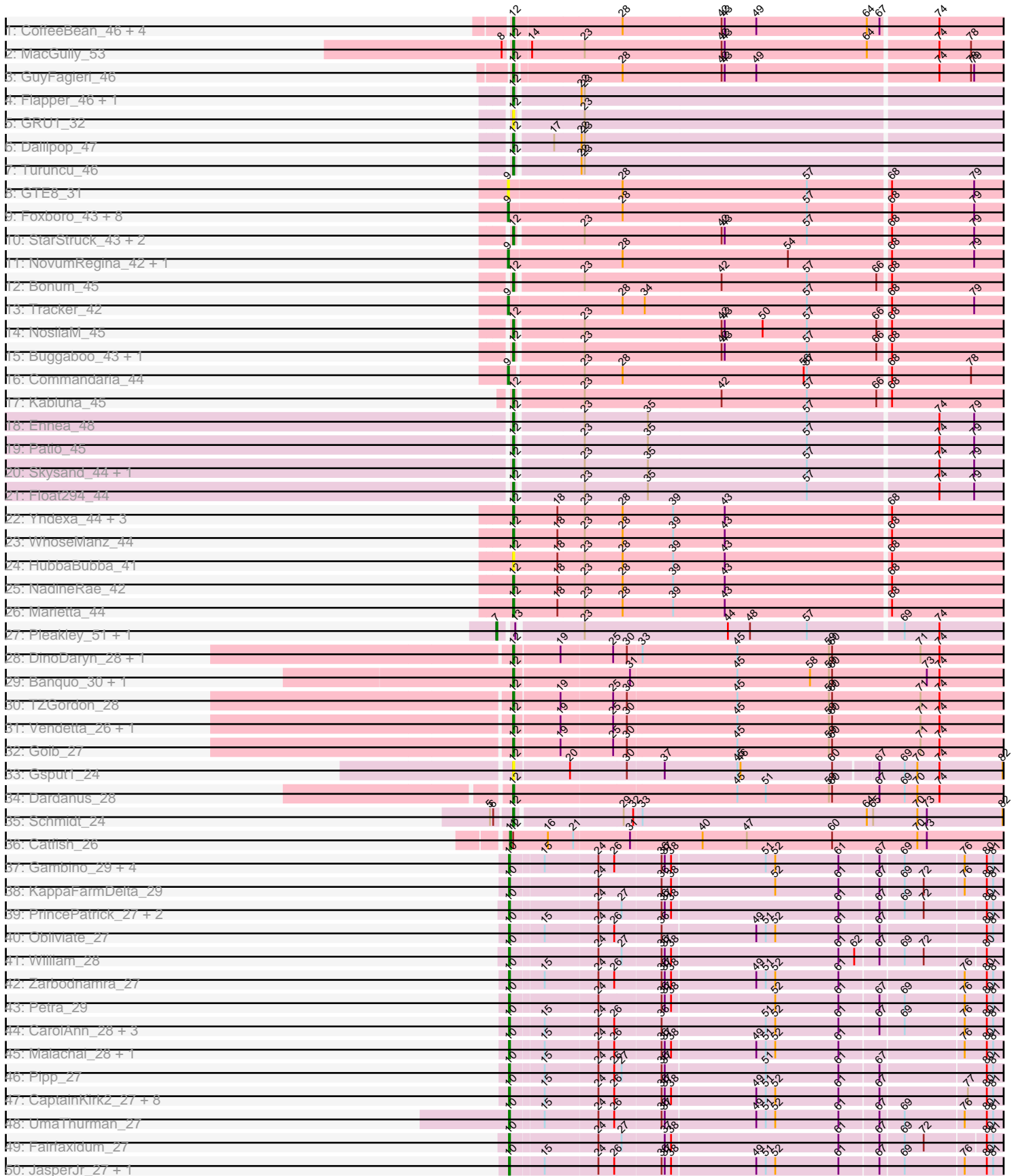
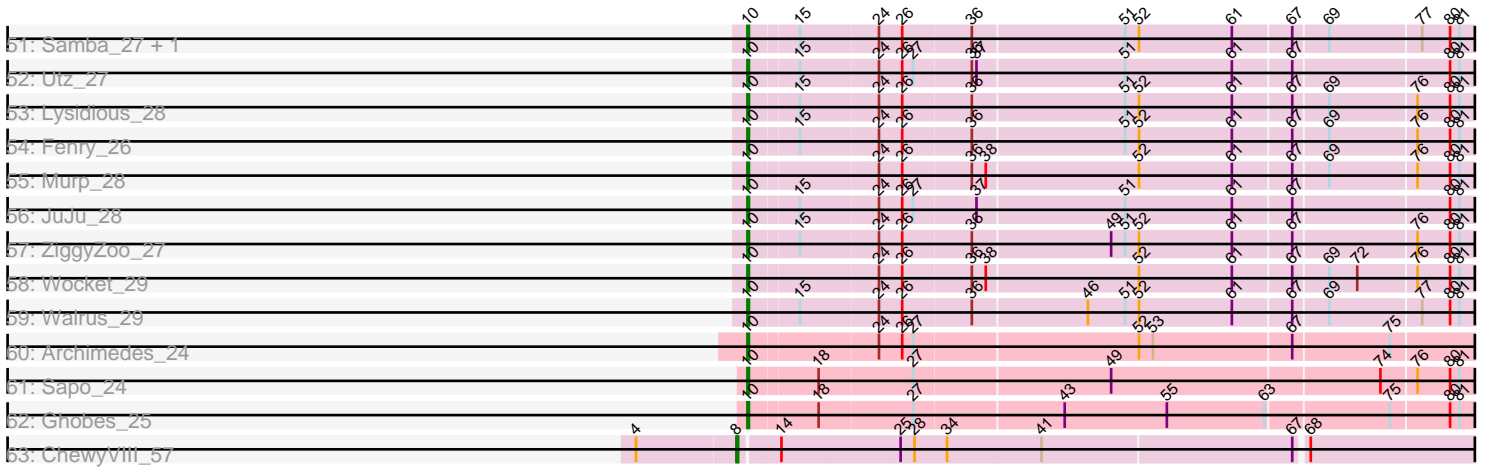


Zoomed Pham 171332



Zoomed Pham 171332



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 171332 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171332 has 108 members, 7 are drafts.

Phages represented in each track:

- Track 1 : CoffeeBean_46, Braxoaddie_46, Polyuyuki_46, Maselop_46, Apiary_46
- Track 2 : MacGully_53
- Track 3 : GuyFagieri_46
- Track 4 : Flapper_46, GTE5_33
- Track 5 : GRU1_32
- Track 6 : Dalilpop_47
- Track 7 : Turuncu_46
- Track 8 : GTE8_31
- Track 9 : Foxboro_43, Kurt_42, KidneyBean_42, Emianna_42, Wheezy_42, Jifall16_41, Arti_42, NatB6_42, Phomeo_41
- Track 10 : StarStruck_43, MerCougar_43, Outis_43
- Track 11 : NovumRegina_42, GrootJr_44
- Track 12 : Bonum_45
- Track 13 : Tracker_42
- Track 14 : NosilaM_45
- Track 15 : Buggaboo_43, SuperSulley_43
- Track 16 : Commandaria_44
- Track 17 : Kabluna_45
- Track 18 : Ennea_48
- Track 19 : Patio_45
- Track 20 : Skysand_44, Lollipop1437_47
- Track 21 : Float294_44
- Track 22 : Yndexa_44, BiPauneto_45, IDyn_43, Sukkupi_44
- Track 23 : WhoseManz_44
- Track 24 : HubbaBubba_41
- Track 25 : NadineRae_42
- Track 26 : Marietta_44
- Track 27 : Pleakley_51, Fury_51
- Track 28 : DinoDaryn_28, Huffy_28
- Track 29 : Banquo_30, TinaLin_29
- Track 30 : TZGordon_28
- Track 31 : Vendetta_26, Splinter_26
- Track 32 : Goib_27
- Track 33 : Gspu1_24
- Track 34 : Dardanus_28
- Track 35 : Schmidt_24
- Track 36 : Catfish_26

- Track 37 : Gambino_29, Azula_29, MissRona_29, Blueberry_29, Frokostdame_27
- Track 38 : KappaFarmDelta_29
- Track 39 : PrincePatrick_27, PCoral7_28, Toast_28
- Track 40 : Obliviate_27
- Track 41 : William_28
- Track 42 : Zarbodnamra_27
- Track 43 : Petra_29
- Track 44 : CarolAnn_28, Jalammah_29, Mellie_26, Blino_28
- Track 45 : Malachai_28, Begonia_28
- Track 46 : Pipp_27
- Track 47 : CaptainKirk2_27, Wisp_26, Archis_28, BlingBling_27, PhrostedPhlake_29, Delian_28, Melba_27, Barco_27, MintFen_27
- Track 48 : UmaThurman_27
- Track 49 : Fairfaxidum_27
- Track 50 : JasperJr_27, Guacamole_27
- Track 51 : Samba_27, Hitter_27
- Track 52 : Utz_27
- Track 53 : Lysidious_28
- Track 54 : Fenry_26
- Track 55 : Murp_28
- Track 56 : JuJu_28
- Track 57 : ZiggyZoo_27
- Track 58 : Wocket_29
- Track 59 : Walrus_29
- Track 60 : Archimedes_24
- Track 61 : Sapo_24
- Track 62 : Ghobes_25
- Track 63 : ChewyVIII_57

