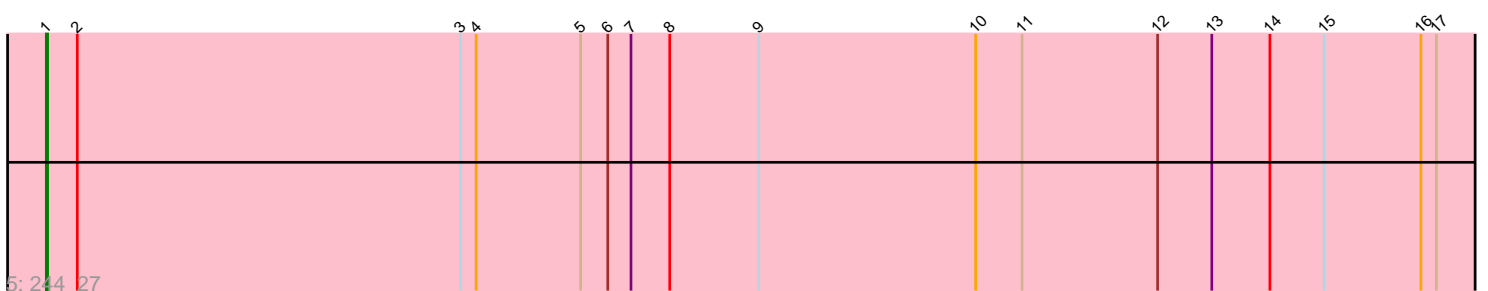
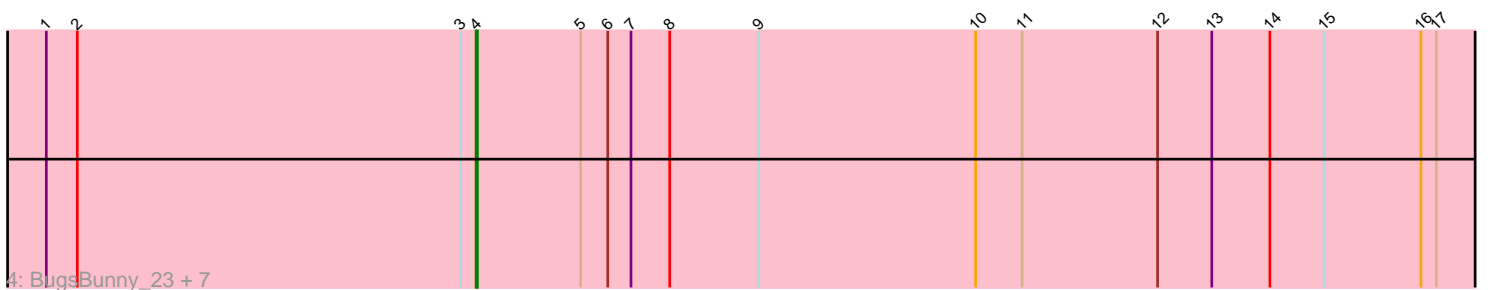
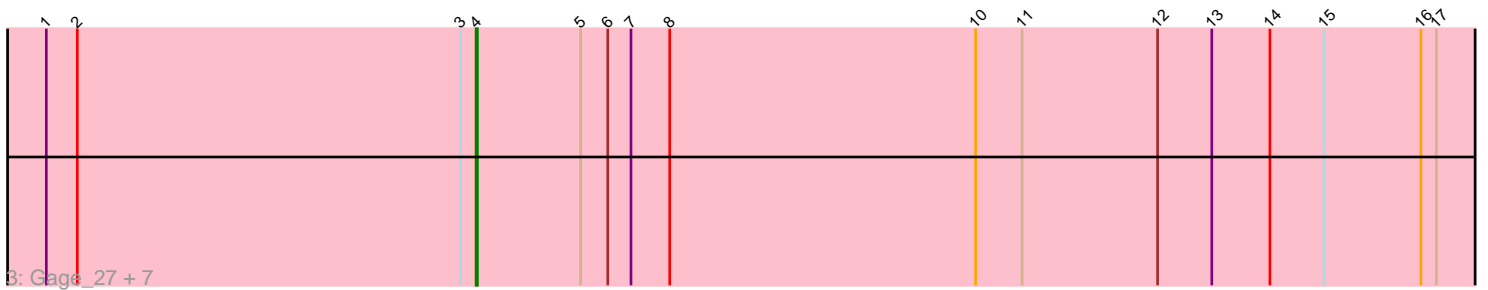
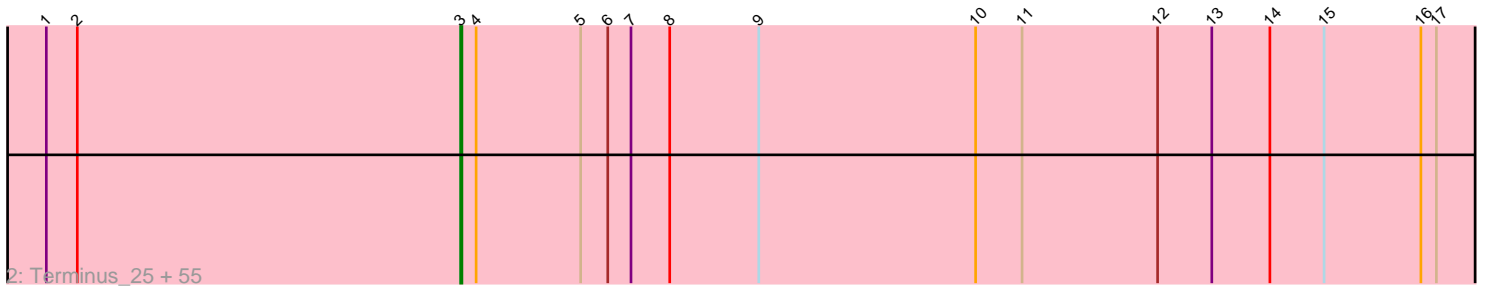
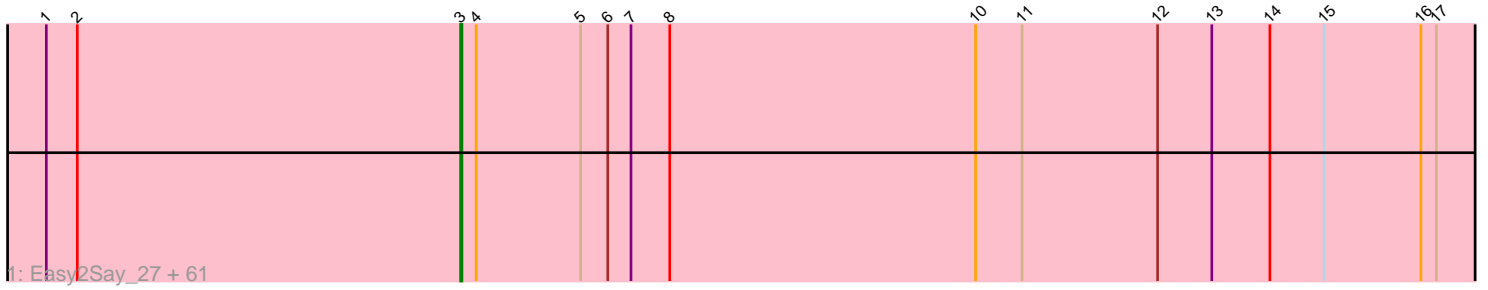


# Pham 215944



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 215944 Report

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

Pham number 215944 has 135 members, 10 are drafts.

Phages represented in each track:

- Track 1 : Easy2Say\_27, BaboJay\_24, Manda\_26, Goku\_25, Dusk\_24, BadStone\_24, Pharsalus\_26, Inca\_24, Adnama\_28, Gator\_23, Stank\_28, Phrux\_25, Bruin\_25, JeTaime\_27, Goldilocks\_26, Emmina\_26, Moldemort\_26, Tarkin\_27, Paperbeatsrock\_27, Contagion\_24, Kimchi\_27, Saints25\_26, ShereKhan\_27, Murphy\_26, Myrale\_25, Argent26\_27, Wiggin\_28, Mosby\_24, Xandras\_27, Barbarian\_24, Tuco\_26, Sotrice96\_25, Pumpkin\_27, Czyszczonek1\_26, Thimble\_25, StellaBean\_25, Highbury\_26, Kanye\_27, Traaww1\_23, Tomaszewski\_24, TeardropMSU\_24, Dumbo\_25, Lilac\_27, Ukulele\_25, TBrady12\_27, SirDuracell\_24, Marshmallow\_25, Teaspoon\_26, SophKB\_25, Gemini\_28, Buck\_24, Bench\_27, Eureka\_25, Cactus\_26, Miniwave\_25, Asriel\_24, Stark\_26, Maxxinista\_26, GooberAzure\_27, Thresher\_26, Elph10\_26, Icee\_24
- Track 2 : Terminus\_25, Murica\_24, Balomoji\_24, Command613\_26, HanKaySha\_26, DoctorDiddles\_25, Phaux\_24, Henry\_25, Phaja\_25, Bask21\_25, ChotaBhai\_25, DrDrey\_26, Simpliphy\_26, Policronamos\_25, Palpatine\_25, HufflyPuff\_24, Nala\_25, Lilpickle\_24, Flypotenuse\_23, FireRed\_25, Willez\_24, MISSy\_24, Nimrod\_25, ShamWow\_25, StolenFromERC\_27, Holt\_26, Rimmer\_24, Filch\_26, MadamMonkfish\_25, YassJohnny\_26, Amao\_25, ChosenOne\_24, NoSleep\_26, xkcd\_26, Mindy\_25, NelitzaMV\_25, Hoonter\_27, BigBubba\_26, GoldenSpark\_27, Pat3\_24, IHOP\_25, Becksu\_25, AmericanBeauty\_27, Porky\_25, Elite2014\_24, Sassay\_24, Kostya\_25, Glexan\_23, CrystalP\_25, Misfit\_25, PhatBacter\_25, FairyPath\_25, Lilizi\_27, Hopey\_27, Cookies\_25, MPhalcon\_24
- Track 3 : Gage\_27, Cjw1\_25, ABCat\_24, FoghornLeghorn\_24, Quallification\_26, RiverMonster\_25, Rakim\_26, OrionPax\_26
- Track 4 : BugsBunny\_23, Harella\_24, Petra64142\_27, StormChicken\_25, Daikon\_23, BilboSwaggins\_25, Youngblood\_25, Toto\_25
- Track 5 : 244\_27

