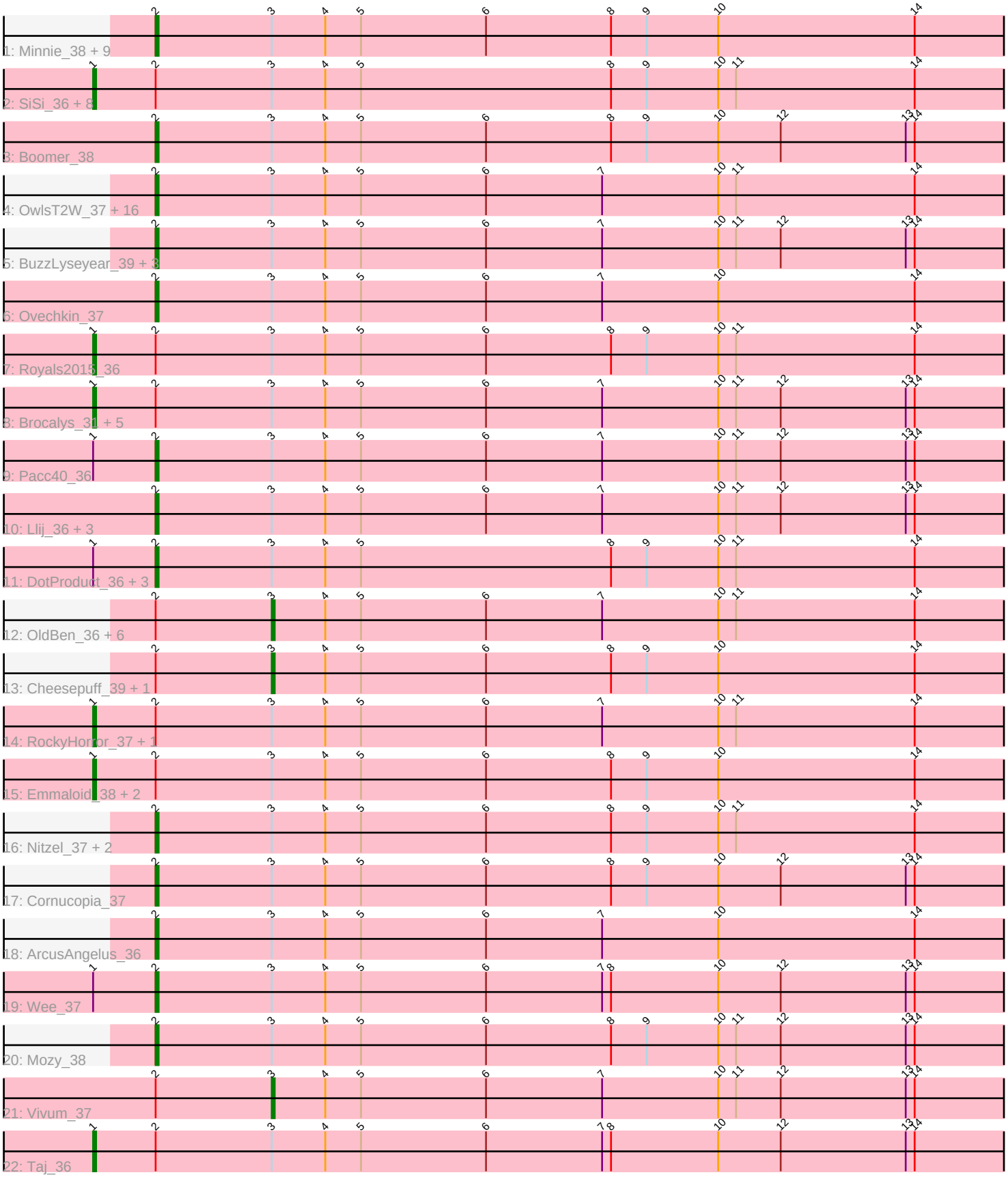
Pham 345651


1: Minnie_38 + 9
2: SiSi_36 + 8
3: Boomer_38
4: OwlsT2W_37 + 16
5: BuzzLyseyear_39 + 3
6: Ovechkin_37
7: Royals2015_36
8: Brocalys_30 + 5
9: Pacc40_36
10: Llij_36 + 3
11: DotProduct_36 + 3
12: OldBen_36 + 6
13: Cheesepuff_39 + 1
14: RockyHorror_37 + 1
15: Emmaloid_38 + 2
16: Nitzel_37 + 2
17: Cornucopia_37
18: ArcusAngelus_36
19: Wee_37
20: Mozy_38
21: Vivum_37
22: Taj_36

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 345651 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345651 has 81 members, 0 are drafts.

