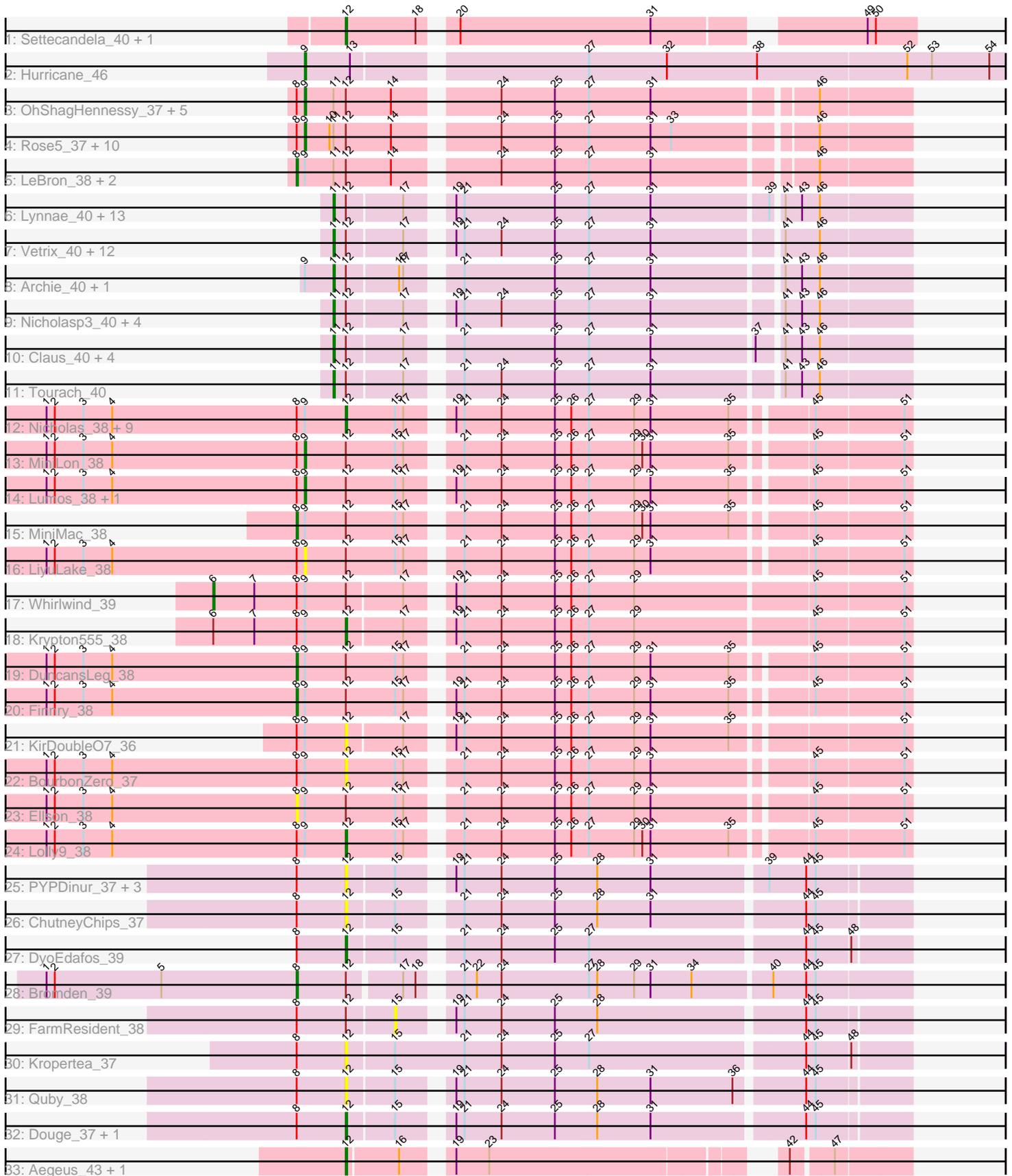# Pham 291014

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 291014 Report

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

Pham number 291014 has 100 members, 24 are drafts.

Phages represented in each track:
• Track 1 : Settecandela_40, Phrappuccino_40
• Track 2 : Hurricane_46
• Track 3 : OhShagHennessy_37, Poochiewood_37, Wamburgrxpress_38, Enceladus_37, Appletree2_37, DirkDirk_37
• Track 4 : Rose5_37, Calm_38, Tyson_37, Halena_37, CicholasNage_38, Wyatt2_38, MAckerman_38, Zaria_38, Acquire49_38, Silverleaf_37, AvadaKedavra_38
• Track 5 : LeBron_38, UPIE_38, JoeDirt_37
• Track 6 : Lynnae_40, Lewan_40, GuuelaD_40, Sarshaun_40, Kahlid_40, Hafay_40, Crossroads_40, Soap141_40, Loadrie_40, Wilder_40, MkaliMitinis3_40, OverPar_41, Wigglewiggle_40, Zakai_40
• Track 7 : Vetrix_40, Winky_40, Breezona_40, SoJulia_41, Gabriela_40, Rumpelstiltskin_40, BobsGarage_40, Netyap_40, BigCheese_40, Faith1_40, Miley16_40, LilDestine_40, DrSeegs_40
• Track 8 : Archie_40, Bazzle_40
• Track 9 : Nicholasp3_40, Rossetti_40, Finemlucis_40, Gardann_40, Underpass_40
• Track 10 : Claus_40, Baoshan_39, DHan_41, ZhongYanYuan_39, DanBing_40
• Track 11 : Tourach_40
• Track 12 : Nicholas_38, Red305_38, Jubie_38, Snenia_38, Bellis_38, Clautastrophe_38, Moostard_38, MsGreen_38, Jobypre_38, TriFive_38
• Track 13 : MiniLon_38
• Track 14 : Lumos_38, Kingsolomon_38
• Track 15 : MiniMac_38
• Track 16 : LiyuLake_38
• Track 17 : Whirlwind_39
• Track 18 : Krypton555_38
• Track 19 : DuncansLeg_38
• Track 20 : Finnry_38
• Track 21 : KirDoubleO7_36
• Track 22 : BourbonZero_37
• Track 23 : Ellson_38
• Track 24 : Lolly9_38
• Track 25 : PYPDinur_37, Douzhi_37, BrainDrainer_38, Sheng711_38
• Track 26 : ChutneyChips_37
• Track 27 : DyoEdafos_39
• Track 28 : Bromden_39
• Track 29 : FarmResident_38

- Track 30 : Kropertea_37
- Track 31 : Quby_38
- Track 32 : Douge_37, Chaser_37
- Track 33 : Aegeus_43, Baudelaire_43