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 45 of the 101 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Archimedes_24, Archis_28, Azula_29, Barco_27, Begonia_28, BlingBling_27, Blino_28, Blueberry_29, CaptainKirk2_27, CarolAnn_28, Delian_28, Fairfaxidum_27, Fenry_26, Frokostdame_27, Gambino_29, Ghobes_25, Guacamole_27, Hitter_27, Jalammah_29, JasperJr_27, JuJu_28, KappaFarmDelta_29, Lysidious_28, Malachai_28, Melba_27, Mellie_26, MintFen_27, MissRona_29, Murp_28, Obliviate_27, PCoral7_28, Petra_29, PhrostedPhlake_29, Pipp_27, PrincePatrick_27, Samba_27, Sapo_24, Toast_28, UmaThurman_27, Utz_27, Walrus_29, William_28, Wisp_26, Wocket_29, Zarbodnamra_27, ZiggyZoo_27,

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

-

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

- Apiary_46, Arti_42, Banquo_30, BiPauneto_45, Bonum_45, Braxoaddie_46, Buggaboo_43, Catfish_26, ChewyVIII_57, CoffeeBean_46, Commandaria_44,

Dalilpop_47, Dardanus_28, DinoDaryn_28, Emianna_42, Ennea_48, Flapper_46, Float294_44, Foxboro_43, Fury_51, GRU1_32, GTE5_33, GTE8_31, Goib_27, GrootJr_44, Gsput1_24, GuyFagieri_46, HubbaBubba_41, Huffy_28, IDyn_43, Jifall16_41, Kabluna_45, KidneyBean_42, Kurt_42, Lollipop1437_47, MacGully_53, Marietta_44, Maselop_46, MerCougar_43, NadineRae_42, NatB6_42, NosilaM_45, NovumRegina_42, Outis_43, Patio_45, Phomeo_41, Pleakley_51, Polyyuki_46, Schmidt_24, Skysand_44, Splinter_26, StarStruck_43, Sukkupi_44, SuperSulley_43, TZGordon_28, TinaLin_29, Tracker_42, Turuncu_46, Vendetta_26, Wheezy_42, WhoseManz_44, Yndexa_44,

Summary by start number:

Start 7:

- Found in 2 of 108 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fury_51 (CR5), Pleakley_51 (CR5),

Start 8:

- Found in 2 of 108 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 101
- Called 50.0% of time when present
- Phage (with cluster) where this start called: ChewyVIII_57 (singleton),

Start 9:

- Found in 14 of 108 (13.0%) of genes in pham
- Manual Annotations of this start: 12 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arti_42 (CR2), Commandaria_44 (CR2), Emianna_42 (CR2), Foxboro_43 (CR2), GTE8_31 (CR2), GrootJr_44 (CR2), Jifall16_41 (CR2), KidneyBean_42 (CR2), Kurt_42 (CR2), NatB6_42 (CR2), NovumRegina_42 (CR2), Phomeo_41 (CR2), Tracker_42 (CR2), Wheezy_42 (CR2),

Start 10:

- Found in 46 of 108 (42.6%) of genes in pham
- Manual Annotations of this start: 45 of 101
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Archimedes_24 (DA), Archis_28 (CV), Azula_29 (CV), Barco_27 (CV), Begonia_28 (CV), BlingBling_27 (CV), Blino_28 (CV), Blueberry_29 (CV), CaptainKirk2_27 (CV), CarolAnn_28 (CV), Delian_28 (CV), Fairfaxidum_27 (CV), Fenry_26 (CV), Frokostdame_27 (CV), Gambino_29 (CV), Ghobes_25 (DA), Guacamole_27 (CV), Hitter_27 (CV), Jalammah_29 (CV), JasperJr_27 (CV), JuJu_28 (CV), KappaFarmDelta_29 (CV), Lysidious_28 (CV), Malachai_28 (CV), Melba_27 (CV), Mellie_26 (CV), MintFen_27 (CV), MissRona_29 (CV), Murp_28 (CV), Obliviate_27 (CV), PCoral7_28 (CV), Petra_29 (CV), PhrostedPhlake_29 (CV), Pipp_27 (CV), PrincePatrick_27 (CV), Samba_27 (CV), Sapo_24 (DA), Toast_28 (CV), UmaThurman_27 (CV), Utz_27 (CV), Wairus_29 (CV), William_28 (CV), Wisp_26 (CV), Wocket_29 (CV), Zarbodnamra_27 (CV), ZiggyZoo_27 (CV),

Start 11:

- Found in 1 of 108 (0.9%) of genes in pham
- Manual Annotations of this start: 1 of 101

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Catfish_26 (CU5),

Start 12:

- Found in 45 of 108 (41.7%) of genes in pham
- Manual Annotations of this start: 40 of 101
- Called 97.8% of time when present
- Phage (with cluster) where this start called: Apiary_46 (CR), Banquo_30 (CU1), BiPauneto_45 (CR4), Bonum_45 (CR2), Braxoaddie_46 (CR), Buggaboo_43 (CR2), CoffeeBean_46 (CR), Dalilpop_47 (CR1), Dardanus_28 (CU3), DinoDaryn_28 (CU1), Ennea_48 (CR3), Flapper_46 (CR1), Float294_44 (CR3), GRU1_32 (CR1), GTE5_33 (CR1), Goib_27 (CU1), Gspu1_24 (CU2), GuyFagieri_46 (CR), HubbaBubba_41 (CR4), Huffy_28 (CU1), IDyn_43 (CR4), Kabluna_45 (CR2), Lollipop1437_47 (CR3), MacGully_53 (CR), Marietta_44 (CR4), Maselop_46 (CR), MerCougar_43 (CR2), NadineRae_42 (CR4), NosilaM_45 (CR2), Outis_43 (CR2), Patio_45 (CR3), Polyyuki_46 (CR), Schmidt_24 (CU4), Skysand_44 (CR3), Splinter_26 (CU1), StarStruck_43 (CR2), Sukkupi_44 (CR4), SuperSulley_43 (CR2), TZGordon_28 (CU1), TinaLin_29 (CU1), Turuncu_46 (CR1), Vendetta_26 (CU1), WhoseManz_44 (CR4), Yndexa_44 (CR4),

Summary by clusters:

There are 14 clusters represented in this pham: CR2, CR3, CU5, CR1, CU3, CU1, CR4, CR5, singleton, DA, CU4, CR, CV, CU2,

Info for manual annotations of cluster CR:

- Start number 12 was manually annotated 7 times for cluster CR.

Info for manual annotations of cluster CR1:

- Start number 12 was manually annotated 3 times for cluster CR1.

Info for manual annotations of cluster CR2:

- Start number 9 was manually annotated 12 times for cluster CR2.
- Start number 12 was manually annotated 8 times for cluster CR2.

Info for manual annotations of cluster CR3:

- Start number 12 was manually annotated 5 times for cluster CR3.

Info for manual annotations of cluster CR4:

- Start number 12 was manually annotated 7 times for cluster CR4.

Info for manual annotations of cluster CR5:

- Start number 7 was manually annotated 2 times for cluster CR5.

Info for manual annotations of cluster CU1:

- Start number 12 was manually annotated 8 times for cluster CU1.

Info for manual annotations of cluster CU3:

- Start number 12 was manually annotated 1 time for cluster CU3.

Info for manual annotations of cluster CU4:

- Start number 12 was manually annotated 1 time for cluster CU4.

Info for manual annotations of cluster CU5:

- Start number 11 was manually annotated 1 time for cluster CU5.

Info for manual annotations of cluster CV:

- Start number 10 was manually annotated 42 times for cluster CV.

Info for manual annotations of cluster DA:

- Start number 10 was manually annotated 3 times for cluster DA.

