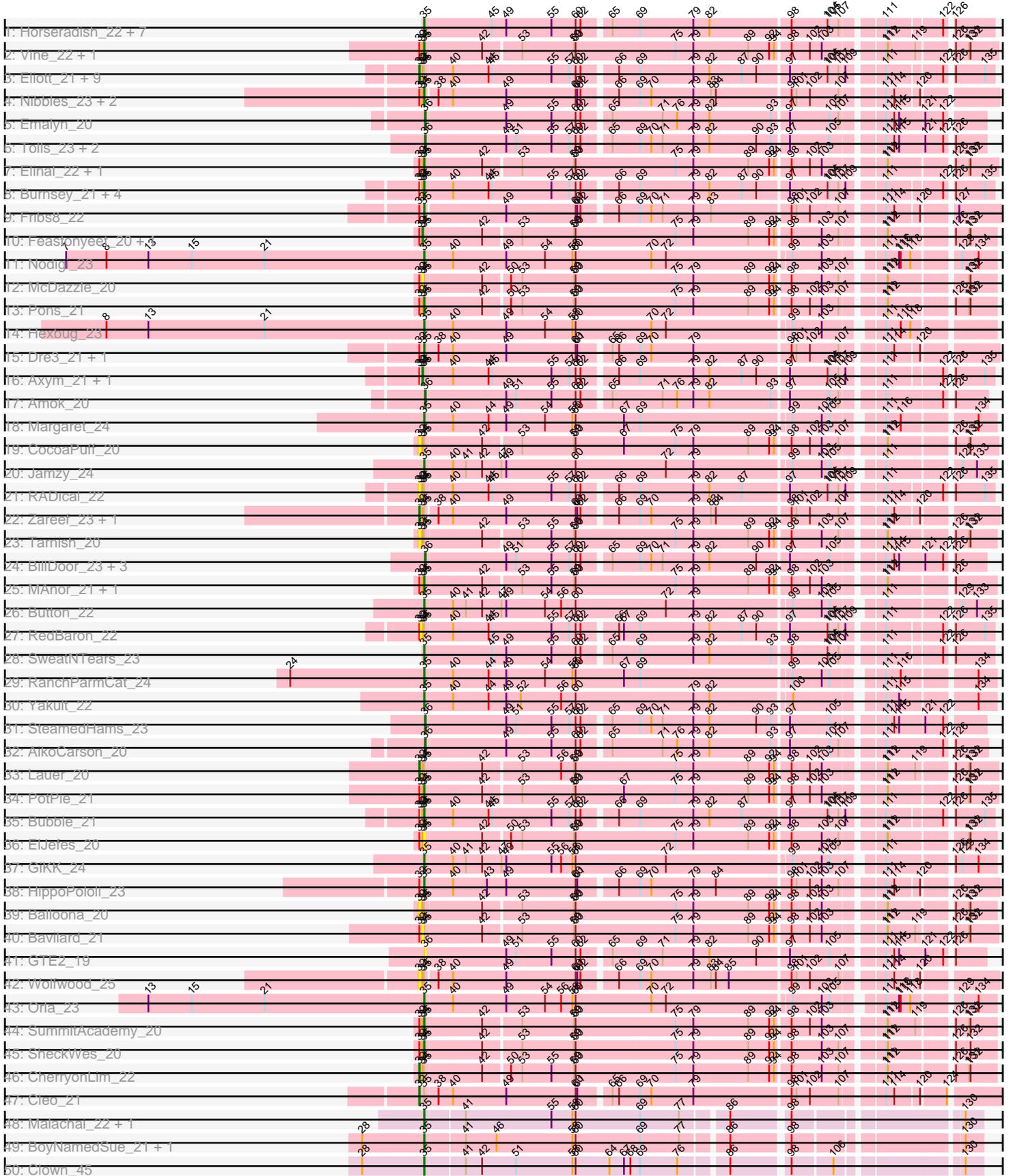# Pham 290977

Pham 290977

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 290977 Report

This analysis was run 03/28/26 on database version 641.

Pham number 290977 has 121 members, 29 are drafts.

Phages represented in each track:
• Track 1 : Horseradish_22, MScarn_23, Blondies_22, Biskit_22, Troje_21, SketchMex_20, Yummy_22, Buttrmlkdreams_21
• Track 2 : Vine_22, Yucky_21
• Track 3 : Eliott_21, Carsonalex_22, ChickenTender_23, Sopespian_21, RSchmailzl_22, Socotra_22, GoldHunter_22, Nina_22, PsychoKiller_21, Starburst_22
• Track 4 : Nibbles_23, MaVan_23, Survivors_23
• Track 5 : Emalyn_20
• Track 6 : Tolls_23, AndPeggy_20, Yarn_20
• Track 7 : Elinal_22, KayGee_21
• Track 8 : Burnsey_21, Typhonomachy_21, Agatha_21, MunkgeeRoachy_21, Quasar_21
• Track 9 : Fribs8_22
• Track 10 : Feastonyeet_20, BigChungus_20
• Track 11 : Nodigi_23
• Track 12 : McDazzle_20
• Track 13 : Pons_21
• Track 14 : Hexbug_23
• Track 15 : Dre3_21, Gibbous_21
• Track 16 : Axym_21, Cozz_21
• Track 17 : Amok_20
• Track 18 : Margaret_24
• Track 19 : CocoaPuff_20
• Track 20 : Jamzy_24
• Track 21 : RADical_22
• Track 22 : Zareef_23, Azira_23
• Track 23 : Tarnish_20
• Track 24 : BillDoor_23, CanesSauce_21, CaramelLatte_21, ChocoMunchkin_21
• Track 25 : MAnor_21, Mayweather_22
• Track 26 : Button_22
• Track 27 : RedBaron_22
• Track 28 : SweatNTears_23
• Track 29 : RanchParmCat_24
• Track 30 : Yakult_22
• Track 31 : SteamedHams_23
• Track 32 : AikoCarson_20
• Track 33 : Lauer_20
• Track 34 : PotPie_21

- Track 35 : Bubble_21
- Track 36 : ElJefes_20
- Track 37 : GiKK_24
- Track 38 : HippoPololi_23
- Track 39 : Balloona_20
- Track 40 : Bavilard_21
- Track 41 : GTE2_19
- Track 42 : Wolfwood_25
- Track 43 : Orla_23
- Track 44 : SummitAcademy_20
- Track 45 : SheckWes_20
- Track 46 : CherryonLim_22
- Track 47 : Cleo_21
- Track 48 : Malachai_22, Begonia_22
- Track 49 : BoyNamedSue_21, AlumE_21
- Track 50 : Clown_45
- Track 51 : Periwinkle_25, ShawBrad_23
- Track 52 : Getalong_24
- Track 53 : CheeseTouch_23, Lutum_23, Kenna_22
- Track 54 : BENtherdunthat_23, BearBQ_22, MortyNRick_22, Kuwabara_22, Birdsong_22
- Track 55 : Asapag_23, BotCity_23
- Track 56 : TraderJ_44, Yeshua_44, Wooper_44
- Track 57 : AksarBAT_42
- Track 58 : Blackpen_44
- Track 59 : CaiB_44
- Track 60 : CloverMinnie_44, MakoManhole_44, FelixTres_44
- Track 61 : MossRose_44
- Track 62 : AnarQue_44
- Track 63 : NHagos_42
- Track 64 : Zodiariah_25
- Track 65 : Sprinklemunch_25
- Track 66 : MakCheese_27
- Track 67 : DonkeyMan_21
- Track 68 : Heinz_21, Hibiscus_21
- Track 69 : Santhid_21
- Track 70 : Tarzan_21
- Track 71 : Jojo24_21
- Track 72 : Reyja_22

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

The start number called the most often in the published annotations is 35, it was called in 67 of the 92 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Agatha_21, AksarBAT_42, AlumE_21, AnarQue_44, Asapag_23, BENtherdunthat_23, BearBQ_22, Begonia_22, Birdsong_22, Biskit_22, Blackpen_44, Blondies_22, BotCity_23, BoyNamedSue_21, Bubble_21, Burnsey_21, Button_22, Buttrmlkdreams_21, CaiB_44, CheeseTouch_23, CloverMinnie_44, Clown_45,

Dre3_21, ElJefes_20, Elinal_22, FelixTres_44, Fribs8_22, Getalong_24, GiKK_24, Gibbous_21, Hexbug_23, HippoPololi_23, Horseradish_22, Jamzy_24, KayGee_21, Kenna_22, Kuwabara_22, Lutum_23, MAnor_21, MScarn_23, MaVan_23, MakCheese_27, MakoManhole_44, Malachai_22, Margaret_24, Mayweather_22, MortyNRick_22, MossRose_44, MunkgeeRoachy_21, NHagos_42, Nibbles_23, Nodigi_23, Orla_23, Periwinkle_25, Pons_21, PotPie_21, Quasar_21, RanchParmCat_24, ShawBrad_23, SheckWes_20, SketchMex_20, Sprinklemunch_25, SummitAcademy_20, Survivors_23, SweatNTears_23, TraderJ_44, Troje_21, Typhonomachy_21, Vine_22, Wooper_44, Yakult_22, Yeshua_44, Yucky_21, Yummy_22, Zodiariah_25,

Genes that have the "Most Annotated" start but do not call it:
• Axym_21, Azira_23, Balloona_20, Bavilard_21, BigChungus_20, Carsonalex_22, CherryonLim_22, ChickenTender_23, Cleo_21, CocoaPuff_20, Cozz_21, Eliott_21, Feastonyeet_20, GoldHunter_22, Lauer_20, McDazzle_20, Nina_22, PsychoKiller_21, RADical_22, RSchmailzl_22, RedBaron_22, Socotra_22, Sopespian_21, Starburst_22, Tarnish_20, Wolfwood_25, Zareef_23,