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

The start number called the most often in the published annotations is 11, it was called in 30 of the 76 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Archie_40, Baoshan_39, Bazzle_40, BigCheese_40, BobsGarage_40, Breezona_40, Claus_40, Crossroads_40, DHan_41, DanBing_40, DrSeegs_40, Faith1_40, Finemlucis_40, Gabriela_40, Gardann_40, GuuelaD_40, Hafay_40, Kahlid_40, Lewan_40, LilDestine_40, Loadrie_40, Lynnae_40, Miley16_40, MkaliMitinis3_40, Netyap_40, Nicholasp3_40, OverPar_41, Rossetti_40, Rumpelstiltskin_40, Sarshaun_40, SoJulia_41, Soap141_40, Tourach_40, Underpass_40, Vetrix_40, Wigglewiggle_40, Wilder_40, Winky_40, Zakai_40, ZhongYanYuan_39,

Genes that have the "Most Annotated" start but do not call it:
- Acquire49_38, Appletree2_37, AvadaKedavra_38, Calm_38, CicholasNage_38, DirkDirk_37, Enceladus_37, Halena_37, JoeDirt_37, LeBron_38, MAckerman_38, OhShagHennessy_37, Poochiewood_37, Rose5_37, Silverleaf_37, Tyson_37, UPIE_38, Wamburgrxpress_38, Wyatt2_38, Zaria_38,

Genes that do not have the "Most Annotated" start:
- Aegeus_43, Baudelaire_43, Bellis_38, BourbonZero_37, BrainDrainer_38, Bromden_39, Chaser_37, ChutneyChips_37, Clautastrophe_38, Douge_37, Douzhi_37, DuncansLeg_38, DyoEdafos_39, Ellson_38, FarmResident_38, Finnry_38, Hurricane_46, Jobypre_38, Jubie_38, Kingsolomon_38, KirDoubleO7_36, Kropertea_37, Krypton555_38, LiyuLake_38, Lolly9_38, Lumos_38, MiniLon_38, MiniMac_38, Moostard_38, MsGreen_38, Nicholas_38, PYPDinur_37, Phrappuccino_40, Quby_38, Red305_38, Settecandela_40, Sheng711_38, Snenia_38, TriFive_38, Whirlwind_39,

Summary by start number:

Start 6:
- Found in 2 of 100 (2.0%) of genes in pham
- Manual Annotations of this start: 1 of 76
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Whirlwind_39 (L3),

Start 8:
- Found in 55 of 100 (55.0%) of genes in pham
- Manual Annotations of this start: 7 of 76
- Called 14.5% of time when present
- Phage (with cluster) where this start called: Bromden_39 (L4), DuncansLeg_38 (L3), Ellson_38 (L3), Finnry_38 (L3), JoeDirt_37 (L1), LeBron_38 (L1), MiniMac_38 (L3),

UPIE_38 (L1),

Start 9:
• Found in 46 of 100 (46.0%) of genes in pham
• Manual Annotations of this start: 20 of 76
• Called 47.8% of time when present
• Phage (with cluster) where this start called: Acquire49_38 (L1), Appletree2_37 (L1), AvadaKedavra_38 (L1), Calm_38 (L1), CicholasNage_38 (L1), DirkDirk_37 (L1), Enceladus_37 (L1), Halena_37 (L1), Hurricane_46 (K3), Kingsolomon_38 (L3), LiyuLake_38 (L3), Lumos_38 (L3), MAckerman_38 (L1), MiniLon_38 (L3), OhShagHennessy_37 (L1), Poochiewood_37 (L1), Rose5_37 (L1), Silverleaf_37 (L1), Tyson_37 (L1), Wamburgrxpress_38 (L1), Wyatt2_38 (L1), Zaria_38 (L1),

Start 11:
• Found in 60 of 100 (60.0%) of genes in pham
• Manual Annotations of this start: 30 of 76
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Archie_40 (L2), Baoshan_39 (L2), Bazzle_40 (L2), BigCheese_40 (L2), BobsGarage_40 (L2), Breezona_40 (L2), Claus_40 (L2), Crossroads_40 (L2), DHan_41 (L2), DanBing_40 (L2), DrSeegs_40 (L2), Faith1_40 (L2), Finemlucis_40 (L2), Gabriela_40 (L2), Gardann_40 (L2), GuuelaD_40 (L2), Hafay_40 (L2), Kahlid_40 (L2), Lewan_40 (L2), LilDestine_40 (L2), Loadrie_40 (L2), Lynnae_40 (L2), Miley16_40 (L2), MkaliMitinis3_40 (L2), Netyap_40 (L2), Nicholasp3_40 (L2), OverPar_41 (L2), Rossetti_40 (L2), Rumpelstiltskin_40 (L2), Sarshaun_40 (L2), SoJulia_41 (L2), Soap141_40 (L2), Tourach_40 (L2), Underpass_40 (L2), Vetrix_40 (L2), Wigglewiggle_40 (L2), Wilder_40 (L2), Winky_40 (L2), Zakai_40 (L2), ZhongYanYuan_39 (L2),

Start 12:
• Found in 99 of 100 (99.0%) of genes in pham
• Manual Annotations of this start: 18 of 76
• Called 28.3% of time when present
• Phage (with cluster) where this start called: Aegeus_43 (L5), Baudelaire_43 (L5), Bellis_38 (L3), BourbonZero_37 (L3), BrainDrainer_38 (L4), Chaser_37 (L4), ChutneyChips_37 (L4), Clautastrophe_38 (L3), Douge_37 (L4), Douzhi_37 (L4), DyoEdafos_39 (L4), Jobypre_38 (L3), Jubie_38 (L3), KirDoubleO7_36 (L3), Kropertea_37 (L4), Krypton555_38 (L3), Lolly9_38 (L3), Moostard_38 (L3), MsGreen_38 (L3), Nicholas_38 (L3), PYPDinur_37 (L4), Phrappuccino_40 (AA), Quby_38 (L4), Red305_38 (L3), Settecandela_40 (AA), Sheng711_38 (L4), Snenia_38 (L3), TriFive_38 (L3),

Start 15:
• Found in 31 of 100 (31.0%) of genes in pham
• No Manual Annotations of this start.
• Called 3.2% of time when present
• Phage (with cluster) where this start called: FarmResident_38 (L4),

Summary by clusters:

There are 7 clusters represented in this pham: AA, K3, L4, L5, L2, L3, L1,

Info for manual annotations of cluster AA:
•Start number 12 was manually annotated 2 times for cluster AA.