Gene Information:

Gene: Apiary_46 Start: 32958, Stop: 34064, Start Num: 12

Candidate Starts for Apiary_46:

(Start: 12 @32958 has 40 MA's), (28, 33057), (42, 33150), (43, 33153), (49, 33183), (64, 33288), (67, 33300), (74, 33351), (94, 33513), (96, 33525), (108, 33591), (127, 33699), (129, 33744), (130, 33750), (134, 33768), (135, 33777), (136, 33783), (147, 33879), (149, 33888), (151, 33903), (155, 33942),

Gene: Archimedes_24 Start: 20193, Stop: 21275, Start Num: 10

Candidate Starts for Archimedes_24:

(Start: 10 @20193 has 45 MA's), (24, 20271), (26, 20286), (27, 20292), (52, 20433), (53, 20442), (67, 20529), (75, 20589), (94, 20739), (126, 20913), (146, 21096), (150, 21120), (153, 21150), (169, 21267),

Gene: Archis_28 Start: 22530, Stop: 23597, Start Num: 10

Candidate Starts for Archis_28:

(Start: 10 @22530 has 45 MA's), (15, 22560), (24, 22608), (26, 22623), (36, 22665), (37, 22668), (38, 22674), (49, 22752), (51, 22761), (52, 22770), (61, 22830), (67, 22866), (77, 22944), (80, 22962), (81, 22968), (89, 23001), (90, 23016), (106, 23142), (123, 23238), (130, 23304), (136, 23334), (168, 23580),

Gene: Arti_42 Start: 31466, Stop: 32593, Start Num: 9

Candidate Starts for Arti_42:

(Start: 9 @31466 has 12 MA's), (28, 31571), (57, 31745), (68, 31820), (79, 31898), (83, 31931), (92, 32012), (98, 32057), (102, 32078), (107, 32111), (117, 32171), (163, 32525), (167, 32558),

Gene: Azula_29 Start: 22628, Stop: 23695, Start Num: 10

Candidate Starts for Azula_29:

(Start: 10 @22628 has 45 MA's), (15, 22658), (24, 22706), (26, 22721), (36, 22763), (37, 22766), (38, 22772), (51, 22859), (52, 22868), (61, 22928), (67, 22964), (69, 22985), (76, 23039), (80, 23060), (81, 23066), (89, 23099), (90, 23114), (106, 23240), (123, 23336), (129, 23396), (130, 23402), (136, 23432), (146, 23513), (168, 23678),

Gene: Banquo_30 Start: 20886, Stop: 22001, Start Num: 12

Candidate Starts for Banquo_30:

(Start: 12 @20886 has 40 MA's), (31, 20991), (45, 21090), (58, 21159), (59, 21177), (60, 21180), (73, 21270), (74, 21282), (101, 21477), (130, 21675), (135, 21699), (136, 21705), (145, 21780), (148, 21789), (153, 21825), (158, 21858), (167, 21924),

Gene: Barco_27 Start: 22319, Stop: 23386, Start Num: 10

Candidate Starts for Barco_27:

(Start: 10 @22319 has 45 MA's), (15, 22349), (24, 22397), (26, 22412), (36, 22454), (37, 22457), (38, 22463), (49, 22541), (51, 22550), (52, 22559), (61, 22619), (67, 22655), (77, 22733), (80, 22751), (81, 22757), (89, 22790), (90, 22805), (106, 22931), (123, 23027), (130, 23093), (136, 23123), (168, 23369),

Gene: Begonia_28 Start: 22800, Stop: 23867, Start Num: 10

Candidate Starts for Begonia_28:

(Start: 10 @22800 has 45 MA's), (15, 22830), (24, 22878), (26, 22893), (36, 22935), (37, 22938), (38, 22944), (49, 23022), (51, 23031), (52, 23040), (61, 23100), (76, 23211), (80, 23232), (81, 23238), (89, 23271), (90, 23286), (106, 23412), (113, 23448), (123, 23508), (129, 23568), (130, 23574), (136, 23604), (146, 23685), (168, 23850),

Gene: BiPauneto_45 Start: 31223, Stop: 32338, Start Num: 12

Candidate Starts for BiPauneto_45:

(Start: 12 @31223 has 40 MA's), (18, 31265), (23, 31289), (28, 31325), (39, 31373), (43, 31421), (68, 31574), (94, 31781), (95, 31787), (100, 31817), (114, 31892), (127, 31967), (128, 32000), (133, 32033), (135, 32045), (154, 32201), (162, 32255), (163, 32270), (165, 32297),

Gene: BlingBling_27 Start: 22319, Stop: 23386, Start Num: 10

Candidate Starts for BlingBling_27:

(Start: 10 @22319 has 45 MA's), (15, 22349), (24, 22397), (26, 22412), (36, 22454), (37, 22457), (38, 22463), (49, 22541), (51, 22550), (52, 22559), (61, 22619), (67, 22655), (77, 22733), (80, 22751), (81, 22757), (89, 22790), (90, 22805), (106, 22931), (123, 23027), (130, 23093), (136, 23123), (168, 23369),

Gene: Blino_28 Start: 22410, Stop: 23477, Start Num: 10

Candidate Starts for Blino_28:

(Start: 10 @22410 has 45 MA's), (15, 22440), (24, 22488), (26, 22503), (36, 22545), (51, 22641), (52, 22650), (61, 22710), (67, 22746), (69, 22767), (76, 22821), (80, 22842), (81, 22848), (89, 22881), (90, 22896), (106, 23022), (123, 23118), (129, 23178), (130, 23184), (136, 23214), (168, 23460),

Gene: Blueberry_29 Start: 22628, Stop: 23695, Start Num: 10

Candidate Starts for Blueberry_29:

(Start: 10 @22628 has 45 MA's), (15, 22658), (24, 22706), (26, 22721), (36, 22763), (37, 22766), (38, 22772), (51, 22859), (52, 22868), (61, 22928), (67, 22964), (69, 22985), (76, 23039), (80, 23060), (81, 23066), (89, 23099), (90, 23114), (106, 23240), (123, 23336), (129, 23396), (130, 23402), (136, 23432), (146, 23513), (168, 23678),

Gene: Bonum_45 Start: 31797, Stop: 32906, Start Num: 12

Candidate Starts for Bonum_45:

(Start: 12 @31797 has 40 MA's), (23, 31857), (42, 31986), (57, 32067), (66, 32133), (68, 32142), (85, 32259), (95, 32355), (96, 32361), (100, 32385), (110, 32433), (116, 32481), (122, 32517), (130, 32586), (133, 32601), (139, 32652), (151, 32742), (159, 32802),

Gene: Braxoaddie_46 Start: 32947, Stop: 34053, Start Num: 12

Candidate Starts for Braxoaddie_46:

(Start: 12 @32947 has 40 MA's), (28, 33046), (42, 33139), (43, 33142), (49, 33172), (64, 33277), (67, 33289), (74, 33340), (94, 33502), (96, 33514), (108, 33580), (127, 33688), (129, 33733), (130, 33739), (134, 33757), (135, 33766), (136, 33772), (147, 33868), (149, 33877), (151, 33892), (155, 33931),

Gene: Buggaboo_43 Start: 32276, Stop: 33385, Start Num: 12

Candidate Starts for Buggaboo_43:

(Start: 12 @32276 has 40 MA's), (23, 32336), (42, 32465), (43, 32468), (57, 32546), (66, 32612), (68, 32621), (95, 32834), (96, 32840), (100, 32864), (110, 32912), (116, 32960), (130, 33065), (133, 33080), (139, 33131), (151, 33221), (159, 33281),

Gene: CaptainKirk2_27 Start: 22340, Stop: 23407, Start Num: 10

Candidate Starts for CaptainKirk2_27:

(Start: 10 @22340 has 45 MA's), (15, 22370), (24, 22418), (26, 22433), (36, 22475), (37, 22478), (38, 22484), (49, 22562), (51, 22571), (52, 22580), (61, 22640), (67, 22676), (77, 22754), (80, 22772), (81, 22778), (89, 22811), (90, 22826), (106, 22952), (123, 23048), (130, 23114), (136, 23144), (168, 23390),

Gene: CarolAnn_28 Start: 22409, Stop: 23476, Start Num: 10

Candidate Starts for CarolAnn_28:

(Start: 10 @22409 has 45 MA's), (15, 22439), (24, 22487), (26, 22502), (36, 22544), (51, 22640), (52, 22649), (61, 22709), (67, 22745), (69, 22766), (76, 22820), (80, 22841), (81, 22847), (89, 22880), (90, 22895), (106, 23021), (123, 23117), (129, 23177), (130, 23183), (136, 23213), (168, 23459),

Gene: Catfish_26 Start: 21557, Stop: 22666, Start Num: 11

Candidate Starts for Catfish_26:

(Start: 11 @21557 has 1 MA's), (Start: 12 @21560 has 40 MA's), (16, 21593), (21, 21617), (31, 21668), (40, 21734), (47, 21776), (60, 21857), (70, 21938), (73, 21947), (86, 22034), (88, 22040), (101, 22154), (103, 22163), (105, 22178), (112, 22208), (125, 22289), (130, 22346), (135, 22370), (157, 22514), (167, 22586), (168, 22595), (169, 22601), (172, 22613), (174, 22619), (175, 22643),