Genes that do not have the "Most Annotated" start:
• AikoCarson_20, Amok_20, AndPeggy_20, BillDoor_23, CanesSauce_21, CaramelLatte_21, ChocoMunchkin_21, DonkeyMan_21, Emalyn_20, GTE2_19, Heinz_21, Hibiscus_21, Jojo24_21, Reyja_22, Santhid_21, SteamedHams_23, Tarzan_21, Tolls_23, Yarn_20,

Summary by start number:

Start 32:
• Found in 51 of 121 (42.1%) of genes in pham
• Manual Annotations of this start: 6 of 92
• Called 39.2% of time when present
• Phage (with cluster) where this start called: Azira_23 (CT), Balloona_20 (CT), Carsonalex_22 (CT), CherryonLim_22 (CT), ChickenTender_23 (CT), Cleo_21 (CT), CocoaPuff_20 (CT), Eliott_21 (CT), GoldHunter_22 (CT), Lauer_20 (CT), Nina_22 (CT), PsychoKiller_21 (CT), RADical_22 (CT), RSchmailzl_22 (CT), Socotra_22 (CT), Sopespian_21 (CT), Starburst_22 (CT), Tarnish_20 (CT), Wolfwood_25 (CT), Zareef_23 (CT),

Start 33:
• Found in 20 of 121 (16.5%) of genes in pham
• No Manual Annotations of this start.
• Called 5.0% of time when present
• Phage (with cluster) where this start called: RedBaron_22 (CT),

Start 34:
• Found in 46 of 121 (38.0%) of genes in pham
• Manual Annotations of this start: 4 of 92
• Called 13.0% of time when present
• Phage (with cluster) where this start called: Axym_21 (CT), Bavilard_21 (CT), BigChungus_20 (CT), Cozz_21 (CT), Feastonyeet_20 (CT), McDazzle_20 (CT),

Start 35:
• Found in 102 of 121 (84.3%) of genes in pham
• Manual Annotations of this start: 67 of 92

• Called 73.5% of time when present
• Phage (with cluster) where this start called: Agatha_21 (CT), AksarBAT_42 (DR), AlumE_21 (CZ1), AnarQue_44 (DR), Asapag_23 (DN1), BENtherdunthat_23 (DN1), BearBQ_22 (DN), Begonia_22 (CV), Birdsong_22 (DN), Biskit_22 (CT), Blackpen_44 (DR), Blondies_22 (CT), BotCity_23 (DN), BoyNamedSue_21 (CZ1), Bubble_21 (CT), Burnsey_21 (CT), Button_22 (CT), Buttrmlkdreams_21 (CT), CaiB_44 (DR), CheeseTouch_23 (DN1), CloverMinnie_44 (DR), Clown_45 (DC2), Dre3_21 (CT), ElJefes_20 (CT), Elinal_22 (CT), FelixTres_44 (DR), Fribs8_22 (CT), Getalong_24 (DN1), GiKK_24 (CT), Gibbous_21 (CT), Hexbug_23 (CT), HippoPololi_23 (CT), Horseradish_22 (CT), Jamzy_24 (CT), KayGee_21 (CT), Kenna_22 (DN1), Kuwabara_22 (DN4), Lutum_23 (DN1), MAnor_21 (CT), MScarn_23 (CT), MaVan_23 (CT), MakCheese_27 (DW), MakoManhole_44 (DR), Malachai_22 (CV), Margaret_24 (CT), Mayweather_22 (CT), MortyNRick_22 (DN), MossRose_44 (DR), MunkgeeRoachy_21 (CT), NHagos_42 (DR), Nibbles_23 (CT), Nodigi_23 (CT), Orla_23 (CT), Periwinkle_25 (DN1), Pons_21 (CT), PotPie_21 (CT), Quasar_21 (CT), RanchParmCat_24 (CT), ShawBrad_23 (DN1), SheckWes_20 (CT), SketchMex_20 (CT), Sprinklemunch_25 (DW), SummitAcademy_20 (CT), Survivors_23 (CT), SweatNTears_23 (CT), TraderJ_44 (DR), Troje_21 (CT), Typhonomachy_21 (CT), Vine_22 (CT), Wooper_44 (DR), Yakult_22 (CT), Yeshua_44 (DR), Yucky_21 (CT), Yummy_22 (CT), Zodiariah_25 (DW),

Start 36:
• Found in 12 of 121 (9.9%) of genes in pham
• Manual Annotations of this start: 8 of 92
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AikoCarson_20 (CT), Amok_20 (CT), AndPeggy_20 (CT), BillDoor_23 (CT), CanesSauce_21 (CT), CaramelLatte_21 (CT), ChocoMunchkin_21 (CT), Emalyn_20 (CT), GTE2_19 (CT), SteamedHams_23 (CT), Tolls_23 (CT), Yarn_20 (CT),

Start 37:
• Found in 7 of 121 (5.8%) of genes in pham
• Manual Annotations of this start: 7 of 92
• Called 100.0% of time when present
• Phage (with cluster) where this start called: DonkeyMan_21 (DY), Heinz_21 (DY), Hibiscus_21 (DY), Jojo24_21 (DY), Reyja_22 (DY), Santhid_21 (DY), Tarzan_21 (DY),

Summary by clusters:

There are 10 clusters represented in this pham: DN, DR, CZ1, DN4, DN1, DY, DW, DC2, CV, CT,

Info for manual annotations of cluster CT:
•Start number 32 was manually annotated 6 times for cluster CT.
•Start number 34 was manually annotated 4 times for cluster CT.
•Start number 35 was manually annotated 41 times for cluster CT.
•Start number 36 was manually annotated 8 times for cluster CT.

Info for manual annotations of cluster CV:
•Start number 35 was manually annotated 2 times for cluster CV.

Info for manual annotations of cluster CZ1:

•Start number 35 was manually annotated 2 times for cluster CZ1.

Info for manual annotations of cluster DC2:
•Start number 35 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DN:
•Start number 35 was manually annotated 4 times for cluster DN.

Info for manual annotations of cluster DN1:
•Start number 35 was manually annotated 7 times for cluster DN1.

Info for manual annotations of cluster DN4:
•Start number 35 was manually annotated 1 time for cluster DN4.

Info for manual annotations of cluster DR:
•Start number 35 was manually annotated 8 times for cluster DR.

Info for manual annotations of cluster DW:
•Start number 35 was manually annotated 1 time for cluster DW.

Info for manual annotations of cluster DY:
•Start number 37 was manually annotated 7 times for cluster DY.

Gene Information:

Gene: Agatha_21 Start: 18406, Stop: 19365, Start Num: 35
Candidate Starts for Agatha_21:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: AikoCarson_20 Start: 17729, Stop: 18682, Start Num: 36
Candidate Starts for AikoCarson_20:
(Start: 36 @17729 has 8 MA's), (49, 17873), (55, 17957), (60, 18002), (62, 18011), (65, 18056), (71, 18149), (76, 18176), (79, 18206), (82, 18236), (93, 18350), (97, 18374), (105, 18437), (107, 18452), (111, 18515), (122, 18614), (126, 18623),

Gene: AksarBAT_42 Start: 35139, Stop: 36161, Start Num: 35
Candidate Starts for AksarBAT_42:
(Start: 35 @35139 has 67 MA's), (39, 35181), (41, 35208), (45, 35256), (52, 35310), (55, 35367), (60, 35412), (62, 35421), (63, 35454), (66, 35478), (69, 35517), (70, 35538), (71, 35559), (78, 35607), (81, 35631), (82, 35643), (84, 35655), (88, 35709), (90, 35730), (91, 35736), (92, 35754), (96, 35781), (98, 35790), (113, 35955), (114, 35958), (125, 36069), (127, 36078),

Gene: AlumE_21 Start: 20173, Stop: 21084, Start Num: 35
Candidate Starts for AlumE_21:
(28, 20065), (Start: 35 @20173 has 67 MA's), (41, 20239), (46, 20296), (58, 20434), (60, 20440), (69, 20557), (77, 20626), (86, 20701), (98, 20794), (130, 21052),

Gene: Amok_20 Start: 17726, Stop: 18679, Start Num: 36

Candidate Starts for Amok_20:
(Start: 36 @17726 has 8 MA's), (49, 17870), (51, 17888), (55, 17954), (60, 17999), (62, 18008), (65, 18053), (71, 18146), (76, 18173), (79, 18203), (82, 18233), (93, 18347), (97, 18371), (105, 18434), (107, 18449), (111, 18512), (122, 18611), (126, 18620),

Gene: AnarQue_44 Start: 36551, Stop: 37570, Start Num: 35
Candidate Starts for AnarQue_44:
(Start: 35 @36551 has 67 MA's), (39, 36590), (45, 36665), (52, 36719), (55, 36776), (60, 36821), (63, 36863), (66, 36887), (69, 36926), (70, 36947), (71, 36968), (76, 36995), (81, 37040), (82, 37052), (84, 37064), (88, 37118), (90, 37139), (91, 37145), (92, 37163), (96, 37190), (98, 37199), (113, 37364), (114, 37367), (116, 37379), (125, 37478), (127, 37487), (134, 37523),

Gene: AndPeggy_20 Start: 18098, Stop: 19048, Start Num: 36
Candidate Starts for AndPeggy_20:
(Start: 36 @18098 has 8 MA's), (49, 18242), (51, 18260), (55, 18326), (57, 18359), (60, 18371), (62, 18380), (65, 18425), (69, 18476), (70, 18497), (71, 18518), (79, 18575), (82, 18605), (90, 18692), (93, 18719), (97, 18743), (105, 18806), (111, 18884), (114, 18899), (115, 18908), (121, 18953), (122, 18983), (126, 18992),

Gene: Asapag_23 Start: 19217, Stop: 20194, Start Num: 35
Candidate Starts for Asapag_23:
(26, 19061), (29, 19133), (30, 19136), (Start: 35 @19217 has 67 MA's), (38, 19238), (41, 19283), (42, 19313), (48, 19352), (52, 19385), (54, 19430), (55, 19442), (58, 19478), (60, 19484), (67, 19574), (69, 19601), (77, 19670), (98, 19841), (116, 20021), (121, 20066), (123, 20102), (125, 20108),