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

The start number called the most often in the published annotations is 3, it was called in 114 of the 125 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Adnama\_28, Amao\_25, AmericanBeauty\_27, Argent26\_27, Asriel\_24, BaboJay\_24, BadStone\_24, Balomoji\_24, Barbarian\_24, Bask21\_25, Becksu\_25, Bench\_27, BigBubba\_26, Bruin\_25, Buck\_24, Cactus\_26, ChosenOne\_24, ChotaBhai\_25, Command613\_26, Contagion\_24, Cookies\_25, CrystalP\_25, Czystczon1\_26, DoctorDiddles\_25, DrDrey\_26, Dumbo\_25, Dusk\_24, Easy2Say\_27, Elite2014\_24, Elph10\_26, Emmina\_26, Eureka\_25, FairyPath\_25, Filch\_26, FireRed\_25, Flypotenuse\_23, Gator\_23, Gemini\_28, Glexan\_23, Goku\_25, GoldenSpark\_27, Goldilocks\_26, GooberAzure\_27, HanKaySha\_26, Henry\_25, Highbury\_26, Holt\_26, Hoonter\_27, Hopey\_27, HufflyPuff\_24, IHOP\_25, Icee\_24, Inca\_24, JeTaime\_27, Kanye\_27, Kimchi\_27, Kostya\_25, Lilac\_27, Lilizi\_27, Lilipickle\_24, MISSy\_24, MPhalcon\_24, MadamMonkfish\_25, Manda\_26, Marshmallow\_25, Maxxinista\_26, Mindy\_25, Miniwave\_25, Misfit\_25, Moldemort\_26, Mosby\_24, Murica\_24, Murphy\_26, Myrale\_25, Nala\_25, NelitzaMV\_25, Nimrod\_25, NoSleep\_26, Palpatine\_25, Paperbeatsrock\_27, Pat3\_24, Phaja\_25, Pharsalus\_26, PhatBacter\_25, Phaux\_24, Phrux\_25, Policronamos\_25, Porky\_25, Pumpkin\_27, Rimmer\_24, Saints25\_26, Sassay\_24, ShamWow\_25, ShereKhan\_27, Simpliphy\_26, SirDuracell\_24, SophKB\_25, Sotrice96\_25, Stank\_28, Stark\_26, StellaBean\_25, StolenFromERC\_27, TBrady12\_27, Tarkin\_27, TeardropMSU\_24, Teaspoon\_26, Terminus\_25, Thimble\_25, Thresher\_26, Tomaszewski\_24, Traaww1\_23, Tuco\_26, Ukulele\_25, Wiggin\_28, Willez\_24, Xandras\_27, YassJohnny\_26, xkcd\_26,

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

- 244\_27, ABCat\_24, BilboSwaggins\_25, BugsBunny\_23, Cjw1\_25, Daikon\_23, FoghornLeghorn\_24, Gage\_27, Harella\_24, OrionPax\_26, Petra64142\_27, Quallification\_26, Rakim\_26, RiverMonster\_25, StormChicken\_25, Toto\_25, Youngblood\_25,

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

- 

### Summary by start number:

Start 1:

- Found in 135 of 135 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 1 of 125
- Called 0.7% of time when present
- Phage (with cluster) where this start called: 244\_27 (E),

Start 3:

- Found in 135 of 135 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 114 of 125
- Called 87.4% of time when present
- Phage (with cluster) where this start called: Adnama\_28 (E), Amao\_25 (E), AmericanBeauty\_27 (E), Argent26\_27 (E), Asriel\_24 (E), BaboJay\_24 (E), BadStone\_24 (E), Balomoji\_24 (E), Barbarian\_24 (E), Bask21\_25 (E), Becksu\_25 (E), Bench\_27 (E), BigBubba\_26 (E), Bruin\_25 (E), Buck\_24 (E), Cactus\_26 (E), ChosenOne\_24 (E), ChotaBhai\_25 (E), Command613\_26 (E), Contagion\_24 (E), Cookies\_25 (E), CrystalP\_25 (E), Czystczon1\_26 (E), DoctorDiddles\_25 (E), DrDrey\_26 (E), Dumbo\_25 (E), Dusk\_24 (E), Easy2Say\_27 (E), Elite2014\_24 (E), Elph10\_26 (E), Emmina\_26 (E), Eureka\_25 (E), FairyPath\_25 (E), Filch\_26 (E), FireRed\_25 (E), Flypotenuse\_23 (E), Gator\_23 (E), Gemini\_28 (E), Glexan\_23 (E), Goku\_25 (E), GoldenSpark\_27 (E), Goldilocks\_26 (E), GooberAzure\_27 (E), HanKaySha\_26 (E), Henry\_25 (E), Highbury\_26 (E), Holt\_26 (E), Hoonter\_27 (E),

Hopey\_27 (E), HufflyPuff\_24 (E), IHOP\_25 (E), Icee\_24 (E), Inca\_24 (E), JeTaime\_27 (E), Kanye\_27 (E), Kimchi\_27 (E), Kostya\_25 (E), Lilac\_27 (E), Lilizi\_27 (E), Lilpickle\_24 (E), MISSy\_24 (E), MPhalcon\_24 (E), MadamMonkfish\_25 (E), Manda\_26 (E), Marshmallow\_25 (E), Maxxinista\_26 (E), Mindy\_25 (E), Miniwave\_25 (E), Misfit\_25 (E), Moldemort\_26 (E), Mosby\_24 (E), Murica\_24 (E), Murphy\_26 (E), Myrale\_25 (E), Nala\_25 (E), NelitzaMV\_25 (E), Nimrod\_25 (E), NoSleep\_26 (E), Palpatine\_25 (E), Paperbeatsrock\_27 (E), Pat3\_24 (E), Phaja\_25 (E), Pharsalus\_26 (E), PhatBacter\_25 (E), Phaux\_24 (E), Phrux\_25 (E), Policronamos\_25 (E), Porky\_25 (E), Pumpkin\_27 (E), Rimmer\_24 (E), Saints25\_26 (E), Sassay\_24 (E), ShamWow\_25 (E), ShereKhan\_27 (E), Simpliphy\_26 (E), SirDuracell\_24 (E), SophKB\_25 (E), Sotrice96\_25 (E), Stank\_28 (E), Stark\_26 (E), StellaBean\_25 (E), StolenFromERC\_27 (E), TBrady12\_27 (E), Tarkin\_27 (E), TeardropMSU\_24 (E), Teaspoon\_26 (E), Terminus\_25 (E), Thimble\_25 (E), Thresher\_26 (E), Tomaszewski\_24 (E), Traaww1\_23 (E), Tuco\_26 (E), Ukulele\_25 (E), Wiggin\_28 (E), Willez\_24 (E), Xandras\_27 (E), YassJohnny\_26 (E), xkcd\_26 (E),

Start 4:

- Found in 135 of 135 ( 100.0% ) of genes in pham
- Manual Annotations of this start: 10 of 125
- Called 11.9% of time when present
- Phage (with cluster) where this start called: ABCat\_24 (E), BilboSwaggins\_25 (E), BugsBunny\_23 (E), Cjw1\_25 (E), Daikon\_23 (E), FoghornLeghorn\_24 (E), Gage\_27 (E), Harella\_24 (E), OrionPax\_26 (E), Petra64142\_27 (E), Quallification\_26 (E), Rakim\_26 (E), RiverMonster\_25 (E), StormChicken\_25 (E), Toto\_25 (E), Youngblood\_25 (E),

### Summary by clusters:

There is one cluster represented in this pham: E

Info for manual annotations of cluster E:

- Start number 1 was manually annotated 1 time for cluster E.
- Start number 3 was manually annotated 114 times for cluster E.
- Start number 4 was manually annotated 10 times for cluster E.

### Gene Information:

Gene: 244\_27 Start: 21393, Stop: 22547, Start Num: 1

Candidate Starts for 244\_27:

(Start: 1 @21393 has 1 MA's), (2, 21417), (Start: 3 @21714 has 114 MA's), (Start: 4 @21726 has 10 MA's), (5, 21807), (6, 21828), (7, 21846), (8, 21876), (9, 21945), (10, 22113), (11, 22149), (12, 22254), (13, 22296), (14, 22341), (15, 22383), (16, 22458), (17, 22470),

Gene: ABCat\_24 Start: 21445, Stop: 22266, Start Num: 4

Candidate Starts for ABCat\_24:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: Adnama\_28 Start: 21941, Stop: 22774, Start Num: 3

Candidate Starts for Adnama\_28:

(Start: 1 @21620 has 1 MA's), (2, 21644), (Start: 3 @21941 has 114 MA's), (Start: 4 @21953 has 10 MA's), (5, 22034), (6, 22055), (7, 22073), (8, 22103), (10, 22340), (11, 22376), (12, 22481), (13, 22523), (14, 22568), (15, 22610), (16, 22685), (17, 22697),

Gene: Amao\_25 Start: 20638, Stop: 21471, Start Num: 3

Candidate Starts for Amao\_25:

(Start: 1 @20317 has 1 MA's), (2, 20341), (Start: 3 @20638 has 114 MA's), (Start: 4 @20650 has 10 MA's), (5, 20731), (6, 20752), (7, 20770), (8, 20800), (9, 20869), (10, 21037), (11, 21073), (12, 21178), (13, 21220), (14, 21265), (15, 21307), (16, 21382), (17, 21394),

Gene: AmericanBeauty\_27 Start: 21421, Stop: 22254, Start Num: 3

Candidate Starts for AmericanBeauty\_27:

(Start: 1 @21100 has 1 MA's), (2, 21124), (Start: 3 @21421 has 114 MA's), (Start: 4 @21433 has 10 MA's), (5, 21514), (6, 21535), (7, 21553), (8, 21583), (9, 21652), (10, 21820), (11, 21856), (12, 21961), (13, 22003), (14, 22048), (15, 22090), (16, 22165), (17, 22177),