Gene: ChewyVIII_57 Start: 39792, Stop: 40907, Start Num: 8

Candidate Starts for ChewyVIII_57:

(4, 39729), (Start: 8 @39792 has 1 MA's), (14, 39816), (25, 39891), (28, 39900), (34, 39921), (41, 39981), (67, 40140), (68, 40146), (106, 40422), (131, 40596), (134, 40608), (138, 40644), (147, 40719), (151, 40743), (159, 40803),

Gene: CoffeeBean_46 Start: 32905, Stop: 34011, Start Num: 12

Candidate Starts for CoffeeBean_46:

(Start: 12 @32905 has 40 MA's), (28, 33004), (42, 33097), (43, 33100), (49, 33130), (64, 33235), (67, 33247), (74, 33298), (94, 33460), (96, 33472), (108, 33538), (127, 33646), (129, 33691), (130, 33697), (134, 33715), (135, 33724), (136, 33730), (147, 33826), (149, 33835), (151, 33850), (155, 33889),

Gene: Commandaria_44 Start: 32797, Stop: 33921, Start Num: 9

Candidate Starts for Commandaria_44:

(Start: 9 @32797 has 12 MA's), (23, 32863), (28, 32899), (56, 33070), (57, 33073), (68, 33148), (78, 33223), (92, 33340), (107, 33439), (109, 33445), (115, 33493), (128, 33583), (135, 33628), (163, 33853), (167, 33886),

Gene: Dalilpop_47 Start: 33773, Stop: 34882, Start Num: 12

Candidate Starts for Dalilpop_47:

(Start: 12 @33773 has 40 MA's), (17, 33806), (22, 33830), (23, 33833), (95, 34331), (100, 34361), (154, 34745), (159, 34778),

Gene: Dardanus_28 Start: 19721, Stop: 20836, Start Num: 12

Candidate Starts for Dardanus_28:

(Start: 12 @19721 has 40 MA's), (45, 19928), (51, 19955), (59, 20015), (60, 20018), (67, 20063), (69, 20087), (70, 20099), (74, 20120), (86, 20195), (92, 20264), (101, 20315), (103, 20324), (120, 20429), (125, 20456), (127, 20462), (137, 20549), (143, 20591), (144, 20597), (154, 20660), (157, 20684), (159, 20693), (160, 20696), (167, 20756), (168, 20765),

Gene: Delian_28 Start: 22338, Stop: 23405, Start Num: 10

Candidate Starts for Delian_28:

(Start: 10 @22338 has 45 MA's), (15, 22368), (24, 22416), (26, 22431), (36, 22473), (37, 22476), (38, 22482), (49, 22560), (51, 22569), (52, 22578), (61, 22638), (67, 22674), (77, 22752), (80, 22770), (81, 22776), (89, 22809), (90, 22824), (106, 22950), (123, 23046), (130, 23112), (136, 23142), (168, 23388),

Gene: DinoDaryn_28 Start: 19747, Stop: 20865, Start Num: 12

Candidate Starts for DinoDaryn_28:

(Start: 12 @19747 has 40 MA's), (19, 19789), (25, 19837), (30, 19849), (33, 19861), (45, 19951), (59, 20038), (60, 20041), (71, 20125), (74, 20143), (86, 20218), (101, 20338), (124, 20473), (130, 20536), (135, 20560), (145, 20641), (148, 20650), (158, 20719), (159, 20722), (160, 20725), (167, 20785), (168, 20794),

Gene: Emianna_42 Start: 32479, Stop: 33606, Start Num: 9

Candidate Starts for Emianna_42:

(Start: 9 @32479 has 12 MA's), (28, 32584), (57, 32758), (68, 32833), (79, 32911), (83, 32944), (92, 33025), (98, 33070), (102, 33091), (107, 33124), (117, 33184), (163, 33538), (167, 33571),

Gene: Ennea_48 Start: 33125, Stop: 34234, Start Num: 12

Candidate Starts for Ennea_48:

(1, 32039), (2, 32072), (3, 32552), (Start: 12 @33125 has 40 MA's), (23, 33185), (35, 33245), (57, 33395), (74, 33515), (79, 33548), (87, 33596), (95, 33683), (100, 33713), (122, 33845), (125, 33857), (135, 33941), (154, 34097), (165, 34193),

Gene: Fairfaxidum_27 Start: 22634, Stop: 23698, Start Num: 10

Candidate Starts for Fairfaxidum_27:

(Start: 10 @22634 has 45 MA's), (24, 22712), (27, 22733), (37, 22772), (38, 22778), (61, 22934), (67, 22970), (69, 22991), (72, 23009), (80, 23063), (81, 23069), (90, 23117), (129, 23399), (130, 23405), (136, 23435), (153, 23570), (158, 23603), (165, 23666), (168, 23681), (169, 23687),

Gene: Fenry_26 Start: 22038, Stop: 23105, Start Num: 10

Candidate Starts for Fenry_26:

(Start: 10 @22038 has 45 MA's), (15, 22068), (24, 22116), (26, 22131), (36, 22173), (51, 22269), (52, 22278), (61, 22338), (67, 22374), (69, 22395), (76, 22449), (80, 22470), (81, 22476), (87, 22503), (89, 22509), (90, 22524), (106, 22650), (123, 22746), (129, 22806), (130, 22812), (136, 22842), (168, 23088),

Gene: Flapper_46 Start: 32840, Stop: 33949, Start Num: 12

Candidate Starts for Flapper_46:

(Start: 12 @32840 has 40 MA's), (22, 32897), (23, 32900), (95, 33398), (100, 33428), (154, 33812), (159, 33845), (165, 33908),

Gene: Float294_44 Start: 32567, Stop: 33676, Start Num: 12

Candidate Starts for Float294_44:

(1, 31481), (2, 31514), (3, 31994), (Start: 12 @32567 has 40 MA's), (23, 32627), (35, 32687), (57, 32837), (74, 32957), (79, 32990), (87, 33038), (95, 33125), (100, 33155), (125, 33299), (135, 33383), (154, 33539), (165, 33635),

Gene: Foxboro_43 Start: 32985, Stop: 34112, Start Num: 9

Candidate Starts for Foxboro_43:

(Start: 9 @32985 has 12 MA's), (28, 33090), (57, 33264), (68, 33339), (79, 33417), (83, 33450), (92, 33531), (98, 33576), (102, 33597), (107, 33630), (117, 33690), (163, 34044), (167, 34077),

Gene: Frokostdame_27 Start: 22282, Stop: 23349, Start Num: 10

Candidate Starts for Frokostdame_27:

(Start: 10 @22282 has 45 MA's), (15, 22312), (24, 22360), (26, 22375), (36, 22417), (37, 22420), (38, 22426), (51, 22513), (52, 22522), (61, 22582), (67, 22618), (69, 22639), (76, 22693), (80, 22714), (81, 22720), (89, 22753), (90, 22768), (106, 22894), (123, 22990), (129, 23050), (130, 23056), (136, 23086), (146, 23167), (168, 23332),

Gene: Fury_51 Start: 32338, Stop: 33456, Start Num: 7

Candidate Starts for Fury_51:

(Start: 7 @32338 has 2 MA's), (13, 32350), (23, 32407), (44, 32542), (48, 32563), (57, 32617), (69, 32704), (74, 32737), (84, 32806), (95, 32905), (107, 32974), (142, 33229), (151, 33292), (165, 33415), (166, 33418), (167, 33421),

Gene: GRU1_32 Start: 24740, Stop: 25849, Start Num: 12

Candidate Starts for GRU1_32:

(Start: 12 @24740 has 40 MA's), (23, 24800), (95, 25298), (100, 25328), (154, 25712), (159, 25745), (162, 25766),

Gene: GTE5_33 Start: 25695, Stop: 26804, Start Num: 12

Candidate Starts for GTE5_33:

(Start: 12 @25695 has 40 MA's), (22, 25752), (23, 25755), (95, 26253), (100, 26283), (154, 26667), (159, 26700), (165, 26763),

Gene: GTE8_31 Start: 25738, Stop: 26865, Start Num: 9

Candidate Starts for GTE8_31:

(Start: 9 @25738 has 12 MA's), (28, 25843), (57, 26017), (68, 26092), (79, 26170), (83, 26203), (92, 26284), (98, 26329), (107, 26383), (117, 26443), (163, 26797), (167, 26830),

Gene: Gambino_29 Start: 22628, Stop: 23695, Start Num: 10

Candidate Starts for Gambino_29:

(Start: 10 @22628 has 45 MA's), (15, 22658), (24, 22706), (26, 22721), (36, 22763), (37, 22766), (38, 22772), (51, 22859), (52, 22868), (61, 22928), (67, 22964), (69, 22985), (76, 23039), (80, 23060), (81, 23066), (89, 23099), (90, 23114), (106, 23240), (123, 23336), (129, 23396), (130, 23402), (136, 23432), (146, 23513), (168, 23678),

Gene: Ghobes_25 Start: 20324, Stop: 21406, Start Num: 10

Candidate Starts for Ghobes_25:

(Start: 10 @20324 has 45 MA's), (18, 20366), (27, 20423), (43, 20516), (55, 20582), (63, 20645), (75, 20720), (80, 20756), (81, 20762), (86, 20786), (89, 20795), (90, 20810), (93, 20864), (94, 20870), (97, 20882), (111, 20957), (113, 20972), (114, 20975), (125, 21041), (146, 21227), (150, 21251), (154, 21284), (157, 21308), (169, 21398),

Gene: Goib_27 Start: 19531, Stop: 20649, Start Num: 12

Candidate Starts for Goib_27:

(Start: 12 @19531 has 40 MA's), (19, 19573), (25, 19621), (30, 19633), (45, 19735), (59, 19822), (60, 19825), (71, 19909), (74, 19927), (86, 20002), (101, 20122), (123, 20254), (124, 20257), (130, 20320), (135, 20344), (145, 20425), (148, 20434), (154, 20473), (156, 20491), (158, 20503), (159, 20506), (160, 20509), (167, 20569),

Gene: GrootJr_44 Start: 31861, Stop: 32988, Start Num: 9

Candidate Starts for GrootJr_44:

(Start: 9 @31861 has 12 MA's), (28, 31966), (54, 32122), (68, 32215), (79, 32293), (83, 32326), (92, 32407), (98, 32452), (102, 32473), (104, 32488), (107, 32506), (117, 32566), (163, 32920), (167, 32953),

Gene: Gspu1_24 Start: 18864, Stop: 19922, Start Num: 12

Candidate Starts for Gspu1_24:

(Start: 12 @18864 has 40 MA's), (20, 18915), (30, 18966), (37, 18999), (45, 19068), (46, 19071), (60, 19158), (67, 19197), (69, 19221), (70, 19233), (74, 19254), (82, 19314), (88, 19335), (99, 19440), (101, 19449), (103, 19458), (113, 19515), (118, 19554), (124, 19584), (125, 19590), (127, 19596), (130, 19647), (135, 19671), (140, 19710), (148, 19761), (152, 19782), (154, 19800), (157, 19824), (159, 19833), (160, 19836), (167, 19896), (168, 19905), (170, 19914),

Gene: Guacamole_27 Start: 22323, Stop: 23390, Start Num: 10

Candidate Starts for Guacamole_27:

(Start: 10 @22323 has 45 MA's), (15, 22353), (24, 22401), (26, 22416), (36, 22458), (37, 22461), (38, 22467), (49, 22545), (51, 22554), (52, 22563), (61, 22623), (67, 22659), (69, 22680), (76, 22734), (80, 22755), (81, 22761), (89, 22794), (90, 22809), (106, 22935), (123, 23031), (129, 23091), (130, 23097), (136, 23127), (168, 23373),

Gene: GuyFagieri_46 Start: 32782, Stop: 33885, Start Num: 12

Candidate Starts for GuyFagieri_46:

(Start: 12 @32782 has 40 MA's), (28, 32878), (42, 32971), (43, 32974), (49, 33004), (74, 33172), (78, 33202), (79, 33205), (94, 33334), (108, 33412), (129, 33565), (130, 33571), (134, 33589), (135, 33598), (136, 33604), (147, 33700), (151, 33724),

Gene: Hitter_27 Start: 22319, Stop: 23386, Start Num: 10

Candidate Starts for Hitter_27:

(Start: 10 @22319 has 45 MA's), (15, 22349), (24, 22397), (26, 22412), (36, 22454), (51, 22550), (52, 22559), (61, 22619), (67, 22655), (69, 22676), (77, 22733), (80, 22751), (81, 22757), (89, 22790), (90, 22805), (106, 22931), (123, 23027), (129, 23087), (130, 23093), (136, 23123), (168, 23369),

Gene: HubbaBubba_41 Start: 28235, Stop: 29350, Start Num: 12

Candidate Starts for HubbaBubba_41:

(Start: 12 @28235 has 40 MA's), (18, 28277), (23, 28301), (28, 28337), (39, 28385), (43, 28433), (68, 28586), (94, 28793), (95, 28799), (127, 28979), (128, 29012), (133, 29045), (135, 29057), (154, 29213), (162, 29267), (163, 29282), (165, 29309),

Gene: Huffu_28 Start: 19747, Stop: 20865, Start Num: 12

Candidate Starts for Huffu_28:

(Start: 12 @19747 has 40 MA's), (19, 19789), (25, 19837), (30, 19849), (33, 19861), (45, 19951), (59, 20038), (60, 20041), (71, 20125), (74, 20143), (86, 20218), (101, 20338), (124, 20473), (130, 20536), (135, 20560), (145, 20641), (148, 20650), (158, 20719), (159, 20722), (160, 20725), (167, 20785), (168, 20794),

Gene: IDyn_43 Start: 29631, Stop: 30746, Start Num: 12

Candidate Starts for IDyn_43:

(Start: 12 @29631 has 40 MA's), (18, 29673), (23, 29697), (28, 29733), (39, 29781), (43, 29829), (68, 29982), (94, 30189), (95, 30195), (100, 30225), (114, 30300), (127, 30375), (128, 30408), (133, 30441), (135, 30453), (154, 30609), (162, 30663), (163, 30678), (165, 30705),

Gene: Jalammah_29 Start: 23113, Stop: 24180, Start Num: 10

Candidate Starts for Jalammah_29:

(Start: 10 @23113 has 45 MA's), (15, 23143), (24, 23191), (26, 23206), (36, 23248), (51, 23344), (52, 23353), (61, 23413), (67, 23449), (69, 23470), (76, 23524), (80, 23545), (81, 23551), (89, 23584), (90, 23599), (106, 23725), (123, 23821), (129, 23881), (130, 23887), (136, 23917), (168, 24163),

Gene: JasperJr_27 Start: 22323, Stop: 23390, Start Num: 10

Candidate Starts for JasperJr_27:

(Start: 10 @22323 has 45 MA's), (15, 22353), (24, 22401), (26, 22416), (36, 22458), (37, 22461), (38, 22467), (49, 22545), (51, 22554), (52, 22563), (61, 22623), (67, 22659), (69, 22680), (76, 22734), (80, 22755), (81, 22761), (89, 22794), (90, 22809), (106, 22935), (123, 23031), (129, 23091), (130, 23097), (136, 23127), (168, 23373),

Gene: Jifall16_41 Start: 32133, Stop: 33260, Start Num: 9

Candidate Starts for Jifall16_41:

(Start: 9 @32133 has 12 MA's), (28, 32238), (57, 32412), (68, 32487), (79, 32565), (83, 32598), (92, 32679), (98, 32724), (102, 32745), (107, 32778), (117, 32838), (163, 33192), (167, 33225),

Gene: JuJu_28 Start: 22382, Stop: 23449, Start Num: 10

Candidate Starts for JuJu_28:

(Start: 10 @22382 has 45 MA's), (15, 22412), (24, 22460), (26, 22475), (27, 22481), (37, 22520), (51, 22613), (61, 22682), (67, 22718), (80, 22814), (81, 22820), (87, 22847), (90, 22868), (130, 23156), (136, 23186), (161, 23363), (168, 23432),

Gene: Kabluna_45 Start: 31212, Stop: 32321, Start Num: 12

Candidate Starts for Kabluna_45:

(Start: 12 @31212 has 40 MA's), (23, 31272), (42, 31401), (57, 31482), (66, 31548), (68, 31557), (85, 31674), (95, 31770), (96, 31776), (100, 31800), (110, 31848), (116, 31896), (122, 31932), (130, 32001), (133, 32016), (139, 32067), (151, 32157), (159, 32217),

Gene: KappaFarmDelta_29 Start: 22801, Stop: 23868, Start Num: 10

Candidate Starts for KappaFarmDelta_29:

(Start: 10 @22801 has 45 MA's), (24, 22879), (36, 22936), (38, 22945), (52, 23041), (61, 23101), (67, 23137), (69, 23158), (72, 23176), (76, 23212), (80, 23233), (81, 23239), (90, 23287), (106, 23413), (119, 23485), (130, 23575), (136, 23605), (153, 23740), (156, 23761), (161, 23782), (168, 23851),

Gene: KidneyBean_42 Start: 32257, Stop: 33384, Start Num: 9

Candidate Starts for KidneyBean_42:

(Start: 9 @32257 has 12 MA's), (28, 32362), (57, 32536), (68, 32611), (79, 32689), (83, 32722), (92, 32803), (98, 32848), (102, 32869), (107, 32902), (117, 32962), (163, 33316), (167, 33349),