Info for manual annotations of cluster K3:
•Start number 9 was manually annotated 1 time for cluster K3.

Info for manual annotations of cluster L1:
•Start number 8 was manually annotated 3 times for cluster L1.
•Start number 9 was manually annotated 16 times for cluster L1.

Info for manual annotations of cluster L2:
•Start number 11 was manually annotated 30 times for cluster L2.

Info for manual annotations of cluster L3:
•Start number 6 was manually annotated 1 time for cluster L3.
•Start number 8 was manually annotated 3 times for cluster L3.
•Start number 9 was manually annotated 3 times for cluster L3.
•Start number 12 was manually annotated 11 times for cluster L3.

Info for manual annotations of cluster L4:
•Start number 8 was manually annotated 1 time for cluster L4.
•Start number 12 was manually annotated 3 times for cluster L4.

Info for manual annotations of cluster L5:
•Start number 12 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: Acquire49_38 Start: 32935, Stop: 32525, Start Num: 9
Candidate Starts for Acquire49_38:
(Start: 8 @32941 has 7 MA's), (Start: 9 @32935 has 20 MA's), (10, 32917), (Start: 11 @32914 has 30 MA's), (Start: 12 @32905 has 18 MA's), (14, 32872), (24, 32806), (25, 32767), (27, 32743), (31, 32698), (33, 32683), (46, 32590),

Gene: Aegeus_43 Start: 36657, Stop: 36304, Start Num: 12
Candidate Starts for Aegeus_43:
(Start: 12 @36657 has 18 MA's), (16, 36621), (19, 36594), (23, 36570), (42, 36384), (47, 36357),

Gene: Appletree2_37 Start: 32877, Stop: 32467, Start Num: 9
Candidate Starts for Appletree2_37:
(Start: 8 @32883 has 7 MA's), (Start: 9 @32877 has 20 MA's), (Start: 11 @32856 has 30 MA's), (Start: 12 @32847 has 18 MA's), (14, 32814), (24, 32748), (25, 32709), (27, 32685), (31, 32640), (46, 32532),

Gene: Archie_40 Start: 34485, Stop: 34096, Start Num: 11
Candidate Starts for Archie_40:
(Start: 9 @34506 has 20 MA's), (Start: 11 @34485 has 30 MA's), (Start: 12 @34476 has 18 MA's), (16, 34440), (17, 34437), (21, 34407), (25, 34341), (27, 34317), (31, 34272), (41, 34185), (43, 34173), (46, 34161),

Gene: AvadaKedavra_38 Start: 32944, Stop: 32534, Start Num: 9
Candidate Starts for AvadaKedavra_38:
(Start: 8 @32950 has 7 MA's), (Start: 9 @32944 has 20 MA's), (10, 32926), (Start: 11 @32923 has 30 MA's), (Start: 12 @32914 has 18 MA's), (14, 32881), (24, 32815), (25, 32776), (27, 32752), (31,

32707), (33, 32692), (46, 32599),

Gene: Baoshan_39 Start: 34142, Stop: 33753, Start Num: 11
Candidate Starts for Baoshan_39:
(Start: 11 @34142 has 30 MA's), (Start: 12 @34133 has 18 MA's), (17, 34094), (21, 34064), (25, 33998), (27, 33974), (31, 33929), (37, 33857), (41, 33842), (43, 33830), (46, 33818),

Gene: Baudelaire_43 Start: 36657, Stop: 36304, Start Num: 12
Candidate Starts for Baudelaire_43:
(Start: 12 @36657 has 18 MA's), (16, 36621), (19, 36594), (23, 36570), (42, 36384), (47, 36357),

Gene: Bazzle_40 Start: 34517, Stop: 34128, Start Num: 11
Candidate Starts for Bazzle_40:
(Start: 9 @34538 has 20 MA's), (Start: 11 @34517 has 30 MA's), (Start: 12 @34508 has 18 MA's), (16, 34472), (17, 34469), (21, 34439), (25, 34373), (27, 34349), (31, 34304), (41, 34217), (43, 34205), (46, 34193),

Gene: Bellis_38 Start: 34518, Stop: 34135, Start Num: 12
Candidate Starts for Bellis_38:
(1, 34737), (2, 34731), (3, 34710), (4, 34689), (Start: 8 @34554 has 7 MA's), (Start: 9 @34548 has 20 MA's), (Start: 12 @34518 has 18 MA's), (15, 34482), (17, 34476), (19, 34452), (21, 34446), (24, 34419), (25, 34380), (26, 34368), (27, 34356), (29, 34323), (31, 34311), (35, 34254), (45, 34203), (51, 34140),

Gene: BigCheese_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for BigCheese_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: BobsGarage_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for BobsGarage_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: BourbonZero_37 Start: 34497, Stop: 34114, Start Num: 12
Candidate Starts for BourbonZero_37:
(1, 34716), (2, 34710), (3, 34689), (4, 34668), (Start: 8 @34533 has 7 MA's), (Start: 9 @34527 has 20 MA's), (Start: 12 @34497 has 18 MA's), (15, 34461), (17, 34455), (21, 34425), (24, 34398), (25, 34359), (26, 34347), (27, 34335), (29, 34302), (31, 34290), (45, 34182), (51, 34119),

Gene: BrainDrainer_38 Start: 33181, Stop: 32801, Start Num: 12
Candidate Starts for BrainDrainer_38:
(Start: 8 @33217 has 7 MA's), (Start: 12 @33181 has 18 MA's), (15, 33148), (19, 33118), (21, 33112), (24, 33085), (25, 33046), (28, 33016), (31, 32977), (39, 32899), (44, 32872), (45, 32866),

Gene: Breezona_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for Breezona_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: Bromden_39 Start: 33770, Stop: 33351, Start Num: 8
Candidate Starts for Bromden_39:

(1, 33953), (2, 33947), (5, 33869), (Start: 8 @33770 has 7 MA's), (Start: 12 @33734 has 18 MA's), (17, 33698), (18, 33689), (21, 33668), (22, 33659), (24, 33641), (27, 33578), (28, 33572), (29, 33545), (31, 33533), (34, 33503), (40, 33449), (44, 33425), (45, 33419),

Gene: Calm_38 Start: 32950, Stop: 32540, Start Num: 9
Candidate Starts for Calm_38:
(Start: 8 @32956 has 7 MA's), (Start: 9 @32950 has 20 MA's), (10, 32932), (Start: 11 @32929 has 30 MA's), (Start: 12 @32920 has 18 MA's), (14, 32887), (24, 32821), (25, 32782), (27, 32758), (31, 32713), (33, 32698), (46, 32605),