Gene: Argent26\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for Argent26\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: Asriel\_24 Start: 20302, Stop: 21135, Start Num: 3

Candidate Starts for Asriel\_24:

(Start: 1 @19981 has 1 MA's), (2, 20005), (Start: 3 @20302 has 114 MA's), (Start: 4 @20314 has 10 MA's), (5, 20395), (6, 20416), (7, 20434), (8, 20464), (10, 20701), (11, 20737), (12, 20842), (13, 20884), (14, 20929), (15, 20971), (16, 21046), (17, 21058),

Gene: BaboJay\_24 Start: 20984, Stop: 21817, Start Num: 3

Candidate Starts for BaboJay\_24:

(Start: 1 @20663 has 1 MA's), (2, 20687), (Start: 3 @20984 has 114 MA's), (Start: 4 @20996 has 10 MA's), (5, 21077), (6, 21098), (7, 21116), (8, 21146), (10, 21383), (11, 21419), (12, 21524), (13, 21566), (14, 21611), (15, 21653), (16, 21728), (17, 21740),

Gene: BadStone\_24 Start: 21433, Stop: 22266, Start Num: 3

Candidate Starts for BadStone\_24:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: Balomoji\_24 Start: 21167, Stop: 22000, Start Num: 3

Candidate Starts for Balomoji\_24:

(Start: 1 @20846 has 1 MA's), (2, 20870), (Start: 3 @21167 has 114 MA's), (Start: 4 @21179 has 10 MA's), (5, 21260), (6, 21281), (7, 21299), (8, 21329), (9, 21398), (10, 21566), (11, 21602), (12, 21707), (13, 21749), (14, 21794), (15, 21836), (16, 21911), (17, 21923),

Gene: Barbarian\_24 Start: 20302, Stop: 21135, Start Num: 3

Candidate Starts for Barbarian\_24:

(Start: 1 @19981 has 1 MA's), (2, 20005), (Start: 3 @20302 has 114 MA's), (Start: 4 @20314 has 10 MA's), (5, 20395), (6, 20416), (7, 20434), (8, 20464), (10, 20701), (11, 20737), (12, 20842), (13, 20884), (14, 20929), (15, 20971), (16, 21046), (17, 21058),

Gene: Bask21\_25 Start: 20613, Stop: 21446, Start Num: 3

Candidate Starts for Bask21\_25:

(Start: 1 @20292 has 1 MA's), (2, 20316), (Start: 3 @20613 has 114 MA's), (Start: 4 @20625 has 10 MA's), (5, 20706), (6, 20727), (7, 20745), (8, 20775), (9, 20844), (10, 21012), (11, 21048), (12, 21153), (13, 21195), (14, 21240), (15, 21282), (16, 21357), (17, 21369),

Gene: Becksu\_25 Start: 21617, Stop: 22450, Start Num: 3

Candidate Starts for Becksu\_25:

(Start: 1 @21296 has 1 MA's), (2, 21320), (Start: 3 @21617 has 114 MA's), (Start: 4 @21629 has 10 MA's), (5, 21710), (6, 21731), (7, 21749), (8, 21779), (9, 21848), (10, 22016), (11, 22052), (12, 22157), (13, 22199), (14, 22244), (15, 22286), (16, 22361), (17, 22373),

Gene: Bench\_27 Start: 21294, Stop: 22127, Start Num: 3

Candidate Starts for Bench\_27:

(Start: 1 @20973 has 1 MA's), (2, 20997), (Start: 3 @21294 has 114 MA's), (Start: 4 @21306 has 10 MA's), (5, 21387), (6, 21408), (7, 21426), (8, 21456), (10, 21693), (11, 21729), (12, 21834), (13, 21876), (14, 21921), (15, 21963), (16, 22038), (17, 22050),

Gene: BigBubba\_26 Start: 21197, Stop: 22030, Start Num: 3

Candidate Starts for BigBubba\_26:

(Start: 1 @20876 has 1 MA's), (2, 20900), (Start: 3 @21197 has 114 MA's), (Start: 4 @21209 has 10 MA's), (5, 21290), (6, 21311), (7, 21329), (8, 21359), (9, 21428), (10, 21596), (11, 21632), (12, 21737), (13, 21779), (14, 21824), (15, 21866), (16, 21941), (17, 21953),

Gene: BilboSwaggins\_25 Start: 21446, Stop: 22267, Start Num: 4

Candidate Starts for BilboSwaggins\_25:

(Start: 1 @21113 has 1 MA's), (2, 21137), (Start: 3 @21434 has 114 MA's), (Start: 4 @21446 has 10 MA's), (5, 21527), (6, 21548), (7, 21566), (8, 21596), (9, 21665), (10, 21833), (11, 21869), (12, 21974), (13, 22016), (14, 22061), (15, 22103), (16, 22178), (17, 22190),

Gene: Bruin\_25 Start: 21457, Stop: 22290, Start Num: 3

Candidate Starts for Bruin\_25:

(Start: 1 @21136 has 1 MA's), (2, 21160), (Start: 3 @21457 has 114 MA's), (Start: 4 @21469 has 10 MA's), (5, 21550), (6, 21571), (7, 21589), (8, 21619), (10, 21856), (11, 21892), (12, 21997), (13, 22039), (14, 22084), (15, 22126), (16, 22201), (17, 22213),

Gene: Buck\_24 Start: 21390, Stop: 22223, Start Num: 3

Candidate Starts for Buck\_24:

(Start: 1 @21069 has 1 MA's), (2, 21093), (Start: 3 @21390 has 114 MA's), (Start: 4 @21402 has 10 MA's), (5, 21483), (6, 21504), (7, 21522), (8, 21552), (10, 21789), (11, 21825), (12, 21930), (13, 21972), (14, 22017), (15, 22059), (16, 22134), (17, 22146),

Gene: BugsBunny\_23 Start: 21035, Stop: 21856, Start Num: 4

Candidate Starts for BugsBunny\_23:

(Start: 1 @20702 has 1 MA's), (2, 20726), (Start: 3 @21023 has 114 MA's), (Start: 4 @21035 has 10 MA's), (5, 21116), (6, 21137), (7, 21155), (8, 21185), (9, 21254), (10, 21422), (11, 21458), (12, 21563), (13, 21605), (14, 21650), (15, 21692), (16, 21767), (17, 21779),

Gene: Cactus\_26 Start: 20646, Stop: 21479, Start Num: 3

Candidate Starts for Cactus\_26:

(Start: 1 @20325 has 1 MA's), (2, 20349), (Start: 3 @20646 has 114 MA's), (Start: 4 @20658 has 10 MA's), (5, 20739), (6, 20760), (7, 20778), (8, 20808), (10, 21045), (11, 21081), (12, 21186), (13, 21228), (14, 21273), (15, 21315), (16, 21390), (17, 21402),

Gene: ChosenOne\_24 Start: 20641, Stop: 21474, Start Num: 3

Candidate Starts for ChosenOne\_24:

(Start: 1 @20320 has 1 MA's), (2, 20344), (Start: 3 @20641 has 114 MA's), (Start: 4 @20653 has 10 MA's), (5, 20734), (6, 20755), (7, 20773), (8, 20803), (9, 20872), (10, 21040), (11, 21076), (12, 21181), (13, 21223), (14, 21268), (15, 21310), (16, 21385), (17, 21397),

Gene: ChotaBhai\_25 Start: 20683, Stop: 21516, Start Num: 3

Candidate Starts for ChotaBhai\_25:

(Start: 1 @20362 has 1 MA's), (2, 20386), (Start: 3 @20683 has 114 MA's), (Start: 4 @20695 has 10 MA's), (5, 20776), (6, 20797), (7, 20815), (8, 20845), (9, 20914), (10, 21082), (11, 21118), (12, 21223), (13, 21265), (14, 21310), (15, 21352), (16, 21427), (17, 21439),

Gene: Cjw1\_25 Start: 22206, Stop: 23027, Start Num: 4

Candidate Starts for Cjw1\_25:

(Start: 1 @21873 has 1 MA's), (2, 21897), (Start: 3 @22194 has 114 MA's), (Start: 4 @22206 has 10 MA's), (5, 22287), (6, 22308), (7, 22326), (8, 22356), (10, 22593), (11, 22629), (12, 22734), (13, 22776), (14, 22821), (15, 22863), (16, 22938), (17, 22950),

Gene: Command613\_26 Start: 21702, Stop: 22535, Start Num: 3

Candidate Starts for Command613\_26:

(Start: 1 @21381 has 1 MA's), (2, 21405), (Start: 3 @21702 has 114 MA's), (Start: 4 @21714 has 10 MA's), (5, 21795), (6, 21816), (7, 21834), (8, 21864), (9, 21933), (10, 22101), (11, 22137), (12, 22242), (13, 22284), (14, 22329), (15, 22371), (16, 22446), (17, 22458),

Gene: Contagion\_24 Start: 20941, Stop: 21774, Start Num: 3

Candidate Starts for Contagion\_24:

(Start: 1 @20620 has 1 MA's), (2, 20644), (Start: 3 @20941 has 114 MA's), (Start: 4 @20953 has 10 MA's), (5, 21034), (6, 21055), (7, 21073), (8, 21103), (10, 21340), (11, 21376), (12, 21481), (13, 21523), (14, 21568), (15, 21610), (16, 21685), (17, 21697),

Gene: Cookies\_25 Start: 21303, Stop: 22136, Start Num: 3

Candidate Starts for Cookies\_25:

(Start: 1 @20982 has 1 MA's), (2, 21006), (Start: 3 @21303 has 114 MA's), (Start: 4 @21315 has 10 MA's), (5, 21396), (6, 21417), (7, 21435), (8, 21465), (9, 21534), (10, 21702), (11, 21738), (12, 21843), (13, 21885), (14, 21930), (15, 21972), (16, 22047), (17, 22059),

Gene: CrystalP\_25 Start: 21434, Stop: 22267, Start Num: 3

Candidate Starts for CrystalP\_25:

(Start: 1 @21113 has 1 MA's), (2, 21137), (Start: 3 @21434 has 114 MA's), (Start: 4 @21446 has 10 MA's), (5, 21527), (6, 21548), (7, 21566), (8, 21596), (9, 21665), (10, 21833), (11, 21869), (12, 21974), (13, 22016), (14, 22061), (15, 22103), (16, 22178), (17, 22190),