Phages represented in each track:
• Track 1 : Minnie_38, Cerasum_32, BigPhil_32, Sarma624_32, VRedHorse_36, Modragons_36, DaddyRickover_36, Quico_37, Velveteen_31, Girafales_37
• Track 2 : SiSi_36, LittleShirley_39, Veteran_36, Sabbb_37, Kersh_35, Krakatau_37, PhlipPhlop_37, Starcevich_40, Plumbus_38
• Track 3 : Boomer_38
• Track 4 : OwlsT2W_37, Dante_36, Daenerys_36, Inventum_36, JoeyJr_36, OlympiaSaint_36, Deb65_36, Ruby_38, Spoonbill_36, Leozinho_38, Nimbo_36, Girr_38, Stap_37, BlueCrab_36, Empress_37, PHappiness_36, Job42_40
• Track 5 : BuzzLyseyear_39, QuickMath_37, Firehouse51_37, Kimberlium_38
• Track 6 : Ovechkin_37
• Track 7 : Royals2015_36
• Track 8 : Brocalys_31, Clifton_30, ShroomBoi_33, Guppsters_38, Dorothy_36, Leperchaun_36
• Track 9 : Pacc40_36
• Track 10 : Llij_36, RitaG_37, Lucia_37, PMC_36
• Track 11 : DotProduct_36, GigiOuiOui_36, GUmbie_36, Mutaforma13_36
• Track 12 : OldBen_36, Scottish_37, Geralt_36, Karhdo_36, MisterCuddles_38, Polka14_37, KingMidas_38
• Track 13 : Cheesepuff_39, SimranZ1_39
• Track 14 : RockyHorror_37, Zerg_36
• Track 15 : Emmaloid_38, Totinger_37, Slim_38
• Track 16 : Nitzel_37, Che8_38, Ibhubesi_36
• Track 17 : Cornucopia_37
• Track 18 : ArcusAngelus_36
• Track 19 : Wee_37
• Track 20 : Mozy_38
• Track 21 : Vivum_37
• Track 22 : Taj_36

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

The start number called the most often in the published annotations is 2, it was called in 49 of the 81 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• ArcusAngelus_36, BigPhil_32, BlueCrab_36, Boomer_38, BuzzLyseyear_39, Cerasum_32, Che8_38, Cornucopia_37, DaddyRickover_36, Daenerys_36, Dante_36, Deb65_36, DotProduct_36, Empress_37, Firehouse51_37, GUmbie_36, GigiOuiOui_36, Girafales_37, Girr_38, Ibhubesi_36, Inventum_36, Job42_40, JoeyJr_36, Kimberlium_38, Leozinho_38, Llij_36, Lucia_37, Minnie_38, Modragons_36, Mozy_38, Mutaforma13_36, Nimbo_36, Nitzel_37, OlympiaSaint_36, Ovechkin_37, OwlsT2W_37, PHappiness_36, PMC_36, Pacc40_36, QuickMath_37, Quico_37, RitaG_37, Ruby_38, Sarma624_32, Spoonbill_36, Stap_37, VRedHorse_36, Velveteen_31, Wee_37,

Genes that have the "Most Annotated" start but do not call it:
• Brocalys_31, Cheesepuff_39, Clifton_30, Dorothy_36, Emmaloid_38, Geralt_36, Guppsters_38, Karhdo_36, Kersh_35, KingMidas_38, Krakatau_37, Leperchaun_36, LittleShirley_39, MisterCuddles_38, OldBen_36, PhlipPhlop_37, Plumbus_38, Polka14_37, RockyHorror_37, Royals2015_36, Sabbb_37, Scottish_37, ShroomBoi_33, SiSi_36, SimranZ1_39, Slim_38, Starcevich_40, Taj_36, Totinger_37, Veteran_36, Vivum_37, Zerg_36,

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

Summary by start number:

Start 1:
• Found in 28 of 81 (34.6%) of genes in pham
• Manual Annotations of this start: 22 of 81
• Called 78.6% of time when present
• Phage (with cluster) where this start called: Brocalys_31 (F1), Clifton_30 (F1), Dorothy_36 (F1), Emmaloid_38 (F1), Guppsters_38 (F1), Kersh_35 (F1), Krakatau_37 (F1), Leperchaun_36 (F1), LittleShirley_39 (F1), PhlipPhlop_37 (F1), Plumbus_38 (F1), RockyHorror_37 (F1), Royals2015_36 (F1), Sabbb_37 (F1), ShroomBoi_33 (F1), SiSi_36 (F1), Slim_38 (F1), Starcevich_40 (F1), Taj_36 (F1), Totinger_37 (F1), Veteran_36 (F1), Zerg_36 (F1),

