 18389), (44, 18494), (47, 18563), (48, 18572), (52, 18641),

Gene: Tydolla_21 Start: 17095, Stop: 18174, Start Num: 4

Candidate Starts for Tydolla_21:

(Start: 4 @17095 has 45 MA's), (7, 17113), (9, 17131), (11, 17191), (12, 17227), (20, 17431), (27, 17608), (32, 17722), (33, 17746), (37, 17875), (45, 18028), (48, 18097), (49, 18115), (51, 18133),

Gene: Vic9_00021 Start: 18016, Stop: 19095, Start Num: 5

Candidate Starts for Vic9_00021:

(Start: 5 @18016 has 34 MA's), (7, 18031), (8, 18034), (13, 18148), (16, 18193), (21, 18367), (23, 18373), (24, 18415), (25, 18442), (27, 18526), (30, 18562), (31, 18592), (34, 18679), (36, 18709), (37, 18787), (39, 18820), (40, 18829), (44, 18934), (47, 19003), (48, 19012), (50, 19033), (52, 19081),

Gene: West99_21 Start: 17696, Stop: 18775, Start Num: 5

Candidate Starts for West99_21:

(Start: 5 @17696 has 34 MA's), (7, 17711), (8, 17714), (13, 17828), (16, 17873), (21, 18047), (23, 18053), (24, 18095), (25, 18122), (27, 18206), (30, 18242), (31, 18272), (34, 18359), (36, 18389), (37, 18467), (39, 18500), (40, 18509), (44, 18614), (47, 18683), (48, 18692), (52, 18761),

Gene: Yahalom_21 Start: 16369, Stop: 17448, Start Num: 4

Candidate Starts for Yahalom_21:

(Start: 4 @16369 has 45 MA's), (7, 16387), (9, 16405), (11, 16465), (12, 16501), (20, 16705), (27, 16882), (32, 16996), (33, 17020), (37, 17149), (45, 17302), (48, 17371), (49, 17389), (51, 17407),

Gene: Yinz_21 Start: 16396, Stop: 17475, Start Num: 4

Candidate Starts for Yinz_21:

(Start: 4 @16396 has 45 MA's), (7, 16414), (9, 16432), (11, 16492), (12, 16528), (20, 16732), (27, 16909), (32, 17023), (33, 17047), (37, 17176), (45, 17329), (48, 17398), (49, 17416), (51, 17434),