Gene: Czyszczone1\_26 Start: 21179, Stop: 22012, Start Num: 3

Candidate Starts for Czyszczone1\_26:

(Start: 1 @20858 has 1 MA's), (2, 20882), (Start: 3 @21179 has 114 MA's), (Start: 4 @21191 has 10 MA's), (5, 21272), (6, 21293), (7, 21311), (8, 21341), (10, 21578), (11, 21614), (12, 21719), (13, 21761), (14, 21806), (15, 21848), (16, 21923), (17, 21935),

Gene: Daikon\_23 Start: 21183, Stop: 22004, Start Num: 4

Candidate Starts for Daikon\_23:

(Start: 1 @20850 has 1 MA's), (2, 20874), (Start: 3 @21171 has 114 MA's), (Start: 4 @21183 has 10 MA's), (5, 21264), (6, 21285), (7, 21303), (8, 21333), (9, 21402), (10, 21570), (11, 21606), (12, 21711), (13, 21753), (14, 21798), (15, 21840), (16, 21915), (17, 21927),

Gene: DoctorDiddles\_25 Start: 20596, Stop: 21429, Start Num: 3

Candidate Starts for DoctorDiddles\_25:

(Start: 1 @20275 has 1 MA's), (2, 20299), (Start: 3 @20596 has 114 MA's), (Start: 4 @20608 has 10 MA's), (5, 20689), (6, 20710), (7, 20728), (8, 20758), (9, 20827), (10, 20995), (11, 21031), (12, 21136), (13, 21178), (14, 21223), (15, 21265), (16, 21340), (17, 21352),

Gene: DrDrey\_26 Start: 21926, Stop: 22759, Start Num: 3

Candidate Starts for DrDrey\_26:

(Start: 1 @21605 has 1 MA's), (2, 21629), (Start: 3 @21926 has 114 MA's), (Start: 4 @21938 has 10 MA's), (5, 22019), (6, 22040), (7, 22058), (8, 22088), (9, 22157), (10, 22325), (11, 22361), (12, 22466), (13, 22508), (14, 22553), (15, 22595), (16, 22670), (17, 22682),

Gene: Dumbo\_25 Start: 20901, Stop: 21734, Start Num: 3

Candidate Starts for Dumbo\_25:

(Start: 1 @20580 has 1 MA's), (2, 20604), (Start: 3 @20901 has 114 MA's), (Start: 4 @20913 has 10 MA's), (5, 20994), (6, 21015), (7, 21033), (8, 21063), (10, 21300), (11, 21336), (12, 21441), (13, 21483), (14, 21528), (15, 21570), (16, 21645), (17, 21657),

Gene: Dusk\_24 Start: 21093, Stop: 21926, Start Num: 3

Candidate Starts for Dusk\_24:

(Start: 1 @20772 has 1 MA's), (2, 20796), (Start: 3 @21093 has 114 MA's), (Start: 4 @21105 has 10 MA's), (5, 21186), (6, 21207), (7, 21225), (8, 21255), (10, 21492), (11, 21528), (12, 21633), (13, 21675), (14, 21720), (15, 21762), (16, 21837), (17, 21849),

Gene: Easy2Say\_27 Start: 22684, Stop: 23517, Start Num: 3

Candidate Starts for Easy2Say\_27:

(Start: 1 @22363 has 1 MA's), (2, 22387), (Start: 3 @22684 has 114 MA's), (Start: 4 @22696 has 10 MA's), (5, 22777), (6, 22798), (7, 22816), (8, 22846), (10, 23083), (11, 23119), (12, 23224), (13, 23266), (14, 23311), (15, 23353), (16, 23428), (17, 23440),

Gene: Elite2014\_24 Start: 20641, Stop: 21474, Start Num: 3

Candidate Starts for Elite2014\_24:

(Start: 1 @20320 has 1 MA's), (2, 20344), (Start: 3 @20641 has 114 MA's), (Start: 4 @20653 has 10 MA's), (5, 20734), (6, 20755), (7, 20773), (8, 20803), (9, 20872), (10, 21040), (11, 21076), (12, 21181), (13, 21223), (14, 21268), (15, 21310), (16, 21385), (17, 21397),

Gene: Elph10\_26 Start: 20904, Stop: 21737, Start Num: 3

Candidate Starts for Elph10\_26:

(Start: 1 @20583 has 1 MA's), (2, 20607), (Start: 3 @20904 has 114 MA's), (Start: 4 @20916 has 10 MA's), (5, 20997), (6, 21018), (7, 21036), (8, 21066), (10, 21303), (11, 21339), (12, 21444), (13, 21486), (14, 21531), (15, 21573), (16, 21648), (17, 21660),

Gene: Emmina\_26 Start: 21265, Stop: 22098, Start Num: 3

Candidate Starts for Emmina\_26:

(Start: 1 @20944 has 1 MA's), (2, 20968), (Start: 3 @21265 has 114 MA's), (Start: 4 @21277 has 10 MA's), (5, 21358), (6, 21379), (7, 21397), (8, 21427), (10, 21664), (11, 21700), (12, 21805), (13, 21847), (14, 21892), (15, 21934), (16, 22009), (17, 22021),

Gene: Eureka\_25 Start: 21419, Stop: 22252, Start Num: 3

Candidate Starts for Eureka\_25:

(Start: 1 @21098 has 1 MA's), (2, 21122), (Start: 3 @21419 has 114 MA's), (Start: 4 @21431 has 10 MA's), (5, 21512), (6, 21533), (7, 21551), (8, 21581), (10, 21818), (11, 21854), (12, 21959), (13,



22001), (14, 22046), (15, 22088), (16, 22163), (17, 22175),

Gene: FairyPath\_25 Start: 21631, Stop: 22464, Start Num: 3

Candidate Starts for FairyPath\_25:

(Start: 1 @21310 has 1 MA's), (2, 21334), (Start: 3 @21631 has 114 MA's), (Start: 4 @21643 has 10 MA's), (5, 21724), (6, 21745), (7, 21763), (8, 21793), (9, 21862), (10, 22030), (11, 22066), (12, 22171), (13, 22213), (14, 22258), (15, 22300), (16, 22375), (17, 22387),

Gene: Filch\_26 Start: 21192, Stop: 22025, Start Num: 3

Candidate Starts for Filch\_26:

(Start: 1 @20871 has 1 MA's), (2, 20895), (Start: 3 @21192 has 114 MA's), (Start: 4 @21204 has 10 MA's), (5, 21285), (6, 21306), (7, 21324), (8, 21354), (9, 21423), (10, 21591), (11, 21627), (12, 21732), (13, 21774), (14, 21819), (15, 21861), (16, 21936), (17, 21948),

Gene: FireRed\_25 Start: 21462, Stop: 22295, Start Num: 3

Candidate Starts for FireRed\_25:

(Start: 1 @21141 has 1 MA's), (2, 21165), (Start: 3 @21462 has 114 MA's), (Start: 4 @21474 has 10 MA's), (5, 21555), (6, 21576), (7, 21594), (8, 21624), (9, 21693), (10, 21861), (11, 21897), (12, 22002), (13, 22044), (14, 22089), (15, 22131), (16, 22206), (17, 22218),

Gene: Flypotenuse\_23 Start: 21050, Stop: 21883, Start Num: 3

Candidate Starts for Flypotenuse\_23:

(Start: 1 @20729 has 1 MA's), (2, 20753), (Start: 3 @21050 has 114 MA's), (Start: 4 @21062 has 10 MA's), (5, 21143), (6, 21164), (7, 21182), (8, 21212), (9, 21281), (10, 21449), (11, 21485), (12, 21590), (13, 21632), (14, 21677), (15, 21719), (16, 21794), (17, 21806),

Gene: FoghornLeghorn\_24 Start: 20950, Stop: 21771, Start Num: 4

Candidate Starts for FoghornLeghorn\_24:

(Start: 1 @20617 has 1 MA's), (2, 20641), (Start: 3 @20938 has 114 MA's), (Start: 4 @20950 has 10 MA's), (5, 21031), (6, 21052), (7, 21070), (8, 21100), (10, 21337), (11, 21373), (12, 21478), (13, 21520), (14, 21565), (15, 21607), (16, 21682), (17, 21694),

Gene: Gage\_27 Start: 21436, Stop: 22257, Start Num: 4

Candidate Starts for Gage\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: Gator\_23 Start: 21049, Stop: 21882, Start Num: 3

Candidate Starts for Gator\_23:

(Start: 1 @20728 has 1 MA's), (2, 20752), (Start: 3 @21049 has 114 MA's), (Start: 4 @21061 has 10 MA's), (5, 21142), (6, 21163), (7, 21181), (8, 21211), (10, 21448), (11, 21484), (12, 21589), (13, 21631), (14, 21676), (15, 21718), (16, 21793), (17, 21805),

Gene: Gemini\_28 Start: 21941, Stop: 22774, Start Num: 3

Candidate Starts for Gemini\_28:

(Start: 1 @21620 has 1 MA's), (2, 21644), (Start: 3 @21941 has 114 MA's), (Start: 4 @21953 has 10 MA's), (5, 22034), (6, 22055), (7, 22073), (8, 22103), (10, 22340), (11, 22376), (12, 22481), (13, 22523), (14, 22568), (15, 22610), (16, 22685), (17, 22697),

Gene: Glexan\_23 Start: 21050, Stop: 21883, Start Num: 3

Candidate Starts for Glexan\_23:

(Start: 1 @20729 has 1 MA's), (2, 20753), (Start: 3 @21050 has 114 MA's), (Start: 4 @21062 has 10 MA's), (5, 21143), (6, 21164), (7, 21182), (8, 21212), (9, 21281), (10, 21449), (11, 21485), (12, 21590), (13, 21632), (14, 21677), (15, 21719), (16, 21794), (17, 21806),

Gene: Goku\_25 Start: 21148, Stop: 21981, Start Num: 3

Candidate Starts for Goku\_25:

(Start: 1 @20827 has 1 MA's), (2, 20851), (Start: 3 @21148 has 114 MA's), (Start: 4 @21160 has 10 MA's), (5, 21241), (6, 21262), (7, 21280), (8, 21310), (10, 21547), (11, 21583), (12, 21688), (13, 21730), (14, 21775), (15, 21817), (16, 21892), (17, 21904),

Gene: GoldenSpark\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for GoldenSpark\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (9, 21655), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: Goldilocks\_26 Start: 20844, Stop: 21677, Start Num: 3

Candidate Starts for Goldilocks\_26:

(Start: 1 @20523 has 1 MA's), (2, 20547), (Start: 3 @20844 has 114 MA's), (Start: 4 @20856 has 10 MA's), (5, 20937), (6, 20958), (7, 20976), (8, 21006), (10, 21243), (11, 21279), (12, 21384), (13, 21426), (14, 21471), (15, 21513), (16, 21588), (17, 21600),

Gene: GooberAzure\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for GooberAzure\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: HanKaySha\_26 Start: 21176, Stop: 22009, Start Num: 3

Candidate Starts for HanKaySha\_26:

(Start: 1 @20855 has 1 MA's), (2, 20879), (Start: 3 @21176 has 114 MA's), (Start: 4 @21188 has 10 MA's), (5, 21269), (6, 21290), (7, 21308), (8, 21338), (9, 21407), (10, 21575), (11, 21611), (12, 21716), (13, 21758), (14, 21803), (15, 21845), (16, 21920), (17, 21932),

Gene: Harella\_24 Start: 21578, Stop: 22399, Start Num: 4

Candidate Starts for Harella\_24:

(Start: 1 @21245 has 1 MA's), (2, 21269), (Start: 3 @21566 has 114 MA's), (Start: 4 @21578 has 10 MA's), (5, 21659), (6, 21680), (7, 21698), (8, 21728), (9, 21797), (10, 21965), (11, 22001), (12, 22106), (13, 22148), (14, 22193), (15, 22235), (16, 22310), (17, 22322),

Gene: Henry\_25 Start: 21433, Stop: 22266, Start Num: 3

Candidate Starts for Henry\_25:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (9, 21664), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: Highbury\_26 Start: 21095, Stop: 21928, Start Num: 3

Candidate Starts for Highbury\_26:

(Start: 1 @20774 has 1 MA's), (2, 20798), (Start: 3 @21095 has 114 MA's), (Start: 4 @21107 has 10 MA's), (5, 21188), (6, 21209), (7, 21227), (8, 21257), (10, 21494), (11, 21530), (12, 21635), (13, 21677), (14, 21722), (15, 21764), (16, 21839), (17, 21851),

Gene: Holt\_26 Start: 20714, Stop: 21547, Start Num: 3

Candidate Starts for Holt\_26:

(Start: 1 @20393 has 1 MA's), (2, 20417), (Start: 3 @20714 has 114 MA's), (Start: 4 @20726 has 10 MA's), (5, 20807), (6, 20828), (7, 20846), (8, 20876), (9, 20945), (10, 21113), (11, 21149), (12, 21254), (13, 21296), (14, 21341), (15, 21383), (16, 21458), (17, 21470),

Gene: Hoonter\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for Hoonter\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (9, 21655), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: Hokey\_27 Start: 21711, Stop: 22544, Start Num: 3

Candidate Starts for Hokey\_27:

(Start: 1 @21390 has 1 MA's), (2, 21414), (Start: 3 @21711 has 114 MA's), (Start: 4 @21723 has 10 MA's), (5, 21804), (6, 21825), (7, 21843), (8, 21873), (9, 21942), (10, 22110), (11, 22146), (12, 22251), (13, 22293), (14, 22338), (15, 22380), (16, 22455), (17, 22467),

Gene: HufflyPuff\_24 Start: 21418, Stop: 22251, Start Num: 3

Candidate Starts for HufflyPuff\_24:

(Start: 1 @21097 has 1 MA's), (2, 21121), (Start: 3 @21418 has 114 MA's), (Start: 4 @21430 has 10 MA's), (5, 21511), (6, 21532), (7, 21550), (8, 21580), (9, 21649), (10, 21817), (11, 21853), (12, 21958), (13, 22000), (14, 22045), (15, 22087), (16, 22162), (17, 22174),

Gene: IHOP\_25 Start: 21610, Stop: 22443, Start Num: 3

Candidate Starts for IHOP\_25:

(Start: 1 @21289 has 1 MA's), (2, 21313), (Start: 3 @21610 has 114 MA's), (Start: 4 @21622 has 10 MA's), (5, 21703), (6, 21724), (7, 21742), (8, 21772), (9, 21841), (10, 22009), (11, 22045), (12, 22150), (13, 22192), (14, 22237), (15, 22279), (16, 22354), (17, 22366),

Gene: Icee\_24 Start: 21093, Stop: 21926, Start Num: 3

Candidate Starts for Icee\_24:

(Start: 1 @20772 has 1 MA's), (2, 20796), (Start: 3 @21093 has 114 MA's), (Start: 4 @21105 has 10 MA's), (5, 21186), (6, 21207), (7, 21225), (8, 21255), (10, 21492), (11, 21528), (12, 21633), (13, 21675), (14, 21720), (15, 21762), (16, 21837), (17, 21849),

Gene: Inca\_24 Start: 20113, Stop: 20946, Start Num: 3

Candidate Starts for Inca\_24:

(Start: 1 @19792 has 1 MA's), (2, 19816), (Start: 3 @20113 has 114 MA's), (Start: 4 @20125 has 10 MA's), (5, 20206), (6, 20227), (7, 20245), (8, 20275), (10, 20512), (11, 20548), (12, 20653), (13, 20695), (14, 20740), (15, 20782), (16, 20857), (17, 20869),

Gene: JeTaime\_27 Start: 22235, Stop: 23068, Start Num: 3

Candidate Starts for JeTaime\_27:

(Start: 1 @21914 has 1 MA's), (2, 21938), (Start: 3 @22235 has 114 MA's), (Start: 4 @22247 has 10 MA's), (5, 22328), (6, 22349), (7, 22367), (8, 22397), (10, 22634), (11, 22670), (12, 22775), (13, 22817), (14, 22862), (15, 22904), (16, 22979), (17, 22991),

Gene: Kanye\_27 Start: 22420, Stop: 23253, Start Num: 3

Candidate Starts for Kanye\_27:

(Start: 1 @22099 has 1 MA's), (2, 22123), (Start: 3 @22420 has 114 MA's), (Start: 4 @22432 has 10 MA's), (5, 22513), (6, 22534), (7, 22552), (8, 22582), (10, 22819), (11, 22855), (12, 22960), (13, 23002), (14, 23047), (15, 23089), (16, 23164), (17, 23176),

Gene: Kimchi\_27 Start: 21427, Stop: 22260, Start Num: 3

Candidate Starts for Kimchi\_27:

(Start: 1 @21106 has 1 MA's), (2, 21130), (Start: 3 @21427 has 114 MA's), (Start: 4 @21439 has 10 MA's), (5, 21520), (6, 21541), (7, 21559), (8, 21589), (10, 21826), (11, 21862), (12, 21967), (13, 22009), (14, 22054), (15, 22096), (16, 22171), (17, 22183),

Gene: Kostya\_25 Start: 21433, Stop: 22266, Start Num: 3

Candidate Starts for Kostya\_25:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (9, 21664), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: Lilac\_27 Start: 20931, Stop: 21764, Start Num: 3

Candidate Starts for Lilac\_27:

(Start: 1 @20610 has 1 MA's), (2, 20634), (Start: 3 @20931 has 114 MA's), (Start: 4 @20943 has 10 MA's), (5, 21024), (6, 21045), (7, 21063), (8, 21093), (10, 21330), (11, 21366), (12, 21471), (13, 21513), (14, 21558), (15, 21600), (16, 21675), (17, 21687),

Gene: Lilizi\_27 Start: 21139, Stop: 21972, Start Num: 3

Candidate Starts for Lilizi\_27:

(Start: 1 @20818 has 1 MA's), (2, 20842), (Start: 3 @21139 has 114 MA's), (Start: 4 @21151 has 10 MA's), (5, 21232), (6, 21253), (7, 21271), (8, 21301), (9, 21370), (10, 21538), (11, 21574), (12, 21679), (13, 21721), (14, 21766), (15, 21808), (16, 21883), (17, 21895),

Gene: Lilpickle\_24 Start: 20641, Stop: 21474, Start Num: 3

Candidate Starts for Lilpickle\_24:

(Start: 1 @20320 has 1 MA's), (2, 20344), (Start: 3 @20641 has 114 MA's), (Start: 4 @20653 has 10 MA's), (5, 20734), (6, 20755), (7, 20773), (8, 20803), (9, 20872), (10, 21040), (11, 21076), (12, 21181), (13, 21223), (14, 21268), (15, 21310), (16, 21385), (17, 21397),

Gene: MISSy\_24 Start: 20946, Stop: 21779, Start Num: 3

Candidate Starts for MISSy\_24:

(Start: 1 @20625 has 1 MA's), (2, 20649), (Start: 3 @20946 has 114 MA's), (Start: 4 @20958 has 10 MA's), (5, 21039), (6, 21060), (7, 21078), (8, 21108), (9, 21177), (10, 21345), (11, 21381), (12, 21486), (13, 21528), (14, 21573), (15, 21615), (16, 21690), (17, 21702),

Gene: MPhalcon\_24 Start: 20940, Stop: 21773, Start Num: 3

Candidate Starts for MPhalcon\_24:

(Start: 1 @20619 has 1 MA's), (2, 20643), (Start: 3 @20940 has 114 MA's), (Start: 4 @20952 has 10 MA's), (5, 21033), (6, 21054), (7, 21072), (8, 21102), (9, 21171), (10, 21339), (11, 21375), (12, 21480), (13, 21522), (14, 21567), (15, 21609), (16, 21684), (17, 21696),

Gene: MadamMonkfish\_25 Start: 20852, Stop: 21685, Start Num: 3

Candidate Starts for MadamMonkfish\_25:

(Start: 1 @20531 has 1 MA's), (2, 20555), (Start: 3 @20852 has 114 MA's), (Start: 4 @20864 has 10 MA's), (5, 20945), (6, 20966), (7, 20984), (8, 21014), (9, 21083), (10, 21251), (11, 21287), (12, 21392), (13, 21434), (14, 21479), (15, 21521), (16, 21596), (17, 21608),

Gene: Manda\_26 Start: 21919, Stop: 22752, Start Num: 3

Candidate Starts for Manda\_26:

(Start: 1 @21598 has 1 MA's), (2, 21622), (Start: 3 @21919 has 114 MA's), (Start: 4 @21931 has 10 MA's), (5, 22012), (6, 22033), (7, 22051), (8, 22081), (10, 22318), (11, 22354), (12, 22459), (13, 22501), (14, 22546), (15, 22588), (16, 22663), (17, 22675),

Gene: Marshmallow\_25 Start: 21433, Stop: 22266, Start Num: 3

Candidate Starts for Marshmallow\_25:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: Maxxinista\_26 Start: 20901, Stop: 21734, Start Num: 3

Candidate Starts for Maxxinista\_26:

(Start: 1 @20580 has 1 MA's), (2, 20604), (Start: 3 @20901 has 114 MA's), (Start: 4 @20913 has 10 MA's), (5, 20994), (6, 21015), (7, 21033), (8, 21063), (10, 21300), (11, 21336), (12, 21441), (13, 21483), (14, 21528), (15, 21570), (16, 21645), (17, 21657),

Gene: Mindy\_25 Start: 21212, Stop: 22045, Start Num: 3

Candidate Starts for Mindy\_25:

(Start: 1 @20891 has 1 MA's), (2, 20915), (Start: 3 @21212 has 114 MA's), (Start: 4 @21224 has 10 MA's), (5, 21305), (6, 21326), (7, 21344), (8, 21374), (9, 21443), (10, 21611), (11, 21647), (12, 21752), (13, 21794), (14, 21839), (15, 21881), (16, 21956), (17, 21968),

Gene: Miniwave\_25 Start: 21631, Stop: 22464, Start Num: 3

Candidate Starts for Miniwave\_25:

(Start: 1 @21310 has 1 MA's), (2, 21334), (Start: 3 @21631 has 114 MA's), (Start: 4 @21643 has 10 MA's), (5, 21724), (6, 21745), (7, 21763), (8, 21793), (10, 22030), (11, 22066), (12, 22171), (13, 22213), (14, 22258), (15, 22300), (16, 22375), (17, 22387),

Gene: Misfit\_25 Start: 21521, Stop: 22354, Start Num: 3

Candidate Starts for Misfit\_25:

(Start: 1 @21200 has 1 MA's), (2, 21224), (Start: 3 @21521 has 114 MA's), (Start: 4 @21533 has 10 MA's), (5, 21614), (6, 21635), (7, 21653), (8, 21683), (9, 21752), (10, 21920), (11, 21956), (12, 22061), (13, 22103), (14, 22148), (15, 22190), (16, 22265), (17, 22277),

Gene: Moldemort\_26 Start: 21176, Stop: 22009, Start Num: 3

Candidate Starts for Moldemort\_26:

(Start: 1 @20855 has 1 MA's), (2, 20879), (Start: 3 @21176 has 114 MA's), (Start: 4 @21188 has 10 MA's), (5, 21269), (6, 21290), (7, 21308), (8, 21338), (10, 21575), (11, 21611), (12, 21716), (13, 21758), (14, 21803), (15, 21845), (16, 21920), (17, 21932),

Gene: Mosby\_24 Start: 20941, Stop: 21774, Start Num: 3

Candidate Starts for Mosby\_24:

(Start: 1 @20620 has 1 MA's), (2, 20644), (Start: 3 @20941 has 114 MA's), (Start: 4 @20953 has 10 MA's), (5, 21034), (6, 21055), (7, 21073), (8, 21103), (10, 21340), (11, 21376), (12, 21481), (13, 21523), (14, 21568), (15, 21610), (16, 21685), (17, 21697),

Gene: Murica\_24 Start: 21418, Stop: 22251, Start Num: 3

Candidate Starts for Murica\_24:

(Start: 1 @21097 has 1 MA's), (2, 21121), (Start: 3 @21418 has 114 MA's), (Start: 4 @21430 has 10 MA's), (5, 21511), (6, 21532), (7, 21550), (8, 21580), (9, 21649), (10, 21817), (11, 21853), (12, 21958), (13, 22000), (14, 22045), (15, 22087), (16, 22162), (17, 22174),

Gene: Murphy\_26 Start: 21413, Stop: 22246, Start Num: 3

Candidate Starts for Murphy\_26:

(Start: 1 @21092 has 1 MA's), (2, 21116), (Start: 3 @21413 has 114 MA's), (Start: 4 @21425 has 10 MA's), (5, 21506), (6, 21527), (7, 21545), (8, 21575), (10, 21812), (11, 21848), (12, 21953), (13,

21995), (14, 22040), (15, 22082), (16, 22157), (17, 22169),

Gene: Myrale\_25 Start: 21304, Stop: 22137, Start Num: 3

Candidate Starts for Myrale\_25:

(Start: 1 @20983 has 1 MA's), (2, 21007), (Start: 3 @21304 has 114 MA's), (Start: 4 @21316 has 10 MA's), (5, 21397), (6, 21418), (7, 21436), (8, 21466), (10, 21703), (11, 21739), (12, 21844), (13, 21886), (14, 21931), (15, 21973), (16, 22048), (17, 22060),

Gene: Nala\_25 Start: 21460, Stop: 22293, Start Num: 3

Candidate Starts for Nala\_25:

(Start: 1 @21139 has 1 MA's), (2, 21163), (Start: 3 @21460 has 114 MA's), (Start: 4 @21472 has 10 MA's), (5, 21553), (6, 21574), (7, 21592), (8, 21622), (9, 21691), (10, 21859), (11, 21895), (12, 22000), (13, 22042), (14, 22087), (15, 22129), (16, 22204), (17, 22216),

Gene: NelitzaMV\_25 Start: 21503, Stop: 22336, Start Num: 3

Candidate Starts for NelitzaMV\_25:

(Start: 1 @21182 has 1 MA's), (2, 21206), (Start: 3 @21503 has 114 MA's), (Start: 4 @21515 has 10 MA's), (5, 21596), (6, 21617), (7, 21635), (8, 21665), (9, 21734), (10, 21902), (11, 21938), (12, 22043), (13, 22085), (14, 22130), (15, 22172), (16, 22247), (17, 22259),

Gene: Nimrod\_25 Start: 21679, Stop: 22512, Start Num: 3

Candidate Starts for Nimrod\_25:

(Start: 1 @21358 has 1 MA's), (2, 21382), (Start: 3 @21679 has 114 MA's), (Start: 4 @21691 has 10 MA's), (5, 21772), (6, 21793), (7, 21811), (8, 21841), (9, 21910), (10, 22078), (11, 22114), (12, 22219), (13, 22261), (14, 22306), (15, 22348), (16, 22423), (17, 22435),

Gene: NoSleep\_26 Start: 21173, Stop: 22006, Start Num: 3

Candidate Starts for NoSleep\_26:

(Start: 1 @20852 has 1 MA's), (2, 20876), (Start: 3 @21173 has 114 MA's), (Start: 4 @21185 has 10 MA's), (5, 21266), (6, 21287), (7, 21305), (8, 21335), (9, 21404), (10, 21572), (11, 21608), (12, 21713), (13, 21755), (14, 21800), (15, 21842), (16, 21917), (17, 21929),

Gene: OrionPax\_26 Start: 21191, Stop: 22012, Start Num: 4

Candidate Starts for OrionPax\_26:

(Start: 1 @20858 has 1 MA's), (2, 20882), (Start: 3 @21179 has 114 MA's), (Start: 4 @21191 has 10 MA's), (5, 21272), (6, 21293), (7, 21311), (8, 21341), (10, 21578), (11, 21614), (12, 21719), (13, 21761), (14, 21806), (15, 21848), (16, 21923), (17, 21935),

Gene: Palpatine\_25 Start: 21451, Stop: 22284, Start Num: 3

Candidate Starts for Palpatine\_25:

(Start: 1 @21130 has 1 MA's), (2, 21154), (Start: 3 @21451 has 114 MA's), (Start: 4 @21463 has 10 MA's), (5, 21544), (6, 21565), (7, 21583), (8, 21613), (9, 21682), (10, 21850), (11, 21886), (12, 21991), (13, 22033), (14, 22078), (15, 22120), (16, 22195), (17, 22207),

Gene: Paperbeatsrock\_27 Start: 22414, Stop: 23247, Start Num: 3

Candidate Starts for Paperbeatsrock\_27:

(Start: 1 @22093 has 1 MA's), (2, 22117), (Start: 3 @22414 has 114 MA's), (Start: 4 @22426 has 10 MA's), (5, 22507), (6, 22528), (7, 22546), (8, 22576), (10, 22813), (11, 22849), (12, 22954), (13, 22996), (14, 23041), (15, 23083), (16, 23158), (17, 23170),

Gene: Pat3\_24 Start: 20160, Stop: 20993, Start Num: 3

Candidate Starts for Pat3\_24:

(Start: 1 @19839 has 1 MA's), (2, 19863), (Start: 3 @20160 has 114 MA's), (Start: 4 @20172 has 10 MA's), (5, 20253), (6, 20274), (7, 20292), (8, 20322), (9, 20391), (10, 20559), (11, 20595), (12, 20700), (13, 20742), (14, 20787), (15, 20829), (16, 20904), (17, 20916),

Gene: Petra64142\_27 Start: 21906, Stop: 22727, Start Num: 4

Candidate Starts for Petra64142\_27:

(Start: 1 @21573 has 1 MA's), (2, 21597), (Start: 3 @21894 has 114 MA's), (Start: 4 @21906 has 10 MA's), (5, 21987), (6, 22008), (7, 22026), (8, 22056), (9, 22125), (10, 22293), (11, 22329), (12, 22434), (13, 22476), (14, 22521), (15, 22563), (16, 22638), (17, 22650),

Gene: Phaja\_25 Start: 21610, Stop: 22443, Start Num: 3

Candidate Starts for Phaja\_25:

(Start: 1 @21289 has 1 MA's), (2, 21313), (Start: 3 @21610 has 114 MA's), (Start: 4 @21622 has 10 MA's), (5, 21703), (6, 21724), (7, 21742), (8, 21772), (9, 21841), (10, 22009), (11, 22045), (12, 22150), (13, 22192), (14, 22237), (15, 22279), (16, 22354), (17, 22366),

Gene: Pharsalus\_26 Start: 22214, Stop: 23047, Start Num: 3

Candidate Starts for Pharsalus\_26:

(Start: 1 @21893 has 1 MA's), (2, 21917), (Start: 3 @22214 has 114 MA's), (Start: 4 @22226 has 10 MA's), (5, 22307), (6, 22328), (7, 22346), (8, 22376), (10, 22613), (11, 22649), (12, 22754), (13, 22796), (14, 22841), (15, 22883), (16, 22958), (17, 22970),

Gene: PhatBacter\_25 Start: 21462, Stop: 22295, Start Num: 3

Candidate Starts for PhatBacter\_25:

(Start: 1 @21141 has 1 MA's), (2, 21165), (Start: 3 @21462 has 114 MA's), (Start: 4 @21474 has 10 MA's), (5, 21555), (6, 21576), (7, 21594), (8, 21624), (9, 21693), (10, 21861), (11, 21897), (12, 22002), (13, 22044), (14, 22089), (15, 22131), (16, 22206), (17, 22218),

Gene: Phaux\_24 Start: 21460, Stop: 22293, Start Num: 3

Candidate Starts for Phaux\_24:

(Start: 1 @21139 has 1 MA's), (2, 21163), (Start: 3 @21460 has 114 MA's), (Start: 4 @21472 has 10 MA's), (5, 21553), (6, 21574), (7, 21592), (8, 21622), (9, 21691), (10, 21859), (11, 21895), (12, 22000), (13, 22042), (14, 22087), (15, 22129), (16, 22204), (17, 22216),

Gene: Phrux\_25 Start: 21175, Stop: 22008, Start Num: 3

Candidate Starts for Phrux\_25:

(Start: 1 @20854 has 1 MA's), (2, 20878), (Start: 3 @21175 has 114 MA's), (Start: 4 @21187 has 10 MA's), (5, 21268), (6, 21289), (7, 21307), (8, 21337), (10, 21574), (11, 21610), (12, 21715), (13, 21757), (14, 21802), (15, 21844), (16, 21919), (17, 21931),

Gene: Policronamos\_25 Start: 21462, Stop: 22295, Start Num: 3

Candidate Starts for Policronamos\_25:

(Start: 1 @21141 has 1 MA's), (2, 21165), (Start: 3 @21462 has 114 MA's), (Start: 4 @21474 has 10 MA's), (5, 21555), (6, 21576), (7, 21594), (8, 21624), (9, 21693), (10, 21861), (11, 21897), (12, 22002), (13, 22044), (14, 22089), (15, 22131), (16, 22206), (17, 22218),

Gene: Porky\_25 Start: 21271, Stop: 22104, Start Num: 3

Candidate Starts for Porky\_25:

(Start: 1 @20950 has 1 MA's), (2, 20974), (Start: 3 @21271 has 114 MA's), (Start: 4 @21283 has 10 MA's), (5, 21364), (6, 21385), (7, 21403), (8, 21433), (9, 21502), (10, 21670), (11, 21706), (12, 21811), (13, 21853), (14, 21898), (15, 21940), (16, 22015), (17, 22027),

Gene: Pumpkin\_27 Start: 21514, Stop: 22347, Start Num: 3

Candidate Starts for Pumpkin\_27:

(Start: 1 @21193 has 1 MA's), (2, 21217), (Start: 3 @21514 has 114 MA's), (Start: 4 @21526 has 10 MA's), (5, 21607), (6, 21628), (7, 21646), (8, 21676), (10, 21913), (11, 21949), (12, 22054), (13, 22096), (14, 22141), (15, 22183), (16, 22258), (17, 22270),

Gene: Quallification\_26 Start: 21652, Stop: 22473, Start Num: 4

Candidate Starts for Quallification\_26:

(Start: 1 @21319 has 1 MA's), (2, 21343), (Start: 3 @21640 has 114 MA's), (Start: 4 @21652 has 10 MA's), (5, 21733), (6, 21754), (7, 21772), (8, 21802), (10, 22039), (11, 22075), (12, 22180), (13, 22222), (14, 22267), (15, 22309), (16, 22384), (17, 22396),

Gene: Rakim\_26 Start: 21559, Stop: 22380, Start Num: 4

Candidate Starts for Rakim\_26:

(Start: 1 @21226 has 1 MA's), (2, 21250), (Start: 3 @21547 has 114 MA's), (Start: 4 @21559 has 10 MA's), (5, 21640), (6, 21661), (7, 21679), (8, 21709), (10, 21946), (11, 21982), (12, 22087), (13, 22129), (14, 22174), (15, 22216), (16, 22291), (17, 22303),

Gene: Rimmer\_24 Start: 21000, Stop: 21833, Start Num: 3

Candidate Starts for Rimmer\_24:

(Start: 1 @20679 has 1 MA's), (2, 20703), (Start: 3 @21000 has 114 MA's), (Start: 4 @21012 has 10 MA's), (5, 21093), (6, 21114), (7, 21132), (8, 21162), (9, 21231), (10, 21399), (11, 21435), (12, 21540), (13, 21582), (14, 21627), (15, 21669), (16, 21744), (17, 21756),

Gene: RiverMonster\_25 Start: 21201, Stop: 22022, Start Num: 4

Candidate Starts for RiverMonster\_25:

(Start: 1 @20868 has 1 MA's), (2, 20892), (Start: 3 @21189 has 114 MA's), (Start: 4 @21201 has 10 MA's), (5, 21282), (6, 21303), (7, 21321), (8, 21351), (10, 21588), (11, 21624), (12, 21729), (13, 21771), (14, 21816), (15, 21858), (16, 21933), (17, 21945),

Gene: Saints25\_26 Start: 21095, Stop: 21928, Start Num: 3

Candidate Starts for Saints25\_26:

(Start: 1 @20774 has 1 MA's), (2, 20798), (Start: 3 @21095 has 114 MA's), (Start: 4 @21107 has 10 MA's), (5, 21188), (6, 21209), (7, 21227), (8, 21257), (10, 21494), (11, 21530), (12, 21635), (13, 21677), (14, 21722), (15, 21764), (16, 21839), (17, 21851),

Gene: Sassay\_24 Start: 20938, Stop: 21771, Start Num: 3

Candidate Starts for Sassay\_24:

(Start: 1 @20617 has 1 MA's), (2, 20641), (Start: 3 @20938 has 114 MA's), (Start: 4 @20950 has 10 MA's), (5, 21031), (6, 21052), (7, 21070), (8, 21100), (9, 21169), (10, 21337), (11, 21373), (12, 21478), (13, 21520), (14, 21565), (15, 21607), (16, 21682), (17, 21694),

Gene: ShamWow\_25 Start: 21434, Stop: 22267, Start Num: 3

Candidate Starts for ShamWow\_25:

(Start: 1 @21113 has 1 MA's), (2, 21137), (Start: 3 @21434 has 114 MA's), (Start: 4 @21446 has 10 MA's), (5, 21527), (6, 21548), (7, 21566), (8, 21596), (9, 21665), (10, 21833), (11, 21869), (12, 21974), (13, 22016), (14, 22061), (15, 22103), (16, 22178), (17, 22190),

Gene: ShereKhan\_27 Start: 22417, Stop: 23250, Start Num: 3

Candidate Starts for ShereKhan\_27:

(Start: 1 @22096 has 1 MA's), (2, 22120), (Start: 3 @22417 has 114 MA's), (Start: 4 @22429 has 10 MA's), (5, 22510), (6, 22531), (7, 22549), (8, 22579), (10, 22816), (11, 22852), (12, 22957), (13, 22999), (14, 23044), (15, 23086), (16, 23161), (17, 23173),



Gene: Simpliphy\_26 Start: 21179, Stop: 22012, Start Num: 3

Candidate Starts for Simpliphy\_26:

(Start: 1 @20858 has 1 MA's), (2, 20882), (Start: 3 @21179 has 114 MA's), (Start: 4 @21191 has 10 MA's), (5, 21272), (6, 21293), (7, 21311), (8, 21341), (9, 21410), (10, 21578), (11, 21614), (12, 21719), (13, 21761), (14, 21806), (15, 21848), (16, 21923), (17, 21935),

Gene: SirDuracell\_24 Start: 20100, Stop: 20933, Start Num: 3

Candidate Starts for SirDuracell\_24:

(Start: 1 @19779 has 1 MA's), (2, 19803), (Start: 3 @20100 has 114 MA's), (Start: 4 @20112 has 10 MA's), (5, 20193), (6, 20214), (7, 20232), (8, 20262), (10, 20499), (11, 20535), (12, 20640), (13, 20682), (14, 20727), (15, 20769), (16, 20844), (17, 20856),

Gene: SophKB\_25 Start: 21433, Stop: 22266, Start Num: 3

Candidate Starts for SophKB\_25:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: Sotrice96\_25 Start: 21389, Stop: 22222, Start Num: 3

Candidate Starts for Sotrice96\_25:

(Start: 1 @21068 has 1 MA's), (2, 21092), (Start: 3 @21389 has 114 MA's), (Start: 4 @21401 has 10 MA's), (5, 21482), (6, 21503), (7, 21521), (8, 21551), (10, 21788), (11, 21824), (12, 21929), (13, 21971), (14, 22016), (15, 22058), (16, 22133), (17, 22145),

Gene: Stank\_28 Start: 21940, Stop: 22773, Start Num: 3

Candidate Starts for Stank\_28:

(Start: 1 @21619 has 1 MA's), (2, 21643), (Start: 3 @21940 has 114 MA's), (Start: 4 @21952 has 10 MA's), (5, 22033), (6, 22054), (7, 22072), (8, 22102), (10, 22339), (11, 22375), (12, 22480), (13, 22522), (14, 22567), (15, 22609), (16, 22684), (17, 22696),