Gene: Chaser_37 Start: 32998, Stop: 32618, Start Num: 12
Candidate Starts for Chaser_37:
(Start: 8 @33034 has 7 MA's), (Start: 12 @32998 has 18 MA's), (15, 32965), (19, 32935), (21, 32929), (24, 32902), (25, 32863), (28, 32833), (31, 32794), (44, 32689), (45, 32683),

Gene: ChutneyChips_37 Start: 33178, Stop: 32798, Start Num: 12
Candidate Starts for ChutneyChips_37:
(Start: 8 @33214 has 7 MA's), (Start: 12 @33178 has 18 MA's), (15, 33145), (21, 33109), (24, 33082), (25, 33043), (28, 33013), (31, 32974), (44, 32869), (45, 32863),

Gene: CicholasNage_38 Start: 32971, Stop: 32561, Start Num: 9
Candidate Starts for CicholasNage_38:
(Start: 8 @32977 has 7 MA's), (Start: 9 @32971 has 20 MA's), (10, 32953), (Start: 11 @32950 has 30 MA's), (Start: 12 @32941 has 18 MA's), (14, 32908), (24, 32842), (25, 32803), (27, 32779), (31, 32734), (33, 32719), (46, 32626),

Gene: Claus_40 Start: 34300, Stop: 33911, Start Num: 11
Candidate Starts for Claus_40:
(Start: 11 @34300 has 30 MA's), (Start: 12 @34291 has 18 MA's), (17, 34252), (21, 34222), (25, 34156), (27, 34132), (31, 34087), (37, 34015), (41, 34000), (43, 33988), (46, 33976),

Gene: Clautastrophe_38 Start: 34516, Stop: 34133, Start Num: 12
Candidate Starts for Clautastrophe_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: Crossroads_40 Start: 34282, Stop: 33893, Start Num: 11
Candidate Starts for Crossroads_40:
(Start: 11 @34282 has 30 MA's), (Start: 12 @34273 has 18 MA's), (17, 34234), (19, 34210), (21, 34204), (25, 34138), (27, 34114), (31, 34069), (39, 33988), (41, 33982), (43, 33970), (46, 33958),

Gene: DHan_41 Start: 34241, Stop: 33852, Start Num: 11
Candidate Starts for DHan_41:
(Start: 11 @34241 has 30 MA's), (Start: 12 @34232 has 18 MA's), (17, 34193), (21, 34163), (25, 34097), (27, 34073), (31, 34028), (37, 33956), (41, 33941), (43, 33929), (46, 33917),

Gene: DanBing_40 Start: 34133, Stop: 33744, Start Num: 11
Candidate Starts for DanBing_40:
(Start: 11 @34133 has 30 MA's), (Start: 12 @34124 has 18 MA's), (17, 34085), (21, 34055), (25, 33989), (27, 33965), (31, 33920), (37, 33848), (41, 33833), (43, 33821), (46, 33809),

Gene: DirkDirk_37 Start: 32937, Stop: 32527, Start Num: 9
Candidate Starts for DirkDirk_37:
(Start: 8 @32943 has 7 MA's), (Start: 9 @32937 has 20 MA's), (Start: 11 @32916 has 30 MA's), (Start: 12 @32907 has 18 MA's), (14, 32874), (24, 32808), (25, 32769), (27, 32745), (31, 32700), (46, 32592),

Gene: Douge_37 Start: 32936, Stop: 32556, Start Num: 12
Candidate Starts for Douge_37:
(Start: 8 @32972 has 7 MA's), (Start: 12 @32936 has 18 MA's), (15, 32903), (19, 32873), (21, 32867), (24, 32840), (25, 32801), (28, 32771), (31, 32732), (44, 32627), (45, 32621),

Gene: Douzhi_37 Start: 33042, Stop: 32662, Start Num: 12
Candidate Starts for Douzhi_37:
(Start: 8 @33078 has 7 MA's), (Start: 12 @33042 has 18 MA's), (15, 33009), (19, 32979), (21, 32973), (24, 32946), (25, 32907), (28, 32877), (31, 32838), (39, 32760), (44, 32733), (45, 32727),

Gene: DrSeegs_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for DrSeegs_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: DuncansLeg_38 Start: 34570, Stop: 34151, Start Num: 8
Candidate Starts for DuncansLeg_38:
(1, 34753), (2, 34747), (3, 34726), (4, 34705), (Start: 8 @34570 has 7 MA's), (Start: 9 @34564 has 20 MA's), (Start: 12 @34534 has 18 MA's), (15, 34498), (17, 34492), (21, 34462), (24, 34435), (25, 34396), (26, 34384), (27, 34372), (29, 34339), (31, 34327), (35, 34270), (45, 34219), (51, 34156),

Gene: DyoEdafos_39 Start: 33270, Stop: 32890, Start Num: 12
Candidate Starts for DyoEdafos_39:
(Start: 8 @33306 has 7 MA's), (Start: 12 @33270 has 18 MA's), (15, 33237), (21, 33201), (24, 33174), (25, 33135), (27, 33111), (44, 32961), (45, 32955), (48, 32931),

Gene: Ellson_38 Start: 34546, Stop: 34127, Start Num: 8
Candidate Starts for Ellson_38:
(1, 34729), (2, 34723), (3, 34702), (4, 34681), (Start: 8 @34546 has 7 MA's), (Start: 9 @34540 has 20 MA's), (Start: 12 @34510 has 18 MA's), (15, 34474), (17, 34468), (21, 34438), (24, 34411), (25, 34372), (26, 34360), (27, 34348), (29, 34315), (31, 34303), (45, 34195), (51, 34132),

Gene: Enceladus_37 Start: 32920, Stop: 32510, Start Num: 9
Candidate Starts for Enceladus_37:
(Start: 8 @32926 has 7 MA's), (Start: 9 @32920 has 20 MA's), (Start: 11 @32899 has 30 MA's), (Start: 12 @32890 has 18 MA's), (14, 32857), (24, 32791), (25, 32752), (27, 32728), (31, 32683), (46, 32575),

Gene: Faith1_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for Faith1_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: FarmResident_38 Start: 32947, Stop: 32600, Start Num: 15
Candidate Starts for FarmResident_38:
(Start: 8 @33016 has 7 MA's), (Start: 12 @32980 has 18 MA's), (15, 32947), (19, 32917), (21, 32911), (24, 32884), (25, 32845), (28, 32815), (44, 32671), (45, 32665),