Gene: Axym_21 Start: 18403, Stop: 19365, Start Num: 34
Candidate Starts for Axym_21:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: Azira_23 Start: 19360, Stop: 20337, Start Num: 32
Candidate Starts for Azira_23:
(Start: 32 @19360 has 6 MA's), (Start: 34 @19366 has 4 MA's), (Start: 35 @19369 has 67 MA's), (38, 19387), (40, 19411), (49, 19510), (60, 19639), (61, 19642), (62, 19648), (66, 19705), (69, 19744), (70, 19765), (79, 19843), (83, 19876), (84, 19885), (98, 20014), (101, 20023), (102, 20044), (107, 20092), (111, 20155), (114, 20170), (120, 20212),

Gene: BENtherdunthat_23 Start: 19217, Stop: 20194, Start Num: 35
Candidate Starts for BENtherdunthat_23:
(23, 18941), (26, 19061), (29, 19133), (30, 19136), (Start: 35 @19217 has 67 MA's), (38, 19238), (41, 19283), (42, 19313), (48, 19352), (52, 19385), (54, 19430), (55, 19442), (58, 19478), (60, 19484), (67, 19574), (69, 19601), (77, 19670), (98, 19841), (113, 20006), (116, 20021), (123, 20102), (125, 20108),

Gene: Balloona_20 Start: 18083, Stop: 19057, Start Num: 32
Candidate Starts for Balloona_20:
(Start: 32 @18083 has 6 MA's), (Start: 34 @18089 has 4 MA's), (Start: 35 @18092 has 67 MA's), (42, 18191), (53, 18257), (59, 18353), (60, 18356), (75, 18539), (79, 18572), (89, 18674), (92, 18713), (94, 18722), (98, 18740), (102, 18770), (103, 18791), (111, 18881), (112, 18884), (126, 18983), (131, 19007), (132, 19010),

Gene: Bavilard_21 Start: 18871, Stop: 19842, Start Num: 34

Candidate Starts for Bavilard_21:
(Start: 32 @18865 has 6 MA's), (Start: 34 @18871 has 4 MA's), (Start: 35 @18874 has 67 MA's), (42, 18973), (53, 19039), (59, 19135), (60, 19138), (75, 19321), (79, 19354), (89, 19456), (92, 19495), (94, 19504), (98, 19522), (102, 19552), (103, 19573), (111, 19663), (112, 19666), (119, 19714), (126, 19765), (131, 19789), (132, 19792),

Gene: BearBQ_22 Start: 20057, Stop: 21034, Start Num: 35
Candidate Starts for BearBQ_22:
(23, 19781), (26, 19901), (29, 19973), (30, 19976), (Start: 35 @20057 has 67 MA's), (38, 20078), (41, 20123), (42, 20153), (48, 20192), (52, 20225), (54, 20270), (55, 20282), (58, 20318), (60, 20324), (67, 20414), (69, 20441), (77, 20510), (98, 20681), (113, 20846), (116, 20861), (123, 20942), (125, 20948),

Gene: Begonia_22 Start: 19498, Stop: 20412, Start Num: 35
Candidate Starts for Begonia_22:
(Start: 35 @19498 has 67 MA's), (41, 19564), (55, 19723), (58, 19759), (60, 19765), (69, 19882), (77, 19951), (86, 20026), (98, 20119), (130, 20380),

Gene: BigChungus_20 Start: 18129, Stop: 19100, Start Num: 34
Candidate Starts for BigChungus_20:
(Start: 32 @18123 has 6 MA's), (Start: 34 @18129 has 4 MA's), (Start: 35 @18132 has 67 MA's), (42, 18231), (53, 18297), (59, 18393), (60, 18396), (75, 18579), (79, 18612), (89, 18714), (92, 18753), (94, 18762), (98, 18783), (103, 18834), (107, 18861), (111, 18924), (112, 18927), (126, 19026), (131, 19050), (132, 19053),

Gene: BillDoor_23 Start: 18066, Stop: 19016, Start Num: 36
Candidate Starts for BillDoor_23:
(Start: 36 @18066 has 8 MA's), (49, 18210), (51, 18228), (55, 18294), (57, 18327), (60, 18339), (62, 18348), (65, 18393), (69, 18444), (70, 18465), (71, 18486), (79, 18543), (82, 18573), (90, 18660), (97, 18711), (105, 18774), (111, 18852), (114, 18867), (115, 18876), (121, 18921), (122, 18951), (126, 18960),

Gene: Birdsong_22 Start: 18950, Stop: 19927, Start Num: 35
Candidate Starts for Birdsong_22:
(23, 18674), (26, 18794), (29, 18866), (30, 18869), (Start: 35 @18950 has 67 MA's), (38, 18971), (41, 19016), (42, 19046), (48, 19085), (52, 19118), (54, 19163), (55, 19175), (58, 19211), (60, 19217), (67, 19307), (69, 19334), (77, 19403), (98, 19574), (113, 19739), (116, 19754), (123, 19835), (125, 19841),

Gene: Biskit_22 Start: 18077, Stop: 19039, Start Num: 35
Candidate Starts for Biskit_22:
(Start: 35 @18077 has 67 MA's), (45, 18194), (49, 18221), (55, 18305), (60, 18350), (62, 18359), (65, 18404), (69, 18455), (79, 18554), (82, 18584), (98, 18725), (104, 18785), (105, 18788), (107, 18803), (111, 18866), (122, 18959), (126, 18968),

Gene: Blackpen_44 Start: 35969, Stop: 36988, Start Num: 35
Candidate Starts for Blackpen_44:
(3, 35252), (5, 35285), (6, 35288), (9, 35435), (12, 35459), (15, 35543), (18, 35594), (21, 35678), (31, 35915), (Start: 35 @35969 has 67 MA's), (39, 36008), (45, 36083), (52, 36137), (55, 36194), (60, 36239), (63, 36281), (66, 36305), (69, 36344), (70, 36365), (71, 36386), (76, 36413), (81, 36458), (82, 36470), (84, 36482), (88, 36536), (90, 36557), (91, 36563), (92, 36581), (96, 36608), (98, 36617), (113, 36782), (114, 36785), (116, 36797), (125, 36896), (127, 36905), (134, 36941),

Gene: Blondies_22 Start: 18060, Stop: 19022, Start Num: 35
Candidate Starts for Blondies_22:

(Start: 35 @18060 has 67 MA's), (45, 18177), (49, 18204), (55, 18288), (60, 18333), (62, 18342), (65, 18387), (69, 18438), (79, 18537), (82, 18567), (98, 18708), (104, 18768), (105, 18771), (107, 18786), (111, 18849), (122, 18942), (126, 18951),

Gene: BotCity_23 Start: 19215, Stop: 20192, Start Num: 35
Candidate Starts for BotCity_23:
(26, 19059), (29, 19131), (30, 19134), (Start: 35 @19215 has 67 MA's), (38, 19236), (41, 19281), (42, 19311), (48, 19350), (52, 19383), (54, 19428), (55, 19440), (58, 19476), (60, 19482), (67, 19572), (69, 19599), (77, 19668), (98, 19839), (116, 20019), (121, 20064), (123, 20100), (125, 20106),

Gene: BoyNamedSue_21 Start: 20173, Stop: 21084, Start Num: 35
Candidate Starts for BoyNamedSue_21:
(28, 20065), (Start: 35 @20173 has 67 MA's), (41, 20239), (46, 20296), (58, 20434), (60, 20440), (69, 20557), (77, 20626), (86, 20701), (98, 20794), (130, 21052),

Gene: Bubble_21 Start: 18406, Stop: 19365, Start Num: 35
Candidate Starts for Bubble_21:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: Burnsey_21 Start: 18407, Stop: 19366, Start Num: 35
Candidate Starts for Burnsey_21:
(Start: 32 @18398 has 6 MA's), (33, 18401), (Start: 34 @18404 has 4 MA's), (Start: 35 @18407 has 67 MA's), (40, 18452), (44, 18518), (45, 18524), (55, 18635), (57, 18668), (60, 18680), (62, 18689), (66, 18746), (69, 18785), (79, 18884), (82, 18914), (87, 18974), (90, 19001), (97, 19052), (104, 19112), (105, 19115), (107, 19130), (109, 19139), (111, 19193), (122, 19286), (126, 19295), (135, 19349),

Gene: Button_22 Start: 17436, Stop: 18404, Start Num: 35
Candidate Starts for Button_22:
(Start: 35 @17436 has 67 MA's), (40, 17478), (41, 17502), (42, 17532), (47, 17568), (49, 17577), (54, 17649), (56, 17679), (60, 17706), (72, 17874), (79, 17925), (99, 18096), (103, 18141), (105, 18153), (111, 18222), (129, 18342), (133, 18369),

Gene: Buttrmlkdreams_21 Start: 18059, Stop: 19021, Start Num: 35
Candidate Starts for Buttrmlkdreams_21:
(Start: 35 @18059 has 67 MA's), (45, 18176), (49, 18203), (55, 18287), (60, 18332), (62, 18341), (65, 18386), (69, 18437), (79, 18536), (82, 18566), (98, 18707), (104, 18767), (105, 18770), (107, 18785), (111, 18848), (122, 18941), (126, 18950),

Gene: CaiB_44 Start: 36537, Stop: 37556, Start Num: 35
Candidate Starts for CaiB_44:
(3, 35820), (4, 35847), (5, 35853), (6, 35856), (9, 36003), (12, 36027), (15, 36111), (18, 36162), (21, 36246), (31, 36483), (Start: 35 @36537 has 67 MA's), (39, 36576), (45, 36651), (52, 36705), (55, 36762), (60, 36807), (63, 36849), (66, 36873), (69, 36912), (70, 36933), (71, 36954), (76, 36981), (81, 37026), (82, 37038), (84, 37050), (88, 37104), (90, 37125), (91, 37131), (92, 37149), (96, 37176), (98, 37185), (113, 37350), (114, 37353), (116, 37365), (125, 37464), (127, 37473), (134, 37509),