Start 2:
• Found in 81 of 81 (100.0%) of genes in pham
• Manual Annotations of this start: 49 of 81
• Called 60.5% of time when present
• Phage (with cluster) where this start called: ArcusAngelus_36 (F1), BigPhil_32 (F1), BlueCrab_36 (F1), Boomer_38 (F1), BuzzLyseyear_39 (F1), Cerasum_32 (F1), Che8_38 (F1), Cornucopia_37 (F1), DaddyRickover_36 (F1), Daenerys_36 (F1), Dante_36 (F1), Deb65_36 (F1), DotProduct_36 (F1), Empress_37 (F1), Firehouse51_37 (F1), GUmbie_36 (F1), GigiOuiOui_36 (F1), Girafales_37 (F1), Girr_38 (F1), Ibhubesi_36 (F1), Inventum_36 (F1), Job42_40 (F1), JoeyJr_36 (F1), Kimberlium_38 (F1), Leozinho_38 (F1), Llij_36 (F1), Lucia_37 (F1), Minnie_38 (F1), Modragons_36 (F1), Mozy_38 (F1), Mutaforma13_36 (F1), Nimbo_36 (F1), Nitzel_37 (F1), OlympiaSaint_36 (F1), Ovechkin_37 (F1), OwlsT2W_37 (F1), PHappiness_36 (F1), PMC_36 (F1), Pacc40_36 (F1), QuickMath_37 (F1), Quico_37 (F1), RitaG_37 (F1), Ruby_38 (F1), Sarma624_32 (F1), Spoonbill_36 (F1), Stap_37 (F1), VRedHorse_36 (F1), Velveteen_31 (F1), Wee_37 (F1),

Start 3:

• Found in 81 of 81 (100.0%) of genes in pham
• Manual Annotations of this start: 10 of 81
• Called 12.3% of time when present
• Phage (with cluster) where this start called: Cheesepuff_39 (F1), Geralt_36 (F1), Karhdo_36 (F1), KingMidas_38 (F1), MisterCuddles_38 (F1), OldBen_36 (F1), Polka14_37 (F1), Scottish_37 (F1), SimranZ1_39 (F1), Vivum_37 (F1),

Summary by clusters:

There is one cluster represented in this pham: F1

Info for manual annotations of cluster F1:
•Start number 1 was manually annotated 22 times for cluster F1.
•Start number 2 was manually annotated 49 times for cluster F1.
•Start number 3 was manually annotated 10 times for cluster F1.

Gene Information:

Gene: ArcusAngelus_36 Start: 30765, Stop: 31055, Start Num: 2
Candidate Starts for ArcusAngelus_36:
(Start: 2 @30765 has 49 MA's), (Start: 3 @30804 has 10 MA's), (4, 30822), (5, 30834), (6, 30876), (7, 30915), (10, 30954), (14, 31020),

Gene: BigPhil_32 Start: 26427, Stop: 26717, Start Num: 2
Candidate Starts for BigPhil_32:
(Start: 2 @26427 has 49 MA's), (Start: 3 @26466 has 10 MA's), (4, 26484), (5, 26496), (6, 26538), (8, 26580), (9, 26592), (10, 26616), (14, 26682),

Gene: BlueCrab_36 Start: 30388, Stop: 30678, Start Num: 2
Candidate Starts for BlueCrab_36:
(Start: 2 @30388 has 49 MA's), (Start: 3 @30427 has 10 MA's), (4, 30445), (5, 30457), (6, 30499), (7, 30538), (10, 30577), (11, 30583), (14, 30643),

Gene: Boomer_38 Start: 30281, Stop: 30571, Start Num: 2
Candidate Starts for Boomer_38:
(Start: 2 @30281 has 49 MA's), (Start: 3 @30320 has 10 MA's), (4, 30338), (5, 30350), (6, 30392), (8, 30434), (9, 30446), (10, 30470), (12, 30491), (13, 30533), (14, 30536),

Gene: Brocalys_31 Start: 25986, Stop: 26297, Start Num: 1
Candidate Starts for Brocalys_31:
(Start: 1 @25986 has 22 MA's), (Start: 2 @26007 has 49 MA's), (Start: 3 @26046 has 10 MA's), (4, 26064), (5, 26076), (6, 26118), (7, 26157), (10, 26196), (11, 26202), (12, 26217), (13, 26259), (14, 26262),

Gene: BuzzLyseyear_39 Start: 31008, Stop: 31298, Start Num: 2
Candidate Starts for BuzzLyseyear_39:
(Start: 2 @31008 has 49 MA's), (Start: 3 @31047 has 10 MA's), (4, 31065), (5, 31077), (6, 31119), (7, 31158), (10, 31197), (11, 31203), (12, 31218), (13, 31260), (14, 31263),

Gene: Cerasum_32 Start: 26427, Stop: 26717, Start Num: 2
Candidate Starts for Cerasum_32:

(Start: 2 @26427 has 49 MA's), (Start: 3 @26466 has 10 MA's), (4, 26484), (5, 26496), (6, 26538), (8, 26580), (9, 26592), (10, 26616), (14, 26682),