Gene: Finemlucis_40 Start: 34556, Stop: 34167, Start Num: 11

Candidate Starts for Finemlucis_40:
(Start: 11 @34556 has 30 MA's), (Start: 12 @34547 has 18 MA's), (17, 34508), (19, 34484), (21, 34478), (24, 34451), (25, 34412), (27, 34388), (31, 34343), (41, 34256), (43, 34244), (46, 34232),

Gene: Finnry_38 Start: 34555, Stop: 34136, Start Num: 8
Candidate Starts for Finnry_38:
(1, 34738), (2, 34732), (3, 34711), (4, 34690), (Start: 8 @34555 has 7 MA's), (Start: 9 @34549 has 20 MA's), (Start: 12 @34519 has 18 MA's), (15, 34483), (17, 34477), (19, 34453), (21, 34447), (24, 34420), (25, 34381), (26, 34369), (27, 34357), (29, 34324), (31, 34312), (35, 34255), (45, 34204), (51, 34141),

Gene: Gabriela_40 Start: 34542, Stop: 34153, Start Num: 11
Candidate Starts for Gabriela_40:
(Start: 11 @34542 has 30 MA's), (Start: 12 @34533 has 18 MA's), (17, 34494), (19, 34470), (21, 34464), (24, 34437), (25, 34398), (27, 34374), (31, 34329), (41, 34242), (46, 34218),

Gene: Gardann_40 Start: 34281, Stop: 33892, Start Num: 11
Candidate Starts for Gardann_40:
(Start: 11 @34281 has 30 MA's), (Start: 12 @34272 has 18 MA's), (17, 34233), (19, 34209), (21, 34203), (24, 34176), (25, 34137), (27, 34113), (31, 34068), (41, 33981), (43, 33969), (46, 33957),

Gene: GuuelaD_40 Start: 34319, Stop: 33930, Start Num: 11
Candidate Starts for GuuelaD_40:
(Start: 11 @34319 has 30 MA's), (Start: 12 @34310 has 18 MA's), (17, 34271), (19, 34247), (21, 34241), (25, 34175), (27, 34151), (31, 34106), (39, 34025), (41, 34019), (43, 34007), (46, 33995),

Gene: Hafay_40 Start: 34314, Stop: 33925, Start Num: 11
Candidate Starts for Hafay_40:
(Start: 11 @34314 has 30 MA's), (Start: 12 @34305 has 18 MA's), (17, 34266), (19, 34242), (21, 34236), (25, 34170), (27, 34146), (31, 34101), (39, 34020), (41, 34014), (43, 34002), (46, 33990),

Gene: Halena_37 Start: 32946, Stop: 32536, Start Num: 9
Candidate Starts for Halena_37:
(Start: 8 @32952 has 7 MA's), (Start: 9 @32946 has 20 MA's), (10, 32928), (Start: 11 @32925 has 30 MA's), (Start: 12 @32916 has 18 MA's), (14, 32883), (24, 32817), (25, 32778), (27, 32754), (31, 32709), (33, 32694), (46, 32601),

Gene: Hurricane_46 Start: 35646, Stop: 35155, Start Num: 9
Candidate Starts for Hurricane_46:
(Start: 9 @35646 has 20 MA's), (13, 35613), (27, 35457), (32, 35400), (38, 35334), (52, 35226), (53, 35208), (54, 35166),

Gene: Jobypre_38 Start: 34516, Stop: 34133, Start Num: 12
Candidate Starts for Jobypre_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: JoeDirt_37 Start: 32924, Stop: 32508, Start Num: 8
Candidate Starts for JoeDirt_37:
(Start: 8 @32924 has 7 MA's), (Start: 9 @32918 has 20 MA's), (Start: 11 @32897 has 30 MA's), (Start: 12 @32888 has 18 MA's), (14, 32855), (24, 32789), (25, 32750), (27, 32726), (31, 32681), (46, 32573),

Gene: Jubie_38 Start: 34517, Stop: 34134, Start Num: 12
Candidate Starts for Jubie_38:
(1, 34736), (2, 34730), (3, 34709), (4, 34688), (Start: 8 @34553 has 7 MA's), (Start: 9 @34547 has 20 MA's), (Start: 12 @34517 has 18 MA's), (15, 34481), (17, 34475), (19, 34451), (21, 34445), (24, 34418), (25, 34379), (26, 34367), (27, 34355), (29, 34322), (31, 34310), (35, 34253), (45, 34202), (51, 34139),

Gene: Kahlid_40 Start: 34286, Stop: 33897, Start Num: 11
Candidate Starts for Kahlid_40:
(Start: 11 @34286 has 30 MA's), (Start: 12 @34277 has 18 MA's), (17, 34238), (19, 34214), (21, 34208), (25, 34142), (27, 34118), (31, 34073), (39, 33992), (41, 33986), (43, 33974), (46, 33962),

Gene: Kingsolomon_38 Start: 34546, Stop: 34133, Start Num: 9
Candidate Starts for Kingsolomon_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: KirDoubleO7_36 Start: 34538, Stop: 34158, Start Num: 12
Candidate Starts for KirDoubleO7_36:
(Start: 8 @34574 has 7 MA's), (Start: 9 @34568 has 20 MA's), (Start: 12 @34538 has 18 MA's), (17, 34499), (19, 34475), (21, 34469), (24, 34442), (25, 34403), (26, 34391), (27, 34379), (29, 34346), (31, 34334), (35, 34277), (51, 34163),

Gene: Kropertea_37 Start: 33093, Stop: 32698, Start Num: 12
Candidate Starts for Kropertea_37:
(Start: 8 @33129 has 7 MA's), (Start: 12 @33093 has 18 MA's), (15, 33060), (21, 33009), (24, 32982), (25, 32943), (27, 32919), (44, 32769), (45, 32763), (48, 32739),

Gene: Krypton555_38 Start: 34434, Stop: 34048, Start Num: 12
Candidate Starts for Krypton555_38:
(Start: 6 @34530 has 1 MA's), (7, 34500), (Start: 8 @34470 has 7 MA's), (Start: 9 @34464 has 20 MA's), (Start: 12 @34434 has 18 MA's), (17, 34395), (19, 34371), (21, 34365), (24, 34338), (25, 34299), (26, 34287), (27, 34275), (29, 34242), (45, 34116), (51, 34053),

Gene: LeBron_38 Start: 32968, Stop: 32552, Start Num: 8
Candidate Starts for LeBron_38:
(Start: 8 @32968 has 7 MA's), (Start: 9 @32962 has 20 MA's), (Start: 11 @32941 has 30 MA's), (Start: 12 @32932 has 18 MA's), (14, 32899), (24, 32833), (25, 32794), (27, 32770), (31, 32725), (46, 32617),