Gene: Kurt_42 Start: 32494, Stop: 33621, Start Num: 9

Candidate Starts for Kurt_42:

(Start: 9 @32494 has 12 MA's), (28, 32599), (57, 32773), (68, 32848), (79, 32926), (83, 32959), (92, 33040), (98, 33085), (102, 33106), (107, 33139), (117, 33199), (163, 33553), (167, 33586),

Gene: Lollipop1437_47 Start: 33113, Stop: 34222, Start Num: 12

Candidate Starts for Lollipop1437_47:

(1, 32027), (2, 32060), (3, 32540), (Start: 12 @33113 has 40 MA's), (23, 33173), (35, 33233), (57, 33383), (74, 33503), (79, 33536), (87, 33584), (95, 33671), (100, 33701), (125, 33845), (135, 33929), (154, 34085), (159, 34118), (165, 34181),

Gene: Lysidious_28 Start: 22840, Stop: 23907, Start Num: 10

Candidate Starts for Lysidious_28:

(Start: 10 @22840 has 45 MA's), (15, 22870), (24, 22918), (26, 22933), (36, 22975), (51, 23071), (52, 23080), (61, 23140), (67, 23176), (69, 23197), (76, 23251), (80, 23272), (81, 23278), (89, 23311), (90, 23326), (106, 23452), (123, 23548), (129, 23608), (130, 23614), (136, 23644), (146, 23725), (168, 23890),

Gene: MacGully_53 Start: 35504, Stop: 36610, Start Num: 12

Candidate Starts for MacGully_53:

(Start: 8 @35498 has 1 MA's), (Start: 12 @35504 has 40 MA's), (14, 35519), (23, 35567), (42, 35696), (43, 35699), (64, 35834), (74, 35897), (78, 35927), (94, 36059), (108, 36137), (122, 36227), (127, 36245), (130, 36296), (134, 36314), (135, 36323), (136, 36329), (151, 36449),

Gene: Malachai_28 Start: 22800, Stop: 23867, Start Num: 10

Candidate Starts for Malachai_28:

(Start: 10 @22800 has 45 MA's), (15, 22830), (24, 22878), (26, 22893), (36, 22935), (37, 22938), (38, 22944), (49, 23022), (51, 23031), (52, 23040), (61, 23100), (76, 23211), (80, 23232), (81, 23238), (89, 23271), (90, 23286), (106, 23412), (113, 23448), (123, 23508), (129, 23568), (130, 23574), (136, 23604), (146, 23685), (168, 23850),

Gene: Marietta_44 Start: 29547, Stop: 30662, Start Num: 12

Candidate Starts for Marietta_44:

(Start: 12 @29547 has 40 MA's), (18, 29589), (23, 29613), (28, 29649), (39, 29697), (43, 29745), (68, 29898), (85, 30015), (94, 30105), (95, 30111), (127, 30291), (128, 30324), (133, 30357), (135, 30369), (154, 30525), (162, 30579), (163, 30594), (165, 30621),

Gene: Maselop_46 Start: 32981, Stop: 34087, Start Num: 12

Candidate Starts for Maselop_46:

(Start: 12 @32981 has 40 MA's), (28, 33080), (42, 33173), (43, 33176), (49, 33206), (64, 33311), (67, 33323), (74, 33374), (94, 33536), (96, 33548), (108, 33614), (127, 33722), (129, 33767), (130, 33773), (134, 33791), (135, 33800), (136, 33806), (147, 33902), (149, 33911), (151, 33926), (155, 33965),

Gene: Melba_27 Start: 22319, Stop: 23386, Start Num: 10

Candidate Starts for Melba_27:

(Start: 10 @22319 has 45 MA's), (15, 22349), (24, 22397), (26, 22412), (36, 22454), (37, 22457), (38, 22463), (49, 22541), (51, 22550), (52, 22559), (61, 22619), (67, 22655), (77, 22733), (80, 22751), (81, 22757), (89, 22790), (90, 22805), (106, 22931), (123, 23027), (130, 23093), (136, 23123), (168, 23369),

Gene: Mellie_26 Start: 22080, Stop: 23147, Start Num: 10

Candidate Starts for Mellie_26:

(Start: 10 @22080 has 45 MA's), (15, 22110), (24, 22158), (26, 22173), (36, 22215), (51, 22311), (52, 22320), (61, 22380), (67, 22416), (69, 22437), (76, 22491), (80, 22512), (81, 22518), (89, 22551), (90, 22566), (106, 22692), (123, 22788), (129, 22848), (130, 22854), (136, 22884), (168, 23130),

Gene: MerCougar_43 Start: 32394, Stop: 33503, Start Num: 12

Candidate Starts for MerCougar_43:

(Start: 12 @32394 has 40 MA's), (23, 32454), (42, 32583), (43, 32586), (57, 32664), (68, 32739), (79, 32817), (95, 32952), (100, 32982), (110, 33030), (116, 33078), (130, 33183), (138, 33237), (151, 33339), (159, 33399),

Gene: MintFen_27 Start: 22319, Stop: 23386, Start Num: 10

Candidate Starts for MintFen_27:

(Start: 10 @22319 has 45 MA's), (15, 22349), (24, 22397), (26, 22412), (36, 22454), (37, 22457), (38, 22463), (49, 22541), (51, 22550), (52, 22559), (61, 22619), (67, 22655), (77, 22733), (80, 22751), (81,

22757), (89, 22790), (90, 22805), (106, 22931), (123, 23027), (130, 23093), (136, 23123), (168, 23369),

Gene: MissRona_29 Start: 22628, Stop: 23695, Start Num: 10

Candidate Starts for MissRona_29:

(Start: 10 @22628 has 45 MA's), (15, 22658), (24, 22706), (26, 22721), (36, 22763), (37, 22766), (38, 22772), (51, 22859), (52, 22868), (61, 22928), (67, 22964), (69, 22985), (76, 23039), (80, 23060), (81, 23066), (89, 23099), (90, 23114), (106, 23240), (123, 23336), (129, 23396), (130, 23402), (136, 23432), (146, 23513), (168, 23678),

Gene: Murp_28 Start: 22578, Stop: 23645, Start Num: 10

Candidate Starts for Murp_28:

(Start: 10 @22578 has 45 MA's), (24, 22656), (26, 22671), (36, 22713), (38, 22722), (52, 22818), (61, 22878), (67, 22914), (69, 22935), (76, 22989), (80, 23010), (81, 23016), (87, 23043), (90, 23064), (106, 23190), (119, 23262), (130, 23352), (136, 23382), (153, 23517), (156, 23538), (161, 23559), (168, 23628),

Gene: NadineRae_42 Start: 28800, Stop: 29915, Start Num: 12

Candidate Starts for NadineRae_42:

(Start: 12 @28800 has 40 MA's), (18, 28842), (23, 28866), (28, 28902), (39, 28950), (43, 28998), (68, 29151), (91, 29340), (94, 29358), (95, 29364), (127, 29544), (128, 29577), (133, 29610), (135, 29622), (154, 29778), (162, 29832), (163, 29847), (165, 29874),

Gene: NatB6_42 Start: 31530, Stop: 32657, Start Num: 9

Candidate Starts for NatB6_42:

(Start: 9 @31530 has 12 MA's), (28, 31635), (57, 31809), (68, 31884), (79, 31962), (83, 31995), (92, 32076), (98, 32121), (102, 32142), (107, 32175), (117, 32235), (163, 32589), (167, 32622),

Gene: NosilaM_45 Start: 32109, Stop: 33218, Start Num: 12

Candidate Starts for NosilaM_45:

(Start: 12 @32109 has 40 MA's), (23, 32169), (42, 32298), (43, 32301), (50, 32337), (57, 32379), (66, 32445), (68, 32454), (95, 32667), (96, 32673), (100, 32697), (110, 32745), (116, 32793), (130, 32898), (133, 32913), (139, 32964), (151, 33054), (159, 33114),

Gene: NovumRegina_42 Start: 31860, Stop: 32987, Start Num: 9

Candidate Starts for NovumRegina_42:

(Start: 9 @31860 has 12 MA's), (28, 31965), (54, 32121), (68, 32214), (79, 32292), (83, 32325), (92, 32406), (98, 32451), (102, 32472), (104, 32487), (107, 32505), (117, 32565), (163, 32919), (167, 32952),

Gene: Obliviate_27 Start: 22235, Stop: 23302, Start Num: 10

Candidate Starts for Obliviate_27:

(Start: 10 @22235 has 45 MA's), (15, 22265), (24, 22313), (26, 22328), (36, 22370), (49, 22457), (51, 22466), (52, 22475), (61, 22535), (67, 22571), (80, 22667), (81, 22673), (87, 22700), (90, 22721), (125, 22952), (130, 23009), (136, 23039), (161, 23216), (168, 23285),