Gene: Che8_38 Start: 30659, Stop: 30949, Start Num: 2
Candidate Starts for Che8_38:
(Start: 2 @30659 has 49 MA's), (Start: 3 @30698 has 10 MA's), (4, 30716), (5, 30728), (6, 30770), (8, 30812), (9, 30824), (10, 30848), (11, 30854), (14, 30914),

Gene: Cheesepuff_39 Start: 31517, Stop: 31768, Start Num: 3
Candidate Starts for Cheesepuff_39:
(Start: 2 @31478 has 49 MA's), (Start: 3 @31517 has 10 MA's), (4, 31535), (5, 31547), (6, 31589), (8, 31631), (9, 31643), (10, 31667), (14, 31733),

Gene: Clifton_30 Start: 26337, Stop: 26648, Start Num: 1
Candidate Starts for Clifton_30:
(Start: 1 @26337 has 22 MA's), (Start: 2 @26358 has 49 MA's), (Start: 3 @26397 has 10 MA's), (4, 26415), (5, 26427), (6, 26469), (7, 26508), (10, 26547), (11, 26553), (12, 26568), (13, 26610), (14, 26613),

Gene: Cornucopia_37 Start: 30234, Stop: 30524, Start Num: 2
Candidate Starts for Cornucopia_37:
(Start: 2 @30234 has 49 MA's), (Start: 3 @30273 has 10 MA's), (4, 30291), (5, 30303), (6, 30345), (8, 30387), (9, 30399), (10, 30423), (12, 30444), (13, 30486), (14, 30489),

Gene: DaddyRickover_36 Start: 30400, Stop: 30690, Start Num: 2
Candidate Starts for DaddyRickover_36:
(Start: 2 @30400 has 49 MA's), (Start: 3 @30439 has 10 MA's), (4, 30457), (5, 30469), (6, 30511), (8, 30553), (9, 30565), (10, 30589), (14, 30655),

Gene: Daenerys_36 Start: 30222, Stop: 30512, Start Num: 2
Candidate Starts for Daenerys_36:
(Start: 2 @30222 has 49 MA's), (Start: 3 @30261 has 10 MA's), (4, 30279), (5, 30291), (6, 30333), (7, 30372), (10, 30411), (11, 30417), (14, 30477),

Gene: Dante_36 Start: 30339, Stop: 30629, Start Num: 2
Candidate Starts for Dante_36:
(Start: 2 @30339 has 49 MA's), (Start: 3 @30378 has 10 MA's), (4, 30396), (5, 30408), (6, 30450), (7, 30489), (10, 30528), (11, 30534), (14, 30594),

Gene: Deb65_36 Start: 30222, Stop: 30512, Start Num: 2
Candidate Starts for Deb65_36:
(Start: 2 @30222 has 49 MA's), (Start: 3 @30261 has 10 MA's), (4, 30279), (5, 30291), (6, 30333), (7, 30372), (10, 30411), (11, 30417), (14, 30477),

Gene: Dorothy_36 Start: 30166, Stop: 30477, Start Num: 1
Candidate Starts for Dorothy_36:
(Start: 1 @30166 has 22 MA's), (Start: 2 @30187 has 49 MA's), (Start: 3 @30226 has 10 MA's), (4, 30244), (5, 30256), (6, 30298), (7, 30337), (10, 30376), (11, 30382), (12, 30397), (13, 30439), (14, 30442),

Gene: DotProduct_36 Start: 30211, Stop: 30501, Start Num: 2
Candidate Starts for DotProduct_36:

(Start: 1 @30190 has 22 MA's), (Start: 2 @30211 has 49 MA's), (Start: 3 @30250 has 10 MA's), (4, 30268), (5, 30280), (8, 30364), (9, 30376), (10, 30400), (11, 30406), (14, 30466),

Gene: Emmaloid_38 Start: 31581, Stop: 31892, Start Num: 1
Candidate Starts for Emmaloid_38:
(Start: 1 @31581 has 22 MA's), (Start: 2 @31602 has 49 MA's), (Start: 3 @31641 has 10 MA's), (4, 31659), (5, 31671), (6, 31713), (8, 31755), (9, 31767), (10, 31791), (14, 31857),

Gene: Empress_37 Start: 31635, Stop: 31925, Start Num: 2
Candidate Starts for Empress_37:
(Start: 2 @31635 has 49 MA's), (Start: 3 @31674 has 10 MA's), (4, 31692), (5, 31704), (6, 31746), (7, 31785), (10, 31824), (11, 31830), (14, 31890),

Gene: Firehouse51_37 Start: 31010, Stop: 31300, Start Num: 2
Candidate Starts for Firehouse51_37:
(Start: 2 @31010 has 49 MA's), (Start: 3 @31049 has 10 MA's), (4, 31067), (5, 31079), (6, 31121), (7, 31160), (10, 31199), (11, 31205), (12, 31220), (13, 31262), (14, 31265),