Gene: Lewan_40 Start: 34274, Stop: 33885, Start Num: 11
Candidate Starts for Lewan_40:
(Start: 11 @34274 has 30 MA's), (Start: 12 @34265 has 18 MA's), (17, 34226), (19, 34202), (21, 34196), (25, 34130), (27, 34106), (31, 34061), (39, 33980), (41, 33974), (43, 33962), (46, 33950),

Gene: LilDestine_40 Start: 34278, Stop: 33889, Start Num: 11
Candidate Starts for LilDestine_40:
(Start: 11 @34278 has 30 MA's), (Start: 12 @34269 has 18 MA's), (17, 34230), (19, 34206), (21, 34200), (24, 34173), (25, 34134), (27, 34110), (31, 34065), (41, 33978), (46, 33954),

Gene: LiyuLake_38 Start: 34530, Stop: 34117, Start Num: 9

Candidate Starts for LiyuLake_38:
(1, 34719), (2, 34713), (3, 34692), (4, 34671), (Start: 8 @34536 has 7 MA's), (Start: 9 @34530 has 20 MA's), (Start: 12 @34500 has 18 MA's), (15, 34464), (17, 34458), (21, 34428), (24, 34401), (25, 34362), (26, 34350), (27, 34338), (29, 34305), (31, 34293), (45, 34185), (51, 34122),

Gene: Loadrie_40 Start: 34312, Stop: 33923, Start Num: 11
Candidate Starts for Loadrie_40:
(Start: 11 @34312 has 30 MA's), (Start: 12 @34303 has 18 MA's), (17, 34264), (19, 34240), (21, 34234), (25, 34168), (27, 34144), (31, 34099), (39, 34018), (41, 34012), (43, 34000), (46, 33988),

Gene: Lolly9_38 Start: 34324, Stop: 33941, Start Num: 12
Candidate Starts for Lolly9_38:
(1, 34543), (2, 34537), (3, 34516), (4, 34495), (Start: 8 @34360 has 7 MA's), (Start: 9 @34354 has 20 MA's), (Start: 12 @34324 has 18 MA's), (15, 34288), (17, 34282), (21, 34252), (24, 34225), (25, 34186), (26, 34174), (27, 34162), (29, 34129), (30, 34123), (31, 34117), (35, 34060), (45, 34009), (51, 33946),

Gene: Lumos_38 Start: 34543, Stop: 34130, Start Num: 9
Candidate Starts for Lumos_38:
(1, 34732), (2, 34726), (3, 34705), (4, 34684), (Start: 8 @34549 has 7 MA's), (Start: 9 @34543 has 20 MA's), (Start: 12 @34513 has 18 MA's), (15, 34477), (17, 34471), (19, 34447), (21, 34441), (24, 34414), (25, 34375), (26, 34363), (27, 34351), (29, 34318), (31, 34306), (35, 34249), (45, 34198), (51, 34135),

Gene: Lynnae_40 Start: 34269, Stop: 33880, Start Num: 11
Candidate Starts for Lynnae_40:
(Start: 11 @34269 has 30 MA's), (Start: 12 @34260 has 18 MA's), (17, 34221), (19, 34197), (21, 34191), (25, 34125), (27, 34101), (31, 34056), (39, 33975), (41, 33969), (43, 33957), (46, 33945),

Gene: MAckerman_38 Start: 32940, Stop: 32530, Start Num: 9
Candidate Starts for MAckerman_38:
(Start: 8 @32946 has 7 MA's), (Start: 9 @32940 has 20 MA's), (10, 32922), (Start: 11 @32919 has 30 MA's), (Start: 12 @32910 has 18 MA's), (14, 32877), (24, 32811), (25, 32772), (27, 32748), (31, 32703), (33, 32688), (46, 32595),

Gene: Miley16_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for Miley16_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: MiniLon_38 Start: 34355, Stop: 33942, Start Num: 9
Candidate Starts for MiniLon_38:
(1, 34544), (2, 34538), (3, 34517), (4, 34496), (Start: 8 @34361 has 7 MA's), (Start: 9 @34355 has 20 MA's), (Start: 12 @34325 has 18 MA's), (15, 34289), (17, 34283), (21, 34253), (24, 34226), (25, 34187), (26, 34175), (27, 34163), (29, 34130), (30, 34124), (31, 34118), (35, 34061), (45, 34010), (51, 33947),

Gene: MiniMac_38 Start: 34358, Stop: 33939, Start Num: 8
Candidate Starts for MiniMac_38:
(Start: 8 @34358 has 7 MA's), (Start: 9 @34352 has 20 MA's), (Start: 12 @34322 has 18 MA's), (15, 34286), (17, 34280), (21, 34250), (24, 34223), (25, 34184), (26, 34172), (27, 34160), (29, 34127), (30, 34121), (31, 34115), (35, 34058), (45, 34007), (51, 33944),

Gene: MkaliMitinis3_40 Start: 34282, Stop: 33893, Start Num: 11
Candidate Starts for MkaliMitinis3_40:
(Start: 11 @34282 has 30 MA's), (Start: 12 @34273 has 18 MA's), (17, 34234), (19, 34210), (21, 34204), (25, 34138), (27, 34114), (31, 34069), (39, 33988), (41, 33982), (43, 33970), (46, 33958),

Gene: Moostard_38 Start: 34518, Stop: 34135, Start Num: 12
Candidate Starts for Moostard_38:
(1, 34737), (2, 34731), (3, 34710), (4, 34689), (Start: 8 @34554 has 7 MA's), (Start: 9 @34548 has 20 MA's), (Start: 12 @34518 has 18 MA's), (15, 34482), (17, 34476), (19, 34452), (21, 34446), (24, 34419), (25, 34380), (26, 34368), (27, 34356), (29, 34323), (31, 34311), (35, 34254), (45, 34203), (51, 34140),

Gene: MsGreen_38 Start: 34516, Stop: 34133, Start Num: 12
Candidate Starts for MsGreen_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: Netyap_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for Netyap_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: Nicholas_38 Start: 34516, Stop: 34133, Start Num: 12
Candidate Starts for Nicholas_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: Nicholasp3_40 Start: 34281, Stop: 33892, Start Num: 11
Candidate Starts for Nicholasp3_40:
(Start: 11 @34281 has 30 MA's), (Start: 12 @34272 has 18 MA's), (17, 34233), (19, 34209), (21, 34203), (24, 34176), (25, 34137), (27, 34113), (31, 34068), (41, 33981), (43, 33969), (46, 33957),