Gene: CanesSauce_21 Start: 18099, Stop: 19049, Start Num: 36
Candidate Starts for CanesSauce_21:
(Start: 36 @18099 has 8 MA's), (49, 18243), (51, 18261), (55, 18327), (57, 18360), (60, 18372), (62, 18381), (65, 18426), (69, 18477), (70, 18498), (71, 18519), (79, 18576), (82, 18606), (90, 18693), (97,

18744), (105, 18807), (111, 18885), (114, 18900), (115, 18909), (121, 18954), (122, 18984), (126, 18993),

Gene: CaramelLatte_21 Start: 18099, Stop: 19049, Start Num: 36
Candidate Starts for CaramelLatte_21:
(Start: 36 @18099 has 8 MA's), (49, 18243), (51, 18261), (55, 18327), (57, 18360), (60, 18372), (62, 18381), (65, 18426), (69, 18477), (70, 18498), (71, 18519), (79, 18576), (82, 18606), (90, 18693), (97, 18744), (105, 18807), (111, 18885), (114, 18900), (115, 18909), (121, 18954), (122, 18984), (126, 18993),

Gene: Carsonalex_22 Start: 18455, Stop: 19423, Start Num: 32
Candidate Starts for Carsonalex_22:
(Start: 32 @18455 has 6 MA's), (33, 18458), (Start: 34 @18461 has 4 MA's), (Start: 35 @18464 has 67 MA's), (40, 18509), (44, 18575), (45, 18581), (55, 18692), (57, 18725), (60, 18737), (62, 18746), (66, 18803), (69, 18842), (79, 18941), (82, 18971), (87, 19031), (90, 19058), (97, 19109), (104, 19169), (105, 19172), (107, 19187), (109, 19196), (111, 19250), (122, 19343), (126, 19352), (135, 19406),

Gene: CheeseTouch_23 Start: 19211, Stop: 20188, Start Num: 35
Candidate Starts for CheeseTouch_23:
(26, 19055), (Start: 35 @19211 has 67 MA's), (38, 19232), (41, 19277), (42, 19307), (48, 19346), (52, 19379), (55, 19436), (58, 19472), (60, 19478), (67, 19568), (69, 19595), (77, 19664), (98, 19835), (116, 20015), (121, 20060), (123, 20096), (125, 20102),

Gene: CherryonLim_22 Start: 18832, Stop: 19809, Start Num: 32
Candidate Starts for CherryonLim_22:
(Start: 32 @18832 has 6 MA's), (Start: 34 @18838 has 4 MA's), (Start: 35 @18841 has 67 MA's), (42, 18940), (50, 18985), (53, 19006), (55, 19060), (59, 19102), (60, 19105), (75, 19288), (79, 19321), (89, 19423), (92, 19462), (94, 19471), (98, 19492), (103, 19543), (107, 19570), (111, 19633), (112, 19636), (126, 19735), (131, 19759), (132, 19762),

Gene: ChickenTender_23 Start: 18462, Stop: 19430, Start Num: 32
Candidate Starts for ChickenTender_23:
(Start: 32 @18462 has 6 MA's), (33, 18465), (Start: 34 @18468 has 4 MA's), (Start: 35 @18471 has 67 MA's), (40, 18516), (44, 18582), (45, 18588), (55, 18699), (57, 18732), (60, 18744), (62, 18753), (66, 18810), (69, 18849), (79, 18948), (82, 18978), (87, 19038), (90, 19065), (97, 19116), (104, 19176), (105, 19179), (107, 19194), (109, 19203), (111, 19257), (122, 19350), (126, 19359), (135, 19413),

Gene: ChocoMunchkin_21 Start: 18099, Stop: 19049, Start Num: 36
Candidate Starts for ChocoMunchkin_21:
(Start: 36 @18099 has 8 MA's), (49, 18243), (51, 18261), (55, 18327), (57, 18360), (60, 18372), (62, 18381), (65, 18426), (69, 18477), (70, 18498), (71, 18519), (79, 18576), (82, 18606), (90, 18693), (97, 18744), (105, 18807), (111, 18885), (114, 18900), (115, 18909), (121, 18954), (122, 18984), (126, 18993),

Gene: Cleo_21 Start: 18673, Stop: 19674, Start Num: 32
Candidate Starts for Cleo_21:
(Start: 32 @18673 has 6 MA's), (Start: 35 @18682 has 67 MA's), (38, 18703), (40, 18727), (49, 18826), (60, 18955), (61, 18958), (65, 19009), (66, 19021), (69, 19060), (70, 19081), (79, 19159), (98, 19330), (101, 19339), (102, 19360), (107, 19408), (111, 19471), (114, 19486), (120, 19528), (124, 19570),

Gene: CloverMinnie_44 Start: 36477, Stop: 37496, Start Num: 35
Candidate Starts for CloverMinnie_44:

(21, 36186), (31, 36423), (Start: 35 @36477 has 67 MA's), (39, 36516), (45, 36591), (52, 36645), (55, 36702), (60, 36747), (63, 36789), (66, 36813), (69, 36852), (70, 36873), (71, 36894), (76, 36921), (81, 36966), (82, 36978), (84, 36990), (88, 37044), (90, 37065), (91, 37071), (92, 37089), (96, 37116), (98, 37125), (113, 37290), (114, 37293), (116, 37305), (125, 37404), (127, 37413), (134, 37449),

Gene: Clown_45 Start: 36252, Stop: 37166, Start Num: 35
Candidate Starts for Clown_45:
(28, 36141), (Start: 35 @36252 has 67 MA's), (41, 36318), (42, 36348), (51, 36411), (58, 36513), (60, 36519), (64, 36582), (67, 36609), (68, 36621), (69, 36636), (76, 36702), (86, 36780), (98, 36873), (106, 36942), (130, 37134),

Gene: CocoaPuff_20 Start: 18077, Stop: 19054, Start Num: 32
Candidate Starts for CocoaPuff_20:
(Start: 32 @18077 has 6 MA's), (Start: 34 @18083 has 4 MA's), (Start: 35 @18086 has 67 MA's), (42, 18185), (53, 18251), (59, 18347), (60, 18350), (67, 18440), (75, 18533), (79, 18566), (89, 18668), (92, 18707), (94, 18716), (98, 18734), (102, 18764), (103, 18785), (107, 18812), (111, 18875), (112, 18878), (126, 18977), (131, 19001), (132, 19004),

Gene: Cozz_21 Start: 18404, Stop: 19366, Start Num: 34
Candidate Starts for Cozz_21:
(Start: 32 @18398 has 6 MA's), (33, 18401), (Start: 34 @18404 has 4 MA's), (Start: 35 @18407 has 67 MA's), (40, 18452), (44, 18518), (45, 18524), (55, 18635), (57, 18668), (60, 18680), (62, 18689), (66, 18746), (69, 18785), (79, 18884), (82, 18914), (87, 18974), (90, 19001), (97, 19052), (104, 19112), (105, 19115), (107, 19130), (109, 19139), (111, 19193), (122, 19286), (126, 19295), (135, 19349),

Gene: DonkeyMan_21 Start: 17562, Stop: 18572, Start Num: 37
Candidate Starts for DonkeyMan_21:
(Start: 37 @17562 has 7 MA's), (41, 17628), (49, 17703), (60, 17832), (74, 17997), (80, 18039), (81, 18051), (82, 18063), (84, 18075), (95, 18198), (108, 18297), (110, 18324), (111, 18381), (115, 18405), (116, 18408), (128, 18507), (130, 18516),

Gene: Dre3_21 Start: 18629, Stop: 19600, Start Num: 35
Candidate Starts for Dre3_21:
(Start: 32 @18620 has 6 MA's), (Start: 35 @18629 has 67 MA's), (38, 18650), (40, 18674), (49, 18773), (60, 18902), (61, 18905), (65, 18956), (66, 18968), (69, 19007), (70, 19028), (79, 19106), (98, 19277), (101, 19286), (102, 19307), (107, 19355), (111, 19418), (114, 19433), (120, 19475),

Gene: ElJefes_20 Start: 18564, Stop: 19532, Start Num: 35
Candidate Starts for ElJefes_20:
(Start: 32 @18555 has 6 MA's), (Start: 34 @18561 has 4 MA's), (Start: 35 @18564 has 67 MA's), (42, 18663), (50, 18708), (53, 18729), (59, 18825), (60, 18828), (75, 19011), (79, 19044), (89, 19146), (92, 19185), (94, 19194), (98, 19215), (103, 19266), (107, 19293), (111, 19356), (112, 19359), (131, 19482), (132, 19485),

Gene: Elinal_22 Start: 18085, Stop: 19053, Start Num: 35
Candidate Starts for Elinal_22:
(Start: 32 @18076 has 6 MA's), (Start: 34 @18082 has 4 MA's), (Start: 35 @18085 has 67 MA's), (42, 18184), (53, 18250), (59, 18346), (60, 18349), (75, 18532), (79, 18565), (89, 18667), (92, 18706), (94, 18715), (98, 18733), (102, 18763), (103, 18784), (111, 18874), (112, 18877), (126, 18976), (131, 19000), (132, 19003),

Gene: Eliott_21 Start: 18397, Stop: 19365, Start Num: 32
Candidate Starts for Eliott_21:

(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: Emalyn_20 Start: 17725, Stop: 18675, Start Num: 36
Candidate Starts for Emalyn_20:
(Start: 36 @17725 has 8 MA's), (49, 17869), (55, 17953), (60, 17998), (62, 18007), (65, 18052), (71, 18145), (76, 18172), (79, 18202), (82, 18232), (93, 18346), (97, 18370), (105, 18433), (107, 18448), (111, 18511), (114, 18526), (115, 18535), (121, 18580), (122, 18610),

Gene: Feastonyeet_20 Start: 18129, Stop: 19100, Start Num: 34
Candidate Starts for Feastonyeet_20:
(Start: 32 @18123 has 6 MA's), (Start: 34 @18129 has 4 MA's), (Start: 35 @18132 has 67 MA's), (42, 18231), (53, 18297), (59, 18393), (60, 18396), (75, 18579), (79, 18612), (89, 18714), (92, 18753), (94, 18762), (98, 18783), (103, 18834), (107, 18861), (111, 18924), (112, 18927), (126, 19026), (131, 19050), (132, 19053),