Gene: GUmbie_36 Start: 30241, Stop: 30531, Start Num: 2
Candidate Starts for GUmbie_36:
(Start: 1 @30220 has 22 MA's), (Start: 2 @30241 has 49 MA's), (Start: 3 @30280 has 10 MA's), (4, 30298), (5, 30310), (8, 30394), (9, 30406), (10, 30430), (11, 30436), (14, 30496),

Gene: Geralt_36 Start: 30260, Stop: 30511, Start Num: 3
Candidate Starts for Geralt_36:
(Start: 2 @30221 has 49 MA's), (Start: 3 @30260 has 10 MA's), (4, 30278), (5, 30290), (6, 30332), (7, 30371), (10, 30410), (11, 30416), (14, 30476),

Gene: GigiOuiOui_36 Start: 30353, Stop: 30643, Start Num: 2
Candidate Starts for GigiOuiOui_36:
(Start: 1 @30332 has 22 MA's), (Start: 2 @30353 has 49 MA's), (Start: 3 @30392 has 10 MA's), (4, 30410), (5, 30422), (8, 30506), (9, 30518), (10, 30542), (11, 30548), (14, 30608),

Gene: Girafales_37 Start: 30028, Stop: 30318, Start Num: 2
Candidate Starts for Girafales_37:
(Start: 2 @30028 has 49 MA's), (Start: 3 @30067 has 10 MA's), (4, 30085), (5, 30097), (6, 30139), (8, 30181), (9, 30193), (10, 30217), (14, 30283),

Gene: Girr_38 Start: 31257, Stop: 31547, Start Num: 2
Candidate Starts for Girr_38:
(Start: 2 @31257 has 49 MA's), (Start: 3 @31296 has 10 MA's), (4, 31314), (5, 31326), (6, 31368), (7, 31407), (10, 31446), (11, 31452), (14, 31512),

Gene: Guppsters_38 Start: 30718, Stop: 31029, Start Num: 1
Candidate Starts for Guppsters_38:
(Start: 1 @30718 has 22 MA's), (Start: 2 @30739 has 49 MA's), (Start: 3 @30778 has 10 MA's), (4, 30796), (5, 30808), (6, 30850), (7, 30889), (10, 30928), (11, 30934), (12, 30949), (13, 30991), (14, 30994),

Gene: Ibhubesi_36 Start: 30164, Stop: 30454, Start Num: 2
Candidate Starts for Ibhubesi_36:
(Start: 2 @30164 has 49 MA's), (Start: 3 @30203 has 10 MA's), (4, 30221), (5, 30233), (6, 30275), (8, 30317), (9, 30329), (10, 30353), (11, 30359), (14, 30419),

Gene: Inventum_36 Start: 30902, Stop: 31192, Start Num: 2
Candidate Starts for Inventum_36:
(Start: 2 @30902 has 49 MA's), (Start: 3 @30941 has 10 MA's), (4, 30959), (5, 30971), (6, 31013), (7, 31052), (10, 31091), (11, 31097), (14, 31157),

Gene: Job42_40 Start: 32218, Stop: 32508, Start Num: 2
Candidate Starts for Job42_40:
(Start: 2 @32218 has 49 MA's), (Start: 3 @32257 has 10 MA's), (4, 32275), (5, 32287), (6, 32329), (7, 32368), (10, 32407), (11, 32413), (14, 32473),

Gene: JoeyJr_36 Start: 30390, Stop: 30680, Start Num: 2
Candidate Starts for JoeyJr_36:
(Start: 2 @30390 has 49 MA's), (Start: 3 @30429 has 10 MA's), (4, 30447), (5, 30459), (6, 30501), (7, 30540), (10, 30579), (11, 30585), (14, 30645),

Gene: Karhdo_36 Start: 30393, Stop: 30644, Start Num: 3
Candidate Starts for Karhdo_36:
(Start: 2 @30354 has 49 MA's), (Start: 3 @30393 has 10 MA's), (4, 30411), (5, 30423), (6, 30465), (7, 30504), (10, 30543), (11, 30549), (14, 30609),

Gene: Kersh_35 Start: 31408, Stop: 31719, Start Num: 1
Candidate Starts for Kersh_35:
(Start: 1 @31408 has 22 MA's), (Start: 2 @31429 has 49 MA's), (Start: 3 @31468 has 10 MA's), (4, 31486), (5, 31498), (8, 31582), (9, 31594), (10, 31618), (11, 31624), (14, 31684),