Gene: OhShagHennessy_37 Start: 32908, Stop: 32498, Start Num: 9
Candidate Starts for OhShagHennessy_37:
(Start: 8 @32914 has 7 MA's), (Start: 9 @32908 has 20 MA's), (Start: 11 @32887 has 30 MA's), (Start: 12 @32878 has 18 MA's), (14, 32845), (24, 32779), (25, 32740), (27, 32716), (31, 32671), (46, 32563),

Gene: OverPar_41 Start: 34312, Stop: 33923, Start Num: 11
Candidate Starts for OverPar_41:
(Start: 11 @34312 has 30 MA's), (Start: 12 @34303 has 18 MA's), (17, 34264), (19, 34240), (21, 34234), (25, 34168), (27, 34144), (31, 34099), (39, 34018), (41, 34012), (43, 34000), (46, 33988),

Gene: PYPDinur_37 Start: 33042, Stop: 32662, Start Num: 12
Candidate Starts for PYPDinur_37:
(Start: 8 @33078 has 7 MA's), (Start: 12 @33042 has 18 MA's), (15, 33009), (19, 32979), (21, 32973), (24, 32946), (25, 32907), (28, 32877), (31, 32838), (39, 32760), (44, 32733), (45, 32727),

Gene: Phrappuccino_40 Start: 22957, Stop: 22583, Start Num: 12
Candidate Starts for Phrappuccino_40:

(Start: 12 @22957 has 18 MA's), (18, 22906), (20, 22888), (31, 22750), (49, 22618), (50, 22612),

Gene: Poochiewood_37 Start: 32936, Stop: 32526, Start Num: 9
Candidate Starts for Poochiewood_37:
(Start: 8 @32942 has 7 MA's), (Start: 9 @32936 has 20 MA's), (Start: 11 @32915 has 30 MA's), (Start: 12 @32906 has 18 MA's), (14, 32873), (24, 32807), (25, 32768), (27, 32744), (31, 32699), (46, 32591),

Gene: Quby_38 Start: 32936, Stop: 32556, Start Num: 12
Candidate Starts for Quby_38:
(Start: 8 @32972 has 7 MA's), (Start: 12 @32936 has 18 MA's), (15, 32903), (19, 32873), (21, 32867), (24, 32840), (25, 32801), (28, 32771), (31, 32732), (36, 32672), (44, 32627), (45, 32621),

Gene: Red305_38 Start: 34516, Stop: 34133, Start Num: 12
Candidate Starts for Red305_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: Rose5_37 Start: 32935, Stop: 32525, Start Num: 9
Candidate Starts for Rose5_37:
(Start: 8 @32941 has 7 MA's), (Start: 9 @32935 has 20 MA's), (10, 32917), (Start: 11 @32914 has 30 MA's), (Start: 12 @32905 has 18 MA's), (14, 32872), (24, 32806), (25, 32767), (27, 32743), (31, 32698), (33, 32683), (46, 32590),

Gene: Rossetti_40 Start: 34547, Stop: 34158, Start Num: 11
Candidate Starts for Rossetti_40:
(Start: 11 @34547 has 30 MA's), (Start: 12 @34538 has 18 MA's), (17, 34499), (19, 34475), (21, 34469), (24, 34442), (25, 34403), (27, 34379), (31, 34334), (41, 34247), (43, 34235), (46, 34223),

Gene: Rumpelstiltskin_40 Start: 34547, Stop: 34158, Start Num: 11
Candidate Starts for Rumpelstiltskin_40:
(Start: 11 @34547 has 30 MA's), (Start: 12 @34538 has 18 MA's), (17, 34499), (19, 34475), (21, 34469), (24, 34442), (25, 34403), (27, 34379), (31, 34334), (41, 34247), (46, 34223),

Gene: Sarshaun_40 Start: 34314, Stop: 33925, Start Num: 11
Candidate Starts for Sarshaun_40:
(Start: 11 @34314 has 30 MA's), (Start: 12 @34305 has 18 MA's), (17, 34266), (19, 34242), (21, 34236), (25, 34170), (27, 34146), (31, 34101), (39, 34020), (41, 34014), (43, 34002), (46, 33990),

Gene: Settecandela_40 Start: 22957, Stop: 22583, Start Num: 12
Candidate Starts for Settecandela_40:
(Start: 12 @22957 has 18 MA's), (18, 22906), (20, 22888), (31, 22750), (49, 22618), (50, 22612),

Gene: Sheng711_38 Start: 33042, Stop: 32662, Start Num: 12
Candidate Starts for Sheng711_38:
(Start: 8 @33078 has 7 MA's), (Start: 12 @33042 has 18 MA's), (15, 33009), (19, 32979), (21, 32973), (24, 32946), (25, 32907), (28, 32877), (31, 32838), (39, 32760), (44, 32733), (45, 32727),

Gene: Silverleaf_37 Start: 32935, Stop: 32525, Start Num: 9
Candidate Starts for Silverleaf_37:
(Start: 8 @32941 has 7 MA's), (Start: 9 @32935 has 20 MA's), (10, 32917), (Start: 11 @32914 has 30 MA's), (Start: 12 @32905 has 18 MA's), (14, 32872), (24, 32806), (25, 32767), (27, 32743), (31,

32698), (33, 32683), (46, 32590),

Gene: Snenia_38 Start: 34517, Stop: 34134, Start Num: 12
Candidate Starts for Snenia_38:
(1, 34736), (2, 34730), (3, 34709), (4, 34688), (Start: 8 @34553 has 7 MA's), (Start: 9 @34547 has 20 MA's), (Start: 12 @34517 has 18 MA's), (15, 34481), (17, 34475), (19, 34451), (21, 34445), (24, 34418), (25, 34379), (26, 34367), (27, 34355), (29, 34322), (31, 34310), (35, 34253), (45, 34202), (51, 34139),

Gene: SoJulia_41 Start: 34540, Stop: 34151, Start Num: 11
Candidate Starts for SoJulia_41:
(Start: 11 @34540 has 30 MA's), (Start: 12 @34531 has 18 MA's), (17, 34492), (19, 34468), (21, 34462), (24, 34435), (25, 34396), (27, 34372), (31, 34327), (41, 34240), (46, 34216),

Gene: Soap141_40 Start: 34314, Stop: 33925, Start Num: 11
Candidate Starts for Soap141_40:
(Start: 11 @34314 has 30 MA's), (Start: 12 @34305 has 18 MA's), (17, 34266), (19, 34242), (21, 34236), (25, 34170), (27, 34146), (31, 34101), (39, 34020), (41, 34014), (43, 34002), (46, 33990),