Gene: FelixTres_44 Start: 36540, Stop: 37559, Start Num: 35
Candidate Starts for FelixTres_44:
(21, 36249), (31, 36486), (Start: 35 @36540 has 67 MA's), (39, 36579), (45, 36654), (52, 36708), (55, 36765), (60, 36810), (63, 36852), (66, 36876), (69, 36915), (70, 36936), (71, 36957), (76, 36984), (81, 37029), (82, 37041), (84, 37053), (88, 37107), (90, 37128), (91, 37134), (92, 37152), (96, 37179), (98, 37188), (113, 37353), (114, 37356), (116, 37368), (125, 37467), (127, 37476), (134, 37512),

Gene: Fribs8_22 Start: 19213, Stop: 20184, Start Num: 35
Candidate Starts for Fribs8_22:
(Start: 32 @19204 has 6 MA's), (Start: 35 @19213 has 67 MA's), (49, 19354), (60, 19483), (61, 19486), (62, 19492), (66, 19549), (69, 19588), (70, 19609), (71, 19630), (79, 19687), (83, 19720), (98, 19858), (101, 19867), (102, 19888), (107, 19936), (111, 19999), (114, 20014), (120, 20056), (127, 20107),

Gene: GTE2_19 Start: 17772, Stop: 18722, Start Num: 36
Candidate Starts for GTE2_19:
(Start: 36 @17772 has 8 MA's), (49, 17916), (51, 17934), (55, 18000), (60, 18045), (62, 18054), (65, 18099), (69, 18150), (71, 18192), (79, 18249), (82, 18279), (90, 18366), (97, 18417), (105, 18480), (111, 18558), (114, 18573), (115, 18582), (121, 18627), (122, 18657), (126, 18666),

Gene: Getalong_24 Start: 20017, Stop: 20994, Start Num: 35
Candidate Starts for Getalong_24:
(26, 19861), (29, 19933), (30, 19936), (Start: 35 @20017 has 67 MA's), (38, 20038), (41, 20083), (42, 20113), (48, 20152), (52, 20185), (54, 20230), (55, 20242), (58, 20278), (60, 20284), (67, 20374), (69, 20401), (77, 20470), (98, 20641), (113, 20806), (116, 20821), (123, 20902), (125, 20908),

Gene: GiKK_24 Start: 17739, Stop: 18707, Start Num: 35
Candidate Starts for GiKK_24:
(Start: 35 @17739 has 67 MA's), (40, 17781), (41, 17805), (42, 17835), (47, 17871), (49, 17880), (55, 17964), (56, 17982), (58, 18003), (60, 18009), (72, 18177), (99, 18399), (103, 18444), (105, 18456), (111, 18525), (126, 18633), (129, 18645), (134, 18675),

Gene: Gibbous_21 Start: 18629, Stop: 19600, Start Num: 35
Candidate Starts for Gibbous_21:
(Start: 32 @18620 has 6 MA's), (Start: 35 @18629 has 67 MA's), (38, 18650), (40, 18674), (49, 18773), (60, 18902), (61, 18905), (65, 18956), (66, 18968), (69, 19007), (70, 19028), (79, 19106), (98, 19277),

(101, 19286), (102, 19307), (107, 19355), (111, 19418), (114, 19433), (120, 19475),

Gene: GoldHunter_22 Start: 18398, Stop: 19366, Start Num: 32
Candidate Starts for GoldHunter_22:
(Start: 32 @18398 has 6 MA's), (33, 18401), (Start: 34 @18404 has 4 MA's), (Start: 35 @18407 has 67 MA's), (40, 18452), (44, 18518), (45, 18524), (55, 18635), (57, 18668), (60, 18680), (62, 18689), (66, 18746), (69, 18785), (79, 18884), (82, 18914), (87, 18974), (90, 19001), (97, 19052), (104, 19112), (105, 19115), (107, 19130), (109, 19139), (111, 19193), (122, 19286), (126, 19295), (135, 19349),

Gene: Heinz_21 Start: 17654, Stop: 18664, Start Num: 37
Candidate Starts for Heinz_21:
(10, 17117), (11, 17126), (14, 17141), (15, 17213), (20, 17279), (22, 17357), (Start: 37 @17654 has 7 MA's), (41, 17720), (49, 17795), (60, 17924), (74, 18089), (81, 18143), (82, 18155), (84, 18167), (91, 18248), (95, 18290), (108, 18389), (110, 18416), (111, 18473), (116, 18500), (117, 18509), (126, 18590), (127, 18596), (128, 18599), (130, 18608),

Gene: Hexbug_23 Start: 18431, Stop: 19402, Start Num: 35
Candidate Starts for Hexbug_23:
(8, 17843), (13, 17921), (21, 18137), (Start: 35 @18431 has 67 MA's), (40, 18476), (49, 18575), (54, 18647), (58, 18698), (60, 18704), (70, 18845), (72, 18872), (99, 19094), (103, 19139), (111, 19220), (116, 19247), (118, 19265),

Gene: Hibiscus_21 Start: 17602, Stop: 18612, Start Num: 37
Candidate Starts for Hibiscus_21:
(10, 17065), (11, 17074), (14, 17089), (15, 17161), (20, 17227), (22, 17305), (Start: 37 @17602 has 7 MA's), (41, 17668), (49, 17743), (60, 17872), (74, 18037), (81, 18091), (82, 18103), (84, 18115), (91, 18196), (95, 18238), (108, 18337), (110, 18364), (111, 18421), (116, 18448), (117, 18457), (126, 18538), (127, 18544), (128, 18547), (130, 18556),

Gene: HippoPololi_23 Start: 19281, Stop: 20252, Start Num: 35
Candidate Starts for HippoPololi_23:
(Start: 32 @19272 has 6 MA's), (Start: 35 @19281 has 67 MA's), (40, 19326), (43, 19389), (49, 19425), (60, 19554), (61, 19557), (66, 19620), (69, 19659), (70, 19680), (79, 19758), (84, 19800), (98, 19929), (101, 19938), (102, 19959), (103, 19980), (107, 20007), (111, 20070), (114, 20085), (120, 20127),

Gene: Horseradish_22 Start: 17973, Stop: 18935, Start Num: 35
Candidate Starts for Horseradish_22:
(Start: 35 @17973 has 67 MA's), (45, 18090), (49, 18117), (55, 18201), (60, 18246), (62, 18255), (65, 18300), (69, 18351), (79, 18450), (82, 18480), (98, 18621), (104, 18681), (105, 18684), (107, 18699), (111, 18762), (122, 18855), (126, 18864),

Gene: Jamzy_24 Start: 17749, Stop: 18717, Start Num: 35
Candidate Starts for Jamzy_24:
(Start: 35 @17749 has 67 MA's), (40, 17791), (41, 17815), (42, 17845), (47, 17881), (49, 17890), (60, 18019), (72, 18187), (79, 18238), (99, 18409), (103, 18454), (105, 18466), (111, 18535), (129, 18655), (133, 18682),

Gene: Jojo24_21 Start: 17599, Stop: 18609, Start Num: 37
Candidate Starts for Jojo24_21:
(Start: 37 @17599 has 7 MA's), (41, 17665), (49, 17740), (60, 17869), (74, 18034), (81, 18088), (82, 18100), (84, 18112), (91, 18193), (95, 18235), (108, 18334), (110, 18361), (111, 18418), (116, 18445), (126, 18535), (128, 18544), (130, 18553),

Gene: KayGee_21 Start: 18085, Stop: 19053, Start Num: 35
Candidate Starts for KayGee_21:
(Start: 32 @18076 has 6 MA's), (Start: 34 @18082 has 4 MA's), (Start: 35 @18085 has 67 MA's), (42, 18184), (53, 18250), (59, 18346), (60, 18349), (75, 18532), (79, 18565), (89, 18667), (92, 18706), (94, 18715), (98, 18733), (102, 18763), (103, 18784), (111, 18874), (112, 18877), (126, 18976), (131, 19000), (132, 19003),

Gene: Kenna_22 Start: 19218, Stop: 20195, Start Num: 35
Candidate Starts for Kenna_22:
(26, 19062), (Start: 35 @19218 has 67 MA's), (38, 19239), (41, 19284), (42, 19314), (48, 19353), (52, 19386), (55, 19443), (58, 19479), (60, 19485), (67, 19575), (69, 19602), (77, 19671), (98, 19842), (116, 20022), (121, 20067), (123, 20103), (125, 20109),

Gene: Kuwabara_22 Start: 18644, Stop: 19621, Start Num: 35
Candidate Starts for Kuwabara_22:
(23, 18368), (26, 18488), (29, 18560), (30, 18563), (Start: 35 @18644 has 67 MA's), (38, 18665), (41, 18710), (42, 18740), (48, 18779), (52, 18812), (54, 18857), (55, 18869), (58, 18905), (60, 18911), (67, 19001), (69, 19028), (77, 19097), (98, 19268), (113, 19433), (116, 19448), (123, 19529), (125, 19535),

Gene: Lauer_20 Start: 18125, Stop: 19102, Start Num: 32
Candidate Starts for Lauer_20:
(Start: 32 @18125 has 6 MA's), (Start: 34 @18131 has 4 MA's), (Start: 35 @18134 has 67 MA's), (42, 18233), (53, 18299), (56, 18371), (59, 18395), (60, 18398), (75, 18581), (79, 18614), (89, 18716), (92, 18755), (94, 18764), (98, 18782), (102, 18812), (103, 18833), (111, 18923), (112, 18926), (119, 18974), (126, 19025), (131, 19049), (132, 19052),

Gene: Lutum_23 Start: 19218, Stop: 20195, Start Num: 35
Candidate Starts for Lutum_23:
(26, 19062), (Start: 35 @19218 has 67 MA's), (38, 19239), (41, 19284), (42, 19314), (48, 19353), (52, 19386), (55, 19443), (58, 19479), (60, 19485), (67, 19575), (69, 19602), (77, 19671), (98, 19842), (116, 20022), (121, 20067), (123, 20103), (125, 20109),