Gene: Kimberlium_38 Start: 31345, Stop: 31635, Start Num: 2
Candidate Starts for Kimberlium_38:
(Start: 2 @31345 has 49 MA's), (Start: 3 @31384 has 10 MA's), (4, 31402), (5, 31414), (6, 31456), (7, 31495), (10, 31534), (11, 31540), (12, 31555), (13, 31597), (14, 31600),

Gene: KingMidas_38 Start: 32123, Stop: 32374, Start Num: 3
Candidate Starts for KingMidas_38:
(Start: 2 @32084 has 49 MA's), (Start: 3 @32123 has 10 MA's), (4, 32141), (5, 32153), (6, 32195), (7, 32234), (10, 32273), (11, 32279), (14, 32339),

Gene: Krakatau_37 Start: 30895, Stop: 31206, Start Num: 1
Candidate Starts for Krakatau_37:
(Start: 1 @30895 has 22 MA's), (Start: 2 @30916 has 49 MA's), (Start: 3 @30955 has 10 MA's), (4, 30973), (5, 30985), (8, 31069), (9, 31081), (10, 31105), (11, 31111), (14, 31171),

Gene: Leozinho_38 Start: 30643, Stop: 30933, Start Num: 2
Candidate Starts for Leozinho_38:
(Start: 2 @30643 has 49 MA's), (Start: 3 @30682 has 10 MA's), (4, 30700), (5, 30712), (6, 30754), (7, 30793), (10, 30832), (11, 30838), (14, 30898),

Gene: Leperchaun_36 Start: 30275, Stop: 30586, Start Num: 1
Candidate Starts for Leperchaun_36:
(Start: 1 @30275 has 22 MA's), (Start: 2 @30296 has 49 MA's), (Start: 3 @30335 has 10 MA's), (4, 30353), (5, 30365), (6, 30407), (7, 30446), (10, 30485), (11, 30491), (12, 30506), (13, 30548), (14, 30551),

Gene: LittleShirley_39 Start: 31841, Stop: 32152, Start Num: 1

Candidate Starts for LittleShirley_39:
(Start: 1 @31841 has 22 MA's), (Start: 2 @31862 has 49 MA's), (Start: 3 @31901 has 10 MA's), (4, 31919), (5, 31931), (8, 32015), (9, 32027), (10, 32051), (11, 32057), (14, 32117),

Gene: Llij_36 Start: 30202, Stop: 30492, Start Num: 2
Candidate Starts for Llij_36:
(Start: 2 @30202 has 49 MA's), (Start: 3 @30241 has 10 MA's), (4, 30259), (5, 30271), (6, 30313), (7, 30352), (10, 30391), (11, 30397), (12, 30412), (13, 30454), (14, 30457),

Gene: Lucia_37 Start: 30333, Stop: 30623, Start Num: 2
Candidate Starts for Lucia_37:
(Start: 2 @30333 has 49 MA's), (Start: 3 @30372 has 10 MA's), (4, 30390), (5, 30402), (6, 30444), (7, 30483), (10, 30522), (11, 30528), (12, 30543), (13, 30585), (14, 30588),

Gene: Minnie_38 Start: 31204, Stop: 31494, Start Num: 2
Candidate Starts for Minnie_38:
(Start: 2 @31204 has 49 MA's), (Start: 3 @31243 has 10 MA's), (4, 31261), (5, 31273), (6, 31315), (8, 31357), (9, 31369), (10, 31393), (14, 31459),

Gene: MisterCuddles_38 Start: 31296, Stop: 31547, Start Num: 3
Candidate Starts for MisterCuddles_38:
(Start: 2 @31257 has 49 MA's), (Start: 3 @31296 has 10 MA's), (4, 31314), (5, 31326), (6, 31368), (7, 31407), (10, 31446), (11, 31452), (14, 31512),

Gene: Modragons_36 Start: 30273, Stop: 30563, Start Num: 2
Candidate Starts for Modragons_36:
(Start: 2 @30273 has 49 MA's), (Start: 3 @30312 has 10 MA's), (4, 30330), (5, 30342), (6, 30384), (8, 30426), (9, 30438), (10, 30462), (14, 30528),

Gene: Mozy_38 Start: 31099, Stop: 31389, Start Num: 2
Candidate Starts for Mozy_38:
(Start: 2 @31099 has 49 MA's), (Start: 3 @31138 has 10 MA's), (4, 31156), (5, 31168), (6, 31210), (8, 31252), (9, 31264), (10, 31288), (11, 31294), (12, 31309), (13, 31351), (14, 31354),

Gene: Mutaforma13_36 Start: 30479, Stop: 30769, Start Num: 2
Candidate Starts for Mutaforma13_36:
(Start: 1 @30458 has 22 MA's), (Start: 2 @30479 has 49 MA's), (Start: 3 @30518 has 10 MA's), (4, 30536), (5, 30548), (8, 30632), (9, 30644), (10, 30668), (11, 30674), (14, 30734),