Gene: Outis_43 Start: 32088, Stop: 33197, Start Num: 12

Candidate Starts for Outis_43:

(Start: 12 @32088 has 40 MA's), (23, 32148), (42, 32277), (43, 32280), (57, 32358), (68, 32433), (79, 32511), (95, 32646), (100, 32676), (110, 32724), (116, 32772), (130, 32877), (138, 32931), (151, 33033), (159, 33093),

Gene: PCoral7_28 Start: 22551, Stop: 23615, Start Num: 10

Candidate Starts for PCoral7_28:

(Start: 10 @22551 has 45 MA's), (24, 22629), (27, 22650), (36, 22686), (37, 22689), (38, 22695), (61, 22851), (67, 22887), (69, 22908), (72, 22926), (80, 22980), (81, 22986), (90, 23034), (106, 23160), (129, 23316), (130, 23322), (136, 23352), (153, 23487), (158, 23520), (161, 23529), (165, 23583), (168, 23598), (169, 23604),

Gene: Patio_45 Start: 32349, Stop: 33458, Start Num: 12

Candidate Starts for Patio_45:

(1, 31263), (3, 31776), (Start: 12 @32349 has 40 MA's), (23, 32409), (35, 32469), (57, 32619), (74, 32739), (79, 32772), (87, 32820), (95, 32907), (100, 32937), (125, 33081), (135, 33165), (154, 33321), (165, 33417),

Gene: Petra_29 Start: 22304, Stop: 23371, Start Num: 10

Candidate Starts for Petra_29:

(Start: 10 @22304 has 45 MA's), (24, 22382), (36, 22439), (37, 22442), (38, 22448), (52, 22544), (61, 22604), (67, 22640), (69, 22661), (76, 22715), (80, 22736), (81, 22742), (87, 22769), (90, 22790), (106, 22916), (119, 22988), (130, 23078), (136, 23108), (153, 23243), (156, 23264), (161, 23285), (168, 23354),

Gene: Phomeo_41 Start: 32129, Stop: 33256, Start Num: 9

Candidate Starts for Phomeo_41:

(Start: 9 @32129 has 12 MA's), (28, 32234), (57, 32408), (68, 32483), (79, 32561), (83, 32594), (92, 32675), (98, 32720), (102, 32741), (107, 32774), (117, 32834), (163, 33188), (167, 33221),

Gene: PhrostedPhlake_29 Start: 23012, Stop: 24079, Start Num: 10

Candidate Starts for PhrostedPhlake_29:

(Start: 10 @23012 has 45 MA's), (15, 23042), (24, 23090), (26, 23105), (36, 23147), (37, 23150), (38, 23156), (49, 23234), (51, 23243), (52, 23252), (61, 23312), (67, 23348), (77, 23426), (80, 23444), (81, 23450), (89, 23483), (90, 23498), (106, 23624), (123, 23720), (130, 23786), (136, 23816), (168, 24062),

Gene: Pipp_27 Start: 22310, Stop: 23377, Start Num: 10

Candidate Starts for Pipp_27:

(Start: 10 @22310 has 45 MA's), (15, 22340), (24, 22388), (26, 22403), (27, 22409), (36, 22445), (37, 22448), (51, 22541), (61, 22610), (67, 22646), (80, 22742), (81, 22748), (87, 22775), (90, 22796), (119, 22994), (123, 23018), (129, 23078), (130, 23084), (136, 23114), (137, 23120), (161, 23291), (168, 23360),

Gene: Pleakley_51 Start: 32339, Stop: 33457, Start Num: 7

Candidate Starts for Pleakley_51:

(Start: 7 @32339 has 2 MA's), (13, 32351), (23, 32408), (44, 32543), (48, 32564), (57, 32618), (69, 32705), (74, 32738), (84, 32807), (95, 32906), (107, 32975), (142, 33230), (151, 33293), (165, 33416), (166, 33419), (167, 33422),

Gene: Polyzuki_46 Start: 32970, Stop: 34076, Start Num: 12

Candidate Starts for Polyzuki_46:

(Start: 12 @32970 has 40 MA's), (28, 33069), (42, 33162), (43, 33165), (49, 33195), (64, 33300), (67, 33312), (74, 33363), (94, 33525), (96, 33537), (108, 33603), (127, 33711), (129, 33756), (130, 33762), (134, 33780), (135, 33789), (136, 33795), (147, 33891), (149, 33900), (151, 33915), (155, 33954),

Gene: PrincePatrick_27 Start: 22630, Stop: 23694, Start Num: 10

Candidate Starts for PrincePatrick_27:

(Start: 10 @22630 has 45 MA's), (24, 22708), (27, 22729), (36, 22765), (37, 22768), (38, 22774), (61, 22930), (67, 22966), (69, 22987), (72, 23005), (80, 23059), (81, 23065), (90, 23113), (106, 23239), (129, 23395), (130, 23401), (136, 23431), (153, 23566), (158, 23599), (161, 23608), (165, 23662), (168, 23677), (169, 23683),

Gene: Samba_27 Start: 22397, Stop: 23464, Start Num: 10

Candidate Starts for Samba_27:

(Start: 10 @22397 has 45 MA's), (15, 22427), (24, 22475), (26, 22490), (36, 22532), (51, 22628), (52, 22637), (61, 22697), (67, 22733), (69, 22754), (77, 22811), (80, 22829), (81, 22835), (89, 22868), (90, 22883), (106, 23009), (123, 23105), (129, 23165), (130, 23171), (136, 23201), (168, 23447),

Gene: Sapo_24 Start: 20295, Stop: 21383, Start Num: 10

Candidate Starts for Sapo_24:

(Start: 10 @20295 has 45 MA's), (18, 20337), (27, 20394), (49, 20517), (74, 20685), (76, 20706), (80, 20727), (81, 20733), (86, 20757), (114, 20946), (121, 20991), (124, 21006), (129, 21063), (146, 21198), (150, 21222), (164, 21327), (168, 21363), (169, 21369), (171, 21375),

Gene: Schmidt_24 Start: 17816, Stop: 18928, Start Num: 12

Candidate Starts for Schmidt_24:

(5, 17798), (6, 17801), (Start: 12 @17816 has 40 MA's), (29, 17912), (32, 17921), (33, 17927), (64, 18140), (65, 18146), (70, 18188), (73, 18197), (82, 18269), (101, 18404), (118, 18509), (123, 18536), (124, 18539), (130, 18602), (132, 18614), (135, 18626), (141, 18668), (153, 18749), (156, 18770), (159, 18785), (162, 18806), (167, 18848), (168, 18857), (173, 18878), (176, 18920),

Gene: Skysand_44 Start: 32569, Stop: 33678, Start Num: 12

Candidate Starts for Skysand_44:

(1, 31483), (2, 31516), (3, 31996), (Start: 12 @32569 has 40 MA's), (23, 32629), (35, 32689), (57, 32839), (74, 32959), (79, 32992), (87, 33040), (95, 33127), (100, 33157), (125, 33301), (135, 33385), (154, 33541), (159, 33574), (165, 33637),

Gene: Splinter_26 Start: 19531, Stop: 20649, Start Num: 12

Candidate Starts for Splinter_26:

(Start: 12 @19531 has 40 MA's), (19, 19573), (25, 19621), (30, 19633), (45, 19735), (59, 19822), (60, 19825), (71, 19909), (74, 19927), (86, 20002), (101, 20122), (124, 20257), (130, 20320), (135, 20344), (145, 20425), (148, 20434), (154, 20473), (156, 20491), (158, 20503), (159, 20506), (160, 20509), (167, 20569),

Gene: StarStruck_43 Start: 32088, Stop: 33197, Start Num: 12

Candidate Starts for StarStruck_43:

(Start: 12 @32088 has 40 MA's), (23, 32148), (42, 32277), (43, 32280), (57, 32358), (68, 32433), (79, 32511), (95, 32646), (100, 32676), (110, 32724), (116, 32772), (130, 32877), (138, 32931), (151, 33033), (159, 33093),

Gene: Sukkupi_44 Start: 31114, Stop: 32229, Start Num: 12

Candidate Starts for Sukkupi_44:

(Start: 12 @31114 has 40 MA's), (18, 31156), (23, 31180), (28, 31216), (39, 31264), (43, 31312), (68, 31465), (94, 31672), (95, 31678), (100, 31708), (114, 31783), (127, 31858), (128, 31891), (133, 31924), (135, 31936), (154, 32092), (162, 32146), (163, 32161), (165, 32188),

Gene: SuperSulley_43 Start: 32276, Stop: 33385, Start Num: 12

Candidate Starts for SuperSulley_43:

(Start: 12 @32276 has 40 MA's), (23, 32336), (42, 32465), (43, 32468), (57, 32546), (66, 32612), (68, 32621), (95, 32834), (96, 32840), (100, 32864), (110, 32912), (116, 32960), (130, 33065), (133,

33080), (139, 33131), (151, 33221), (159, 33281),

Gene: TZGordon_28 Start: 19670, Stop: 20788, Start Num: 12

Candidate Starts for TZGordon_28:

(Start: 12 @19670 has 40 MA's), (19, 19712), (25, 19760), (30, 19772), (45, 19874), (59, 19961), (60, 19964), (71, 20048), (74, 20066), (86, 20141), (101, 20261), (124, 20396), (130, 20459), (135, 20483), (145, 20564), (148, 20573), (158, 20642), (159, 20645), (160, 20648), (167, 20708), (168, 20717),

Gene: TinaLin_29 Start: 20510, Stop: 21625, Start Num: 12

Candidate Starts for TinaLin_29:

(Start: 12 @20510 has 40 MA's), (31, 20615), (45, 20714), (58, 20783), (59, 20801), (60, 20804), (73, 20894), (74, 20906), (101, 21101), (130, 21299), (135, 21323), (136, 21329), (145, 21404), (148, 21413), (153, 21449), (158, 21482), (167, 21548),

Gene: Toast_28 Start: 22551, Stop: 23615, Start Num: 10

Candidate Starts for Toast_28:

(Start: 10 @22551 has 45 MA's), (24, 22629), (27, 22650), (36, 22686), (37, 22689), (38, 22695), (61, 22851), (67, 22887), (69, 22908), (72, 22926), (80, 22980), (81, 22986), (90, 23034), (106, 23160), (129, 23316), (130, 23322), (136, 23352), (153, 23487), (158, 23520), (161, 23529), (165, 23583), (168, 23598), (169, 23604),

Gene: Tracker_42 Start: 31257, Stop: 32384, Start Num: 9

Candidate Starts for Tracker_42:

(Start: 9 @31257 has 12 MA's), (28, 31362), (34, 31383), (57, 31536), (68, 31611), (79, 31689), (83, 31722), (92, 31803), (98, 31848), (102, 31869), (107, 31902), (117, 31962), (163, 32316), (167, 32349),

Gene: Turuncu_46 Start: 32551, Stop: 33660, Start Num: 12

Candidate Starts for Turuncu_46:

(Start: 12 @32551 has 40 MA's), (22, 32608), (23, 32611), (95, 33109), (100, 33139), (107, 33178), (154, 33523), (159, 33556),

Gene: UmaThurman_27 Start: 22444, Stop: 23511, Start Num: 10

Candidate Starts for UmaThurman_27:

(Start: 10 @22444 has 45 MA's), (15, 22474), (24, 22522), (26, 22537), (36, 22579), (37, 22582), (49, 22666), (51, 22675), (52, 22684), (61, 22744), (67, 22780), (69, 22801), (76, 22855), (80, 22876), (81, 22882), (89, 22915), (90, 22930), (106, 23056), (123, 23152), (129, 23212), (130, 23218), (136, 23248), (168, 23494),

Gene: Utz_27 Start: 22311, Stop: 23378, Start Num: 10

Candidate Starts for Utz_27:

(Start: 10 @22311 has 45 MA's), (15, 22341), (24, 22389), (26, 22404), (27, 22410), (36, 22446), (37, 22449), (51, 22542), (61, 22611), (67, 22647), (80, 22743), (81, 22749), (87, 22776), (90, 22797), (119, 22995), (125, 23028), (130, 23085), (136, 23115), (137, 23121), (161, 23292), (168, 23361),

Gene: Vendetta_26 Start: 19531, Stop: 20649, Start Num: 12

Candidate Starts for Vendetta_26:

(Start: 12 @19531 has 40 MA's), (19, 19573), (25, 19621), (30, 19633), (45, 19735), (59, 19822), (60, 19825), (71, 19909), (74, 19927), (86, 20002), (101, 20122), (124, 20257), (130, 20320), (135, 20344), (145, 20425), (148, 20434), (154, 20473), (156, 20491), (158, 20503), (159, 20506), (160, 20509), (167, 20569),

Gene: Walrus_29 Start: 22859, Stop: 23926, Start Num: 10

Candidate Starts for Walrus_29:

(Start: 10 @22859 has 45 MA's), (15, 22889), (24, 22937), (26, 22952), (36, 22994), (46, 23066), (51, 23090), (52, 23099), (61, 23159), (67, 23195), (69, 23216), (77, 23273), (80, 23291), (81, 23297), (89, 23330), (90, 23345), (106, 23471), (123, 23567), (129, 23627), (130, 23633), (136, 23663), (146, 23744), (168, 23909),

Gene: Wheezy_42 Start: 31462, Stop: 32589, Start Num: 9

Candidate Starts for Wheezy_42:

(Start: 9 @31462 has 12 MA's), (28, 31567), (57, 31741), (68, 31816), (79, 31894), (83, 31927), (92, 32008), (98, 32053), (102, 32074), (107, 32107), (117, 32167), (163, 32521), (167, 32554),

Gene: WhoseManz_44 Start: 29160, Stop: 30275, Start Num: 12

Candidate Starts for WhoseManz_44:

(Start: 12 @29160 has 40 MA's), (18, 29202), (23, 29226), (28, 29262), (39, 29310), (43, 29358), (68, 29511), (94, 29718), (95, 29724), (100, 29754), (127, 29904), (128, 29937), (133, 29970), (135, 29982), (154, 30138), (162, 30192), (163, 30207), (165, 30234),

Gene: William_28 Start: 22377, Stop: 23441, Start Num: 10

Candidate Starts for William_28:

(Start: 10 @22377 has 45 MA's), (24, 22455), (27, 22476), (36, 22512), (37, 22515), (38, 22521), (61, 22677), (62, 22692), (67, 22713), (69, 22734), (72, 22752), (80, 22806), (90, 22860), (106, 22986), (129, 23142), (130, 23148), (136, 23178), (153, 23313), (158, 23346), (161, 23355), (165, 23409), (168, 23424), (169, 23430),

Gene: Wisp_26 Start: 22029, Stop: 23096, Start Num: 10

Candidate Starts for Wisp_26:

(Start: 10 @22029 has 45 MA's), (15, 22059), (24, 22107), (26, 22122), (36, 22164), (37, 22167), (38, 22173), (49, 22251), (51, 22260), (52, 22269), (61, 22329), (67, 22365), (77, 22443), (80, 22461), (81, 22467), (89, 22500), (90, 22515), (106, 22641), (123, 22737), (130, 22803), (136, 22833), (168, 23079),

Gene: Wocket_29 Start: 22996, Stop: 24063, Start Num: 10

Candidate Starts for Wocket_29:

(Start: 10 @22996 has 45 MA's), (24, 23074), (26, 23089), (36, 23131), (38, 23140), (52, 23236), (61, 23296), (67, 23332), (69, 23353), (72, 23371), (76, 23407), (80, 23428), (81, 23434), (87, 23461), (90, 23482), (106, 23608), (130, 23770), (136, 23800), (137, 23806), (161, 23977), (168, 24046),

Gene: Yndexa_44 Start: 31114, Stop: 32229, Start Num: 12

Candidate Starts for Yndexa_44:

(Start: 12 @31114 has 40 MA's), (18, 31156), (23, 31180), (28, 31216), (39, 31264), (43, 31312), (68, 31465), (94, 31672), (95, 31678), (100, 31708), (114, 31783), (127, 31858), (128, 31891), (133, 31924), (135, 31936), (154, 32092), (162, 32146), (163, 32161), (165, 32188),

Gene: Zarbodnamra_27 Start: 22318, Stop: 23385, Start Num: 10

Candidate Starts for Zarbodnamra_27:

(Start: 10 @22318 has 45 MA's), (15, 22348), (24, 22396), (26, 22411), (36, 22453), (37, 22456), (38, 22462), (49, 22540), (51, 22549), (52, 22558), (61, 22618), (76, 22729), (80, 22750), (81, 22756), (89, 22789), (90, 22804), (106, 22930), (123, 23026), (129, 23086), (130, 23092), (136, 23122), (146, 23203), (168, 23368),

Gene: ZiggyZoo_27 Start: 22235, Stop: 23302, Start Num: 10

Candidate Starts for ZiggyZoo_27:

(Start: 10 @22235 has 45 MA's), (15, 22265), (24, 22313), (26, 22328), (36, 22370), (49, 22457), (51, 22466), (52, 22475), (61, 22535), (67, 22571), (76, 22646), (80, 22667), (81, 22673), (89, 22706), (90, 22721), (106, 22847), (123, 22943), (129, 23003), (130, 23009), (136, 23039), (146, 23120), (168, 23285),