Gene: MAnor_21 Start: 18096, Stop: 19067, Start Num: 35
Candidate Starts for MAnor_21:
(Start: 32 @18087 has 6 MA's), (Start: 34 @18093 has 4 MA's), (Start: 35 @18096 has 67 MA's), (42, 18195), (53, 18261), (55, 18315), (59, 18357), (60, 18360), (75, 18543), (79, 18576), (89, 18678), (92, 18717), (94, 18726), (98, 18750), (102, 18780), (103, 18801), (111, 18891), (112, 18894), (126, 18993),

Gene: MScarn_23 Start: 18062, Stop: 19024, Start Num: 35
Candidate Starts for MScarn_23:
(Start: 35 @18062 has 67 MA's), (45, 18179), (49, 18206), (55, 18290), (60, 18335), (62, 18344), (65, 18389), (69, 18440), (79, 18539), (82, 18569), (98, 18710), (104, 18770), (105, 18773), (107, 18788), (111, 18851), (122, 18944), (126, 18953),

Gene: MaVan_23 Start: 19369, Stop: 20337, Start Num: 35
Candidate Starts for MaVan_23:
(Start: 32 @19360 has 6 MA's), (Start: 34 @19366 has 4 MA's), (Start: 35 @19369 has 67 MA's), (38, 19387), (40, 19411), (49, 19510), (60, 19639), (61, 19642), (62, 19648), (66, 19705), (69, 19744), (70, 19765), (79, 19843), (83, 19876), (84, 19885), (98, 20014), (101, 20023), (102, 20044), (107, 20092), (111, 20155), (114, 20170), (120, 20212),

Gene: MakCheese_27 Start: 23638, Stop: 24627, Start Num: 35

Candidate Starts for MakCheese_27:
(25, 23425), (27, 23497), (Start: 35 @23638 has 67 MA's), (42, 23734), (52, 23806), (58, 23899), (60, 23905), (69, 24022), (74, 24079), (77, 24091), (98, 24274), (113, 24439), (125, 24541), (136, 24601),

Gene: MakoManhole_44 Start: 36555, Stop: 37574, Start Num: 35
Candidate Starts for MakoManhole_44:
(21, 36264), (31, 36501), (Start: 35 @36555 has 67 MA's), (39, 36594), (45, 36669), (52, 36723), (55, 36780), (60, 36825), (63, 36867), (66, 36891), (69, 36930), (70, 36951), (71, 36972), (76, 36999), (81, 37044), (82, 37056), (84, 37068), (88, 37122), (90, 37143), (91, 37149), (92, 37167), (96, 37194), (98, 37203), (113, 37368), (114, 37371), (116, 37383), (125, 37482), (127, 37491), (134, 37527),

Gene: Malachai_22 Start: 19498, Stop: 20412, Start Num: 35
Candidate Starts for Malachai_22:
(Start: 35 @19498 has 67 MA's), (41, 19564), (55, 19723), (58, 19759), (60, 19765), (69, 19882), (77, 19951), (86, 20026), (98, 20119), (130, 20380),

Gene: Margaret_24 Start: 18118, Stop: 19089, Start Num: 35
Candidate Starts for Margaret_24:
(Start: 35 @18118 has 67 MA's), (40, 18163), (44, 18229), (49, 18262), (54, 18334), (58, 18385), (60, 18391), (67, 18481), (69, 18511), (99, 18781), (103, 18826), (105, 18838), (111, 18907), (116, 18934), (134, 19057),

Gene: Mayweather_22 Start: 18711, Stop: 19682, Start Num: 35
Candidate Starts for Mayweather_22:
(Start: 32 @18702 has 6 MA's), (Start: 34 @18708 has 4 MA's), (Start: 35 @18711 has 67 MA's), (42, 18810), (53, 18876), (55, 18930), (59, 18972), (60, 18975), (75, 19158), (79, 19191), (89, 19293), (92, 19332), (94, 19341), (98, 19365), (102, 19395), (103, 19416), (111, 19506), (112, 19509), (126, 19608),

Gene: McDazzle_20 Start: 18555, Stop: 19526, Start Num: 34
Candidate Starts for McDazzle_20:
(Start: 32 @18549 has 6 MA's), (Start: 34 @18555 has 4 MA's), (Start: 35 @18558 has 67 MA's), (42, 18657), (50, 18702), (53, 18723), (59, 18819), (60, 18822), (75, 19005), (79, 19038), (89, 19140), (92, 19179), (94, 19188), (98, 19209), (103, 19260), (107, 19287), (111, 19350), (112, 19353), (131, 19476), (132, 19479),

Gene: MortyNRick_22 Start: 18950, Stop: 19927, Start Num: 35
Candidate Starts for MortyNRick_22:
(23, 18674), (26, 18794), (29, 18866), (30, 18869), (Start: 35 @18950 has 67 MA's), (38, 18971), (41, 19016), (42, 19046), (48, 19085), (52, 19118), (54, 19163), (55, 19175), (58, 19211), (60, 19217), (67, 19307), (69, 19334), (77, 19403), (98, 19574), (113, 19739), (116, 19754), (123, 19835), (125, 19841),

Gene: MossRose_44 Start: 36534, Stop: 37553, Start Num: 35
Candidate Starts for MossRose_44:
(2, 35796), (3, 35817), (4, 35844), (5, 35850), (6, 35853), (9, 36000), (12, 36024), (15, 36108), (16, 36117), (18, 36159), (21, 36243), (31, 36480), (Start: 35 @36534 has 67 MA's), (39, 36573), (52, 36702), (55, 36759), (60, 36804), (63, 36846), (66, 36870), (69, 36909), (70, 36930), (71, 36951), (73, 36963), (76, 36978), (81, 37023), (82, 37035), (84, 37047), (88, 37101), (90, 37122), (91, 37128), (92, 37146), (96, 37173), (98, 37182), (113, 37347), (114, 37350), (116, 37362), (125, 37461), (127, 37470), (134, 37506),

Gene: MunkgeeRoachy_21 Start: 18454, Stop: 19413, Start Num: 35
Candidate Starts for MunkgeeRoachy_21:

(Start: 32 @18445 has 6 MA's), (33, 18448), (Start: 34 @18451 has 4 MA's), (Start: 35 @18454 has 67 MA's), (40, 18499), (44, 18565), (45, 18571), (55, 18682), (57, 18715), (60, 18727), (62, 18736), (66, 18793), (69, 18832), (79, 18931), (82, 18961), (87, 19021), (90, 19048), (97, 19099), (104, 19159), (105, 19162), (107, 19177), (109, 19186), (111, 19240), (122, 19333), (126, 19342), (135, 19396),

Gene: NHagos_42 Start: 35138, Stop: 36160, Start Num: 35
Candidate Starts for NHagos_42:
(31, 35084), (Start: 35 @35138 has 67 MA's), (39, 35180), (41, 35207), (45, 35255), (52, 35309), (55, 35366), (60, 35411), (62, 35420), (63, 35453), (66, 35477), (69, 35516), (70, 35537), (71, 35558), (78, 35606), (81, 35630), (82, 35642), (84, 35654), (88, 35708), (90, 35729), (91, 35735), (92, 35753), (96, 35780), (98, 35789), (113, 35954), (114, 35957), (125, 36068), (127, 36077),

Gene: Nibbles_23 Start: 19369, Stop: 20337, Start Num: 35
Candidate Starts for Nibbles_23:
(Start: 32 @19360 has 6 MA's), (Start: 34 @19366 has 4 MA's), (Start: 35 @19369 has 67 MA's), (38, 19387), (40, 19411), (49, 19510), (60, 19639), (61, 19642), (62, 19648), (66, 19705), (69, 19744), (70, 19765), (79, 19843), (83, 19876), (84, 19885), (98, 20014), (101, 20023), (102, 20044), (107, 20092), (111, 20155), (114, 20170), (120, 20212),

Gene: Nina_22 Start: 19439, Stop: 20407, Start Num: 32
Candidate Starts for Nina_22:
(Start: 32 @19439 has 6 MA's), (33, 19442), (Start: 34 @19445 has 4 MA's), (Start: 35 @19448 has 67 MA's), (40, 19493), (44, 19559), (45, 19565), (55, 19676), (57, 19709), (60, 19721), (62, 19730), (66, 19787), (69, 19826), (79, 19925), (82, 19955), (87, 20015), (90, 20042), (97, 20093), (104, 20153), (105, 20156), (107, 20171), (109, 20180), (111, 20234), (122, 20327), (126, 20336), (135, 20390),

Gene: Nodigi_23 Start: 18410, Stop: 19381, Start Num: 35
Candidate Starts for Nodigi_23:
(7, 17747), (8, 17822), (13, 17900), (15, 17981), (21, 18116), (Start: 35 @18410 has 67 MA's), (40, 18455), (49, 18554), (54, 18626), (58, 18677), (60, 18683), (70, 18824), (72, 18851), (99, 19073), (103, 19118), (111, 19199), (115, 19223), (116, 19226), (118, 19244), (129, 19319), (134, 19349),

Gene: Orla_23 Start: 18414, Stop: 19385, Start Num: 35
Candidate Starts for Orla_23:
(13, 17904), (15, 17985), (21, 18120), (Start: 35 @18414 has 67 MA's), (40, 18459), (49, 18558), (54, 18630), (56, 18660), (58, 18681), (60, 18687), (70, 18828), (72, 18855), (99, 19077), (103, 19122), (105, 19134), (111, 19203), (115, 19227), (116, 19230), (118, 19248), (129, 19323), (134, 19353),

Gene: Periwinkle_25 Start: 19684, Stop: 20661, Start Num: 35
Candidate Starts for Periwinkle_25:
(26, 19528), (27, 19549), (29, 19600), (Start: 35 @19684 has 67 MA's), (38, 19705), (41, 19750), (48, 19819), (52, 19852), (55, 19909), (58, 19945), (60, 19951), (67, 20041), (69, 20068), (75, 20131), (77, 20137), (86, 20212), (98, 20308), (116, 20488), (121, 20533), (123, 20569), (125, 20575),