Gene: Nimbo_36 Start: 30225, Stop: 30515, Start Num: 2
Candidate Starts for Nimbo_36:
(Start: 2 @30225 has 49 MA's), (Start: 3 @30264 has 10 MA's), (4, 30282), (5, 30294), (6, 30336), (7, 30375), (10, 30414), (11, 30420), (14, 30480),

Gene: Nitzel_37 Start: 30941, Stop: 31231, Start Num: 2
Candidate Starts for Nitzel_37:
(Start: 2 @30941 has 49 MA's), (Start: 3 @30980 has 10 MA's), (4, 30998), (5, 31010), (6, 31052), (8, 31094), (9, 31106), (10, 31130), (11, 31136), (14, 31196),

Gene: OldBen_36 Start: 30295, Stop: 30546, Start Num: 3
Candidate Starts for OldBen_36:
(Start: 2 @30256 has 49 MA's), (Start: 3 @30295 has 10 MA's), (4, 30313), (5, 30325), (6, 30367), (7, 30406), (10, 30445), (11, 30451), (14, 30511),

Gene: OlympiaSaint_36 Start: 30671, Stop: 30961, Start Num: 2
Candidate Starts for OlympiaSaint_36:
(Start: 2 @30671 has 49 MA's), (Start: 3 @30710 has 10 MA's), (4, 30728), (5, 30740), (6, 30782), (7, 30821), (10, 30860), (11, 30866), (14, 30926),

Gene: Ovechkin_37 Start: 31231, Stop: 31521, Start Num: 2
Candidate Starts for Ovechkin_37:
(Start: 2 @31231 has 49 MA's), (Start: 3 @31270 has 10 MA's), (4, 31288), (5, 31300), (6, 31342), (7, 31381), (10, 31420), (14, 31486),

Gene: OwlsT2W_37 Start: 30646, Stop: 30936, Start Num: 2
Candidate Starts for OwlsT2W_37:
(Start: 2 @30646 has 49 MA's), (Start: 3 @30685 has 10 MA's), (4, 30703), (5, 30715), (6, 30757), (7, 30796), (10, 30835), (11, 30841), (14, 30901),

Gene: PHappiness_36 Start: 30198, Stop: 30488, Start Num: 2
Candidate Starts for PHappiness_36:
(Start: 2 @30198 has 49 MA's), (Start: 3 @30237 has 10 MA's), (4, 30255), (5, 30267), (6, 30309), (7, 30348), (10, 30387), (11, 30393), (14, 30453),

Gene: PMC_36 Start: 30202, Stop: 30492, Start Num: 2
Candidate Starts for PMC_36:
(Start: 2 @30202 has 49 MA's), (Start: 3 @30241 has 10 MA's), (4, 30259), (5, 30271), (6, 30313), (7, 30352), (10, 30391), (11, 30397), (12, 30412), (13, 30454), (14, 30457),

Gene: Pacc40_36 Start: 30392, Stop: 30682, Start Num: 2
Candidate Starts for Pacc40_36:
(Start: 1 @30371 has 22 MA's), (Start: 2 @30392 has 49 MA's), (Start: 3 @30431 has 10 MA's), (4, 30449), (5, 30461), (6, 30503), (7, 30542), (10, 30581), (11, 30587), (12, 30602), (13, 30644), (14, 30647),

Gene: PhlipPhlop_37 Start: 31813, Stop: 32124, Start Num: 1
Candidate Starts for PhlipPhlop_37:
(Start: 1 @31813 has 22 MA's), (Start: 2 @31834 has 49 MA's), (Start: 3 @31873 has 10 MA's), (4, 31891), (5, 31903), (8, 31987), (9, 31999), (10, 32023), (11, 32029), (14, 32089),

Gene: Plumbus_38 Start: 30277, Stop: 30588, Start Num: 1
Candidate Starts for Plumbus_38:
(Start: 1 @30277 has 22 MA's), (Start: 2 @30298 has 49 MA's), (Start: 3 @30337 has 10 MA's), (4, 30355), (5, 30367), (8, 30451), (9, 30463), (10, 30487), (11, 30493), (14, 30553),

Gene: Polka14_37 Start: 30882, Stop: 31133, Start Num: 3
Candidate Starts for Polka14_37:
(Start: 2 @30843 has 49 MA's), (Start: 3 @30882 has 10 MA's), (4, 30900), (5, 30912), (6, 30954), (7, 30993), (10, 31032), (11, 31038), (14, 31098),

Gene: QuickMath_37 Start: 31568, Stop: 31858, Start Num: 2
Candidate Starts for QuickMath_37:
(Start: 2 @31568 has 49 MA's), (Start: 3 @31607 has 10 MA's), (4, 31625), (5, 31637), (6, 31679), (7, 31718), (10, 31757), (11, 31763), (12, 31778), (13, 31820), (14, 31823),