Gene: Stark\_26 Start: 21192, Stop: 22025, Start Num: 3

Candidate Starts for Stark\_26:

(Start: 1 @20871 has 1 MA's), (2, 20895), (Start: 3 @21192 has 114 MA's), (Start: 4 @21204 has 10 MA's), (5, 21285), (6, 21306), (7, 21324), (8, 21354), (10, 21591), (11, 21627), (12, 21732), (13, 21774), (14, 21819), (15, 21861), (16, 21936), (17, 21948),

Gene: StellaBean\_25 Start: 21433, Stop: 22266, Start Num: 3

Candidate Starts for StellaBean\_25:

(Start: 1 @21112 has 1 MA's), (2, 21136), (Start: 3 @21433 has 114 MA's), (Start: 4 @21445 has 10 MA's), (5, 21526), (6, 21547), (7, 21565), (8, 21595), (10, 21832), (11, 21868), (12, 21973), (13, 22015), (14, 22060), (15, 22102), (16, 22177), (17, 22189),

Gene: StolenFromERC\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for StolenFromERC\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (9, 21655), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: StormChicken\_25 Start: 21620, Stop: 22441, Start Num: 4

Candidate Starts for StormChicken\_25:

(Start: 1 @21287 has 1 MA's), (2, 21311), (Start: 3 @21608 has 114 MA's), (Start: 4 @21620 has 10 MA's), (5, 21701), (6, 21722), (7, 21740), (8, 21770), (9, 21839), (10, 22007), (11, 22043), (12, 22148), (13, 22190), (14, 22235), (15, 22277), (16, 22352), (17, 22364),

Gene: TBrady12\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for TBrady12\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: Tarkin\_27 Start: 22423, Stop: 23256, Start Num: 3

Candidate Starts for Tarkin\_27:

(Start: 1 @22102 has 1 MA's), (2, 22126), (Start: 3 @22423 has 114 MA's), (Start: 4 @22435 has 10 MA's), (5, 22516), (6, 22537), (7, 22555), (8, 22585), (10, 22822), (11, 22858), (12, 22963), (13, 23005), (14, 23050), (15, 23092), (16, 23167), (17, 23179),

Gene: TeardropMSU\_24 Start: 21341, Stop: 22174, Start Num: 3

Candidate Starts for TeardropMSU\_24:

(Start: 1 @21020 has 1 MA's), (2, 21044), (Start: 3 @21341 has 114 MA's), (Start: 4 @21353 has 10 MA's), (5, 21434), (6, 21455), (7, 21473), (8, 21503), (10, 21740), (11, 21776), (12, 21881), (13, 21923), (14, 21968), (15, 22010), (16, 22085), (17, 22097),

Gene: Teaspoon\_26 Start: 21387, Stop: 22220, Start Num: 3

Candidate Starts for Teaspoon\_26:

(Start: 1 @21066 has 1 MA's), (2, 21090), (Start: 3 @21387 has 114 MA's), (Start: 4 @21399 has 10 MA's), (5, 21480), (6, 21501), (7, 21519), (8, 21549), (10, 21786), (11, 21822), (12, 21927), (13, 21969), (14, 22014), (15, 22056), (16, 22131), (17, 22143),

Gene: Terminus\_25 Start: 21521, Stop: 22354, Start Num: 3

Candidate Starts for Terminus\_25:

(Start: 1 @21200 has 1 MA's), (2, 21224), (Start: 3 @21521 has 114 MA's), (Start: 4 @21533 has 10 MA's), (5, 21614), (6, 21635), (7, 21653), (8, 21683), (9, 21752), (10, 21920), (11, 21956), (12, 22061), (13, 22103), (14, 22148), (15, 22190), (16, 22265), (17, 22277),

Gene: Thimble\_25 Start: 20387, Stop: 21220, Start Num: 3

Candidate Starts for Thimble\_25:

(Start: 1 @20066 has 1 MA's), (2, 20090), (Start: 3 @20387 has 114 MA's), (Start: 4 @20399 has 10 MA's), (5, 20480), (6, 20501), (7, 20519), (8, 20549), (10, 20786), (11, 20822), (12, 20927), (13, 20969), (14, 21014), (15, 21056), (16, 21131), (17, 21143),

Gene: Thresher\_26 Start: 22188, Stop: 23021, Start Num: 3

Candidate Starts for Thresher\_26:

(Start: 1 @21867 has 1 MA's), (2, 21891), (Start: 3 @22188 has 114 MA's), (Start: 4 @22200 has 10 MA's), (5, 22281), (6, 22302), (7, 22320), (8, 22350), (10, 22587), (11, 22623), (12, 22728), (13, 22770), (14, 22815), (15, 22857), (16, 22932), (17, 22944),

Gene: Tomaszewski\_24 Start: 21034, Stop: 21867, Start Num: 3

Candidate Starts for Tomaszewski\_24:

(Start: 1 @20713 has 1 MA's), (2, 20737), (Start: 3 @21034 has 114 MA's), (Start: 4 @21046 has 10 MA's), (5, 21127), (6, 21148), (7, 21166), (8, 21196), (10, 21433), (11, 21469), (12, 21574), (13, 21616), (14, 21661), (15, 21703), (16, 21778), (17, 21790),

Gene: Toto\_25 Start: 21446, Stop: 22267, Start Num: 4

Candidate Starts for Toto\_25:

(Start: 1 @21113 has 1 MA's), (2, 21137), (Start: 3 @21434 has 114 MA's), (Start: 4 @21446 has 10 MA's), (5, 21527), (6, 21548), (7, 21566), (8, 21596), (9, 21665), (10, 21833), (11, 21869), (12, 21974),

(13, 22016), (14, 22061), (15, 22103), (16, 22178), (17, 22190),

Gene: Traaww1\_23 Start: 21079, Stop: 21912, Start Num: 3

Candidate Starts for Traaww1\_23:

(Start: 1 @20758 has 1 MA's), (2, 20782), (Start: 3 @21079 has 114 MA's), (Start: 4 @21091 has 10 MA's), (5, 21172), (6, 21193), (7, 21211), (8, 21241), (10, 21478), (11, 21514), (12, 21619), (13, 21661), (14, 21706), (15, 21748), (16, 21823), (17, 21835),

Gene: Tuco\_26 Start: 21949, Stop: 22782, Start Num: 3

Candidate Starts for Tuco\_26:

(Start: 1 @21628 has 1 MA's), (2, 21652), (Start: 3 @21949 has 114 MA's), (Start: 4 @21961 has 10 MA's), (5, 22042), (6, 22063), (7, 22081), (8, 22111), (10, 22348), (11, 22384), (12, 22489), (13, 22531), (14, 22576), (15, 22618), (16, 22693), (17, 22705),

Gene: Ukulele\_25 Start: 21192, Stop: 22025, Start Num: 3

Candidate Starts for Ukulele\_25:

(Start: 1 @20871 has 1 MA's), (2, 20895), (Start: 3 @21192 has 114 MA's), (Start: 4 @21204 has 10 MA's), (5, 21285), (6, 21306), (7, 21324), (8, 21354), (10, 21591), (11, 21627), (12, 21732), (13, 21774), (14, 21819), (15, 21861), (16, 21936), (17, 21948),

Gene: Wiggin\_28 Start: 21938, Stop: 22771, Start Num: 3

Candidate Starts for Wiggin\_28:

(Start: 1 @21617 has 1 MA's), (2, 21641), (Start: 3 @21938 has 114 MA's), (Start: 4 @21950 has 10 MA's), (5, 22031), (6, 22052), (7, 22070), (8, 22100), (10, 22337), (11, 22373), (12, 22478), (13, 22520), (14, 22565), (15, 22607), (16, 22682), (17, 22694),

Gene: Willez\_24 Start: 20938, Stop: 21771, Start Num: 3

Candidate Starts for Willez\_24:

(Start: 1 @20617 has 1 MA's), (2, 20641), (Start: 3 @20938 has 114 MA's), (Start: 4 @20950 has 10 MA's), (5, 21031), (6, 21052), (7, 21070), (8, 21100), (9, 21169), (10, 21337), (11, 21373), (12, 21478), (13, 21520), (14, 21565), (15, 21607), (16, 21682), (17, 21694),

Gene: Xandras\_27 Start: 21424, Stop: 22257, Start Num: 3

Candidate Starts for Xandras\_27:

(Start: 1 @21103 has 1 MA's), (2, 21127), (Start: 3 @21424 has 114 MA's), (Start: 4 @21436 has 10 MA's), (5, 21517), (6, 21538), (7, 21556), (8, 21586), (10, 21823), (11, 21859), (12, 21964), (13, 22006), (14, 22051), (15, 22093), (16, 22168), (17, 22180),

Gene: YassJohnny\_26 Start: 21949, Stop: 22782, Start Num: 3

Candidate Starts for YassJohnny\_26:

(Start: 1 @21628 has 1 MA's), (2, 21652), (Start: 3 @21949 has 114 MA's), (Start: 4 @21961 has 10 MA's), (5, 22042), (6, 22063), (7, 22081), (8, 22111), (9, 22180), (10, 22348), (11, 22384), (12, 22489), (13, 22531), (14, 22576), (15, 22618), (16, 22693), (17, 22705),

Gene: Youngblood\_25 Start: 21614, Stop: 22435, Start Num: 4

Candidate Starts for Youngblood\_25:

(Start: 1 @21281 has 1 MA's), (2, 21305), (Start: 3 @21602 has 114 MA's), (Start: 4 @21614 has 10 MA's), (5, 21695), (6, 21716), (7, 21734), (8, 21764), (9, 21833), (10, 22001), (11, 22037), (12, 22142), (13, 22184), (14, 22229), (15, 22271), (16, 22346), (17, 22358),

Gene: xkcd\_26 Start: 21603, Stop: 22436, Start Num: 3

Candidate Starts for xkcd\_26:

(Start: 1 @21282 has 1 MA's), (2, 21306), (Start: 3 @21603 has 114 MA's), (Start: 4 @21615 has 10 MA's), (5, 21696), (6, 21717), (7, 21735), (8, 21765), (9, 21834), (10, 22002), (11, 22038), (12, 22143), (13, 22185), (14, 22230), (15, 22272), (16, 22347), (17, 22359),