Gene: Pons_21 Start: 18086, Stop: 19057, Start Num: 35
Candidate Starts for Pons_21:
(Start: 32 @18077 has 6 MA's), (Start: 34 @18083 has 4 MA's), (Start: 35 @18086 has 67 MA's), (42, 18185), (50, 18230), (53, 18251), (59, 18347), (60, 18350), (75, 18533), (79, 18566), (89, 18668), (92, 18707), (94, 18716), (98, 18740), (102, 18770), (103, 18791), (107, 18818), (111, 18881), (112, 18884), (126, 18983), (131, 19007), (132, 19010),

Gene: PotPie_21 Start: 18951, Stop: 19919, Start Num: 35
Candidate Starts for PotPie_21:

(Start: 32 @18942 has 6 MA's), (Start: 34 @18948 has 4 MA's), (Start: 35 @18951 has 67 MA's), (42, 19050), (53, 19116), (59, 19212), (60, 19215), (67, 19305), (75, 19398), (79, 19431), (89, 19533), (92, 19572), (94, 19581), (98, 19599), (102, 19629), (103, 19650), (111, 19740), (112, 19743), (126, 19842), (131, 19866), (132, 19869),

Gene: PsychoKiller_21 Start: 18397, Stop: 19365, Start Num: 32
Candidate Starts for PsychoKiller_21:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: Quasar_21 Start: 19015, Stop: 19974, Start Num: 35
Candidate Starts for Quasar_21:
(Start: 32 @19006 has 6 MA's), (33, 19009), (Start: 34 @19012 has 4 MA's), (Start: 35 @19015 has 67 MA's), (40, 19060), (44, 19126), (45, 19132), (55, 19243), (57, 19276), (60, 19288), (62, 19297), (66, 19354), (69, 19393), (79, 19492), (82, 19522), (87, 19582), (90, 19609), (97, 19660), (104, 19720), (105, 19723), (107, 19738), (109, 19747), (111, 19801), (122, 19894), (126, 19903), (135, 19957),

Gene: RADical_22 Start: 18398, Stop: 19366, Start Num: 32
Candidate Starts for RADical_22:
(Start: 32 @18398 has 6 MA's), (33, 18401), (Start: 34 @18404 has 4 MA's), (Start: 35 @18407 has 67 MA's), (40, 18452), (44, 18518), (45, 18524), (55, 18635), (57, 18668), (60, 18680), (62, 18689), (66, 18746), (69, 18785), (79, 18884), (82, 18914), (87, 18974), (97, 19052), (104, 19112), (105, 19115), (107, 19130), (109, 19139), (111, 19193), (122, 19286), (126, 19295), (135, 19349),

Gene: RSchmailzl_22 Start: 18541, Stop: 19509, Start Num: 32
Candidate Starts for RSchmailzl_22:
(Start: 32 @18541 has 6 MA's), (33, 18544), (Start: 34 @18547 has 4 MA's), (Start: 35 @18550 has 67 MA's), (40, 18595), (44, 18661), (45, 18667), (55, 18778), (57, 18811), (60, 18823), (62, 18832), (66, 18889), (69, 18928), (79, 19027), (82, 19057), (87, 19117), (90, 19144), (97, 19195), (104, 19255), (105, 19258), (107, 19273), (109, 19282), (111, 19336), (122, 19429), (126, 19438), (135, 19492),

Gene: RanchParmCat_24 Start: 18118, Stop: 19089, Start Num: 35
Candidate Starts for RanchParmCat_24:
(24, 17872), (Start: 35 @18118 has 67 MA's), (40, 18163), (44, 18229), (49, 18262), (54, 18334), (58, 18385), (60, 18391), (67, 18481), (69, 18511), (99, 18781), (103, 18826), (105, 18838), (111, 18907), (116, 18934), (134, 19057),

Gene: RedBaron_22 Start: 18444, Stop: 19409, Start Num: 33
Candidate Starts for RedBaron_22:
(Start: 32 @18441 has 6 MA's), (33, 18444), (Start: 34 @18447 has 4 MA's), (Start: 35 @18450 has 67 MA's), (40, 18495), (44, 18561), (45, 18567), (55, 18678), (57, 18711), (60, 18723), (62, 18732), (66, 18789), (67, 18798), (69, 18828), (79, 18927), (82, 18957), (87, 19017), (90, 19044), (97, 19095), (104, 19155), (105, 19158), (107, 19173), (109, 19182), (111, 19236), (122, 19329), (126, 19338), (135, 19392),

Gene: Reyja_22 Start: 17773, Stop: 18783, Start Num: 37
Candidate Starts for Reyja_22:
(19, 17392), (20, 17398), (22, 17476), (Start: 37 @17773 has 7 MA's), (41, 17839), (49, 17914), (60, 18043), (74, 18208), (81, 18262), (82, 18274), (84, 18286), (95, 18409), (108, 18508), (110, 18535), (111, 18592), (115, 18616), (116, 18619), (128, 18718), (130, 18727),

Gene: Santhid_21 Start: 17607, Stop: 18617, Start Num: 37
Candidate Starts for Santhid_21:
(Start: 37 @17607 has 7 MA's), (41, 17673), (49, 17748), (60, 17877), (74, 18042), (81, 18096), (82, 18108), (84, 18120), (91, 18201), (95, 18243), (108, 18342), (110, 18369), (111, 18426), (116, 18453), (126, 18543), (127, 18549), (128, 18552), (130, 18561),

Gene: ShawBrad_23 Start: 19227, Stop: 20204, Start Num: 35
Candidate Starts for ShawBrad_23:
(26, 19071), (27, 19092), (29, 19143), (Start: 35 @19227 has 67 MA's), (38, 19248), (41, 19293), (48, 19362), (52, 19395), (55, 19452), (58, 19488), (60, 19494), (67, 19584), (69, 19611), (75, 19674), (77, 19680), (86, 19755), (98, 19851), (116, 20031), (121, 20076), (123, 20112), (125, 20118),

Gene: SheckWes_20 Start: 18086, Stop: 19054, Start Num: 35
Candidate Starts for SheckWes_20:
(Start: 32 @18077 has 6 MA's), (Start: 34 @18083 has 4 MA's), (Start: 35 @18086 has 67 MA's), (42, 18185), (53, 18251), (59, 18347), (60, 18350), (75, 18533), (79, 18566), (89, 18668), (92, 18707), (94, 18716), (98, 18737), (103, 18788), (107, 18815), (111, 18878), (112, 18881), (126, 18980), (132, 19007),

Gene: SketchMex_20 Start: 18077, Stop: 19039, Start Num: 35
Candidate Starts for SketchMex_20:
(Start: 35 @18077 has 67 MA's), (45, 18194), (49, 18221), (55, 18305), (60, 18350), (62, 18359), (65, 18404), (69, 18455), (79, 18554), (82, 18584), (98, 18725), (104, 18785), (105, 18788), (107, 18803), (111, 18866), (122, 18959), (126, 18968),

Gene: Socotra_22 Start: 18397, Stop: 19365, Start Num: 32
Candidate Starts for Socotra_22:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: Sopespian_21 Start: 18398, Stop: 19366, Start Num: 32
Candidate Starts for Sopespian_21:
(Start: 32 @18398 has 6 MA's), (33, 18401), (Start: 34 @18404 has 4 MA's), (Start: 35 @18407 has 67 MA's), (40, 18452), (44, 18518), (45, 18524), (55, 18635), (57, 18668), (60, 18680), (62, 18689), (66, 18746), (69, 18785), (79, 18884), (82, 18914), (87, 18974), (90, 19001), (97, 19052), (104, 19112), (105, 19115), (107, 19130), (109, 19139), (111, 19193), (122, 19286), (126, 19295), (135, 19349),

Gene: Sprinklemunch_25 Start: 23888, Stop: 24880, Start Num: 35
Candidate Starts for Sprinklemunch_25:
(17, 23486), (27, 23747), (Start: 35 @23888 has 67 MA's), (41, 23954), (42, 23984), (52, 24056), (58, 24149), (60, 24155), (69, 24272), (74, 24329), (77, 24341), (98, 24527), (125, 24794),

Gene: Starburst_22 Start: 18397, Stop: 19365, Start Num: 32
Candidate Starts for Starburst_22:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: SteamedHams_23 Start: 18099, Stop: 19049, Start Num: 36
Candidate Starts for SteamedHams_23:

(Start: 36 @18099 has 8 MA's), (49, 18243), (51, 18261), (55, 18327), (57, 18360), (60, 18372), (62, 18381), (65, 18426), (69, 18477), (70, 18498), (71, 18519), (79, 18576), (82, 18606), (90, 18693), (93, 18720), (97, 18744), (105, 18807), (111, 18885), (114, 18900), (115, 18909), (121, 18954), (122, 18984),

Gene: SummitAcademy_20 Start: 18166, Stop: 19131, Start Num: 35
Candidate Starts for SummitAcademy_20:
(Start: 32 @18157 has 6 MA's), (Start: 34 @18163 has 4 MA's), (Start: 35 @18166 has 67 MA's), (42, 18265), (53, 18331), (59, 18427), (60, 18430), (75, 18613), (79, 18646), (89, 18748), (92, 18787), (94, 18796), (98, 18814), (102, 18844), (103, 18865), (111, 18955), (112, 18958), (119, 19006), (126, 19057), (131, 19081), (132, 19084),

Gene: Survivors_23 Start: 19218, Stop: 20186, Start Num: 35
Candidate Starts for Survivors_23:
(Start: 32 @19209 has 6 MA's), (Start: 34 @19215 has 4 MA's), (Start: 35 @19218 has 67 MA's), (38, 19236), (40, 19260), (49, 19359), (60, 19488), (61, 19491), (62, 19497), (66, 19554), (69, 19593), (70, 19614), (79, 19692), (83, 19725), (84, 19734), (98, 19863), (101, 19872), (102, 19893), (107, 19941), (111, 20004), (114, 20019), (120, 20061),