Gene: Tourach_40 Start: 34296, Stop: 33907, Start Num: 11
Candidate Starts for Tourach_40:
(Start: 11 @34296 has 30 MA's), (Start: 12 @34287 has 18 MA's), (17, 34248), (21, 34218), (24, 34191), (25, 34152), (27, 34128), (31, 34083), (41, 33996), (43, 33984), (46, 33972),

Gene: TriFive_38 Start: 34516, Stop: 34133, Start Num: 12
Candidate Starts for TriFive_38:
(1, 34735), (2, 34729), (3, 34708), (4, 34687), (Start: 8 @34552 has 7 MA's), (Start: 9 @34546 has 20 MA's), (Start: 12 @34516 has 18 MA's), (15, 34480), (17, 34474), (19, 34450), (21, 34444), (24, 34417), (25, 34378), (26, 34366), (27, 34354), (29, 34321), (31, 34309), (35, 34252), (45, 34201), (51, 34138),

Gene: Tyson_37 Start: 32936, Stop: 32526, Start Num: 9
Candidate Starts for Tyson_37:
(Start: 8 @32942 has 7 MA's), (Start: 9 @32936 has 20 MA's), (10, 32918), (Start: 11 @32915 has 30 MA's), (Start: 12 @32906 has 18 MA's), (14, 32873), (24, 32807), (25, 32768), (27, 32744), (31, 32699), (33, 32684), (46, 32591),

Gene: UPIE_38 Start: 32940, Stop: 32524, Start Num: 8
Candidate Starts for UPIE_38:
(Start: 8 @32940 has 7 MA's), (Start: 9 @32934 has 20 MA's), (Start: 11 @32913 has 30 MA's), (Start: 12 @32904 has 18 MA's), (14, 32871), (24, 32805), (25, 32766), (27, 32742), (31, 32697), (46, 32589),

Gene: Underpass_40 Start: 34281, Stop: 33892, Start Num: 11
Candidate Starts for Underpass_40:
(Start: 11 @34281 has 30 MA's), (Start: 12 @34272 has 18 MA's), (17, 34233), (19, 34209), (21, 34203), (24, 34176), (25, 34137), (27, 34113), (31, 34068), (41, 33981), (43, 33969), (46, 33957),

Gene: Vetrix_40 Start: 34287, Stop: 33898, Start Num: 11
Candidate Starts for Vetrix_40:
(Start: 11 @34287 has 30 MA's), (Start: 12 @34278 has 18 MA's), (17, 34239), (19, 34215), (21, 34209), (24, 34182), (25, 34143), (27, 34119), (31, 34074), (41, 33987), (46, 33963),

Gene: Wamburgrxpress_38 Start: 32949, Stop: 32539, Start Num: 9

Candidate Starts for Wamburgrxpress_38:
(Start: 8 @32955 has 7 MA's), (Start: 9 @32949 has 20 MA's), (Start: 11 @32928 has 30 MA's), (Start: 12 @32919 has 18 MA's), (14, 32886), (24, 32820), (25, 32781), (27, 32757), (31, 32712), (46, 32604),

Gene: Whirlwind_39 Start: 34372, Stop: 33890, Start Num: 6
Candidate Starts for Whirlwind_39:
(Start: 6 @34372 has 1 MA's), (7, 34342), (Start: 8 @34312 has 7 MA's), (Start: 9 @34306 has 20 MA's), (Start: 12 @34276 has 18 MA's), (17, 34237), (19, 34213), (21, 34207), (24, 34180), (25, 34141), (26, 34129), (27, 34117), (29, 34084), (45, 33958), (51, 33895),

Gene: Wigglewiggle_40 Start: 34313, Stop: 33924, Start Num: 11
Candidate Starts for Wigglewiggle_40:
(Start: 11 @34313 has 30 MA's), (Start: 12 @34304 has 18 MA's), (17, 34265), (19, 34241), (21, 34235), (25, 34169), (27, 34145), (31, 34100), (39, 34019), (41, 34013), (43, 34001), (46, 33989),

Gene: Wilder_40 Start: 34286, Stop: 33897, Start Num: 11
Candidate Starts for Wilder_40:
(Start: 11 @34286 has 30 MA's), (Start: 12 @34277 has 18 MA's), (17, 34238), (19, 34214), (21, 34208), (25, 34142), (27, 34118), (31, 34073), (39, 33992), (41, 33986), (43, 33974), (46, 33962),

Gene: Winky_40 Start: 34280, Stop: 33891, Start Num: 11
Candidate Starts for Winky_40:
(Start: 11 @34280 has 30 MA's), (Start: 12 @34271 has 18 MA's), (17, 34232), (19, 34208), (21, 34202), (24, 34175), (25, 34136), (27, 34112), (31, 34067), (41, 33980), (46, 33956),

Gene: Wyatt2_38 Start: 32935, Stop: 32525, Start Num: 9
Candidate Starts for Wyatt2_38:
(Start: 8 @32941 has 7 MA's), (Start: 9 @32935 has 20 MA's), (10, 32917), (Start: 11 @32914 has 30 MA's), (Start: 12 @32905 has 18 MA's), (14, 32872), (24, 32806), (25, 32767), (27, 32743), (31, 32698), (33, 32683), (46, 32590),

Gene: Zakai_40 Start: 34538, Stop: 34149, Start Num: 11
Candidate Starts for Zakai_40:
(Start: 11 @34538 has 30 MA's), (Start: 12 @34529 has 18 MA's), (17, 34490), (19, 34466), (21, 34460), (25, 34394), (27, 34370), (31, 34325), (39, 34244), (41, 34238), (43, 34226), (46, 34214),

Gene: Zaria_38 Start: 32950, Stop: 32540, Start Num: 9
Candidate Starts for Zaria_38:
(Start: 8 @32956 has 7 MA's), (Start: 9 @32950 has 20 MA's), (10, 32932), (Start: 11 @32929 has 30 MA's), (Start: 12 @32920 has 18 MA's), (14, 32887), (24, 32821), (25, 32782), (27, 32758), (31, 32713), (33, 32698), (46, 32605),

Gene: ZhongYanYuan_39 Start: 34142, Stop: 33753, Start Num: 11
Candidate Starts for ZhongYanYuan_39:
(Start: 11 @34142 has 30 MA's), (Start: 12 @34133 has 18 MA's), (17, 34094), (21, 34064), (25, 33998), (27, 33974), (31, 33929), (37, 33857), (41, 33842), (43, 33830), (46, 33818),