Gene: SweatNTears_23 Start: 18588, Stop: 19550, Start Num: 35
Candidate Starts for SweatNTears_23:
(Start: 35 @18588 has 67 MA's), (45, 18705), (49, 18732), (55, 18816), (60, 18861), (62, 18870), (65, 18915), (69, 18966), (79, 19065), (82, 19095), (93, 19209), (98, 19236), (104, 19296), (105, 19299), (107, 19314), (111, 19377), (122, 19470), (126, 19479),

Gene: Tarnish_20 Start: 18447, Stop: 19424, Start Num: 32
Candidate Starts for Tarnish_20:
(Start: 32 @18447 has 6 MA's), (Start: 34 @18453 has 4 MA's), (Start: 35 @18456 has 67 MA's), (42, 18555), (53, 18621), (55, 18675), (59, 18717), (60, 18720), (75, 18903), (79, 18936), (89, 19038), (92, 19077), (94, 19086), (98, 19107), (103, 19158), (107, 19185), (111, 19248), (112, 19251), (126, 19350), (131, 19374), (132, 19377),

Gene: Tarzan_21 Start: 17576, Stop: 18586, Start Num: 37
Candidate Starts for Tarzan_21:
(20, 17201), (22, 17279), (Start: 37 @17576 has 7 MA's), (41, 17642), (49, 17717), (60, 17846), (74, 18011), (81, 18065), (82, 18077), (84, 18089), (95, 18212), (110, 18338), (111, 18395), (115, 18419), (116, 18422), (127, 18518), (128, 18521), (130, 18530),

Gene: Tolls_23 Start: 18102, Stop: 19052, Start Num: 36
Candidate Starts for Tolls_23:
(Start: 36 @18102 has 8 MA's), (49, 18246), (51, 18264), (55, 18330), (57, 18363), (60, 18375), (62, 18384), (65, 18429), (69, 18480), (70, 18501), (71, 18522), (79, 18579), (82, 18609), (90, 18696), (93, 18723), (97, 18747), (105, 18810), (111, 18888), (114, 18903), (115, 18912), (121, 18957), (122, 18987), (126, 18996),

Gene: TraderJ_44 Start: 36566, Stop: 37585, Start Num: 35
Candidate Starts for TraderJ_44:
(1, 35822), (2, 35828), (3, 35849), (4, 35876), (5, 35882), (6, 35885), (9, 36032), (12, 36056), (15, 36140), (18, 36191), (21, 36275), (31, 36512), (Start: 35 @36566 has 67 MA's), (39, 36605), (45, 36680), (52, 36734), (55, 36791), (60, 36836), (63, 36878), (66, 36902), (69, 36941), (70, 36962), (71, 36983), (76, 37010), (81, 37055), (82, 37067), (84, 37079), (88, 37133), (90, 37154), (91, 37160), (92, 37178), (96, 37205), (98, 37214), (113, 37379), (114, 37382), (116, 37394), (125, 37493), (127, 37502), (134, 37538),

Gene: Troje_21 Start: 18059, Stop: 19021, Start Num: 35
Candidate Starts for Troje_21:
(Start: 35 @18059 has 67 MA's), (45, 18176), (49, 18203), (55, 18287), (60, 18332), (62, 18341), (65, 18386), (69, 18437), (79, 18536), (82, 18566), (98, 18707), (104, 18767), (105, 18770), (107, 18785), (111, 18848), (122, 18941), (126, 18950),

Gene: Typhonomachy_21 Start: 18406, Stop: 19365, Start Num: 35
Candidate Starts for Typhonomachy_21:
(Start: 32 @18397 has 6 MA's), (33, 18400), (Start: 34 @18403 has 4 MA's), (Start: 35 @18406 has 67 MA's), (40, 18451), (44, 18517), (45, 18523), (55, 18634), (57, 18667), (60, 18679), (62, 18688), (66, 18745), (69, 18784), (79, 18883), (82, 18913), (87, 18973), (90, 19000), (97, 19051), (104, 19111), (105, 19114), (107, 19129), (109, 19138), (111, 19192), (122, 19285), (126, 19294), (135, 19348),

Gene: Vine_22 Start: 19098, Stop: 20066, Start Num: 35
Candidate Starts for Vine_22:
(Start: 32 @19089 has 6 MA's), (Start: 34 @19095 has 4 MA's), (Start: 35 @19098 has 67 MA's), (42, 19197), (53, 19263), (59, 19359), (60, 19362), (75, 19545), (79, 19578), (89, 19680), (92, 19719), (94, 19728), (98, 19746), (102, 19776), (103, 19797), (111, 19887), (112, 19890), (119, 19938), (126, 19989), (131, 20013), (132, 20016),

Gene: Wolfwood_25 Start: 19353, Stop: 20330, Start Num: 32
Candidate Starts for Wolfwood_25:
(Start: 32 @19353 has 6 MA's), (Start: 34 @19359 has 4 MA's), (Start: 35 @19362 has 67 MA's), (38, 19380), (40, 19404), (49, 19503), (60, 19632), (61, 19635), (62, 19641), (66, 19698), (69, 19737), (70, 19758), (79, 19836), (83, 19869), (84, 19878), (85, 19902), (98, 20007), (101, 20016), (102, 20037), (107, 20085), (111, 20148), (114, 20163), (120, 20205),

Gene: Wooper_44 Start: 36572, Stop: 37591, Start Num: 35
Candidate Starts for Wooper_44:
(1, 35828), (2, 35834), (3, 35855), (4, 35882), (5, 35888), (6, 35891), (9, 36038), (12, 36062), (15, 36146), (18, 36197), (21, 36281), (31, 36518), (Start: 35 @36572 has 67 MA's), (39, 36611), (45, 36686), (52, 36740), (55, 36797), (60, 36842), (63, 36884), (66, 36908), (69, 36947), (70, 36968), (71, 36989), (76, 37016), (81, 37061), (82, 37073), (84, 37085), (88, 37139), (90, 37160), (91, 37166), (92, 37184), (96, 37211), (98, 37220), (113, 37385), (114, 37388), (116, 37400), (125, 37499), (127, 37508), (134, 37544),

Gene: Yakult_22 Start: 17972, Stop: 18943, Start Num: 35
Candidate Starts for Yakult_22:
(Start: 35 @17972 has 67 MA's), (40, 18017), (44, 18083), (49, 18116), (52, 18143), (56, 18218), (60, 18245), (79, 18464), (82, 18494), (100, 18635), (111, 18761), (115, 18785), (134, 18911),

Gene: Yarn_20 Start: 18092, Stop: 19042, Start Num: 36
Candidate Starts for Yarn_20:
(Start: 36 @18092 has 8 MA's), (49, 18236), (51, 18254), (55, 18320), (57, 18353), (60, 18365), (62, 18374), (65, 18419), (69, 18470), (70, 18491), (71, 18512), (79, 18569), (82, 18599), (90, 18686), (93, 18713), (97, 18737), (105, 18800), (111, 18878), (114, 18893), (115, 18902), (121, 18947), (122, 18977), (126, 18986),

Gene: Yeshua_44 Start: 36549, Stop: 37568, Start Num: 35
Candidate Starts for Yeshua_44:
(1, 35805), (2, 35811), (3, 35832), (4, 35859), (5, 35865), (6, 35868), (9, 36015), (12, 36039), (15, 36123), (18, 36174), (21, 36258), (31, 36495), (Start: 35 @36549 has 67 MA's), (39, 36588), (45,

36663), (52, 36717), (55, 36774), (60, 36819), (63, 36861), (66, 36885), (69, 36924), (70, 36945), (71, 36966), (76, 36993), (81, 37038), (82, 37050), (84, 37062), (88, 37116), (90, 37137), (91, 37143), (92, 37161), (96, 37188), (98, 37197), (113, 37362), (114, 37365), (116, 37377), (125, 37476), (127, 37485), (134, 37521),

Gene: Yucky_21 Start: 18957, Stop: 19925, Start Num: 35
Candidate Starts for Yucky_21:
(Start: 32 @18948 has 6 MA's), (Start: 34 @18954 has 4 MA's), (Start: 35 @18957 has 67 MA's), (42, 19056), (53, 19122), (59, 19218), (60, 19221), (75, 19404), (79, 19437), (89, 19539), (92, 19578), (94, 19587), (98, 19605), (102, 19635), (103, 19656), (111, 19746), (112, 19749), (119, 19797), (126, 19848), (131, 19872), (132, 19875),

Gene: Yummy_22 Start: 17973, Stop: 18935, Start Num: 35
Candidate Starts for Yummy_22:
(Start: 35 @17973 has 67 MA's), (45, 18090), (49, 18117), (55, 18201), (60, 18246), (62, 18255), (65, 18300), (69, 18351), (79, 18450), (82, 18480), (98, 18621), (104, 18681), (105, 18684), (107, 18699), (111, 18762), (122, 18855), (126, 18864),

Gene: Zareef_23 Start: 19361, Stop: 20338, Start Num: 32
Candidate Starts for Zareef_23:
(Start: 32 @19361 has 6 MA's), (Start: 34 @19367 has 4 MA's), (Start: 35 @19370 has 67 MA's), (38, 19388), (40, 19412), (49, 19511), (60, 19640), (61, 19643), (62, 19649), (66, 19706), (69, 19745), (70, 19766), (79, 19844), (83, 19877), (84, 19886), (98, 20015), (101, 20024), (102, 20045), (107, 20093), (111, 20156), (114, 20171), (120, 20213),

Gene: Zodiariah_25 Start: 23934, Stop: 24923, Start Num: 35
Candidate Starts for Zodiariah_25:
(17, 23532), (27, 23793), (Start: 35 @23934 has 67 MA's), (41, 24000), (42, 24030), (52, 24102), (58, 24195), (60, 24201), (69, 24318), (74, 24375), (77, 24387), (98, 24570), (113, 24735), (125, 24837), (136, 24897),