Gene: Quico_37 Start: 30028, Stop: 30318, Start Num: 2

Candidate Starts for Quico_37:
(Start: 2 @30028 has 49 MA's), (Start: 3 @30067 has 10 MA's), (4, 30085), (5, 30097), (6, 30139), (8, 30181), (9, 30193), (10, 30217), (14, 30283),

Gene: RitaG_37 Start: 30665, Stop: 30955, Start Num: 2
Candidate Starts for RitaG_37:
(Start: 2 @30665 has 49 MA's), (Start: 3 @30704 has 10 MA's), (4, 30722), (5, 30734), (6, 30776), (7, 30815), (10, 30854), (11, 30860), (12, 30875), (13, 30917), (14, 30920),

Gene: RockyHorror_37 Start: 30124, Stop: 30435, Start Num: 1
Candidate Starts for RockyHorror_37:
(Start: 1 @30124 has 22 MA's), (Start: 2 @30145 has 49 MA's), (Start: 3 @30184 has 10 MA's), (4, 30202), (5, 30214), (6, 30256), (7, 30295), (10, 30334), (11, 30340), (14, 30400),

Gene: Royals2015_36 Start: 30297, Stop: 30608, Start Num: 1
Candidate Starts for Royals2015_36:
(Start: 1 @30297 has 22 MA's), (Start: 2 @30318 has 49 MA's), (Start: 3 @30357 has 10 MA's), (4, 30375), (5, 30387), (6, 30429), (8, 30471), (9, 30483), (10, 30507), (11, 30513), (14, 30573),

Gene: Ruby_38 Start: 31257, Stop: 31547, Start Num: 2
Candidate Starts for Ruby_38:
(Start: 2 @31257 has 49 MA's), (Start: 3 @31296 has 10 MA's), (4, 31314), (5, 31326), (6, 31368), (7, 31407), (10, 31446), (11, 31452), (14, 31512),

Gene: Sabbb_37 Start: 30597, Stop: 30908, Start Num: 1
Candidate Starts for Sabbb_37:
(Start: 1 @30597 has 22 MA's), (Start: 2 @30618 has 49 MA's), (Start: 3 @30657 has 10 MA's), (4, 30675), (5, 30687), (8, 30771), (9, 30783), (10, 30807), (11, 30813), (14, 30873),

Gene: Sarma624_32 Start: 26427, Stop: 26717, Start Num: 2
Candidate Starts for Sarma624_32:
(Start: 2 @26427 has 49 MA's), (Start: 3 @26466 has 10 MA's), (4, 26484), (5, 26496), (6, 26538), (8, 26580), (9, 26592), (10, 26616), (14, 26682),

Gene: Scottish_37 Start: 31562, Stop: 31813, Start Num: 3
Candidate Starts for Scottish_37:
(Start: 2 @31523 has 49 MA's), (Start: 3 @31562 has 10 MA's), (4, 31580), (5, 31592), (6, 31634), (7, 31673), (10, 31712), (11, 31718), (14, 31778),

Gene: ShroomBoi_33 Start: 29273, Stop: 29584, Start Num: 1
Candidate Starts for ShroomBoi_33:
(Start: 1 @29273 has 22 MA's), (Start: 2 @29294 has 49 MA's), (Start: 3 @29333 has 10 MA's), (4, 29351), (5, 29363), (6, 29405), (7, 29444), (10, 29483), (11, 29489), (12, 29504), (13, 29546), (14, 29549),

Gene: SiSi_36 Start: 30181, Stop: 30492, Start Num: 1
Candidate Starts for SiSi_36:
(Start: 1 @30181 has 22 MA's), (Start: 2 @30202 has 49 MA's), (Start: 3 @30241 has 10 MA's), (4, 30259), (5, 30271), (8, 30355), (9, 30367), (10, 30391), (11, 30397), (14, 30457),

Gene: SimranZ1_39 Start: 30558, Stop: 30809, Start Num: 3
Candidate Starts for SimranZ1_39:

(Start: 2 @30519 has 49 MA's), (Start: 3 @30558 has 10 MA's), (4, 30576), (5, 30588), (6, 30630), (8, 30672), (9, 30684), (10, 30708), (14, 30774),

Gene: Slim_38 Start: 31572, Stop: 31883, Start Num: 1
Candidate Starts for Slim_38:
(Start: 1 @31572 has 22 MA's), (Start: 2 @31593 has 49 MA's), (Start: 3 @31632 has 10 MA's), (4, 31650), (5, 31662), (6, 31704), (8, 31746), (9, 31758), (10, 31782), (14, 31848),

Gene: Spoonbill_36 Start: 30482, Stop: 30772, Start Num: 2
Candidate Starts for Spoonbill_36:
(Start: 2 @30482 has 49 MA's), (Start: 3 @30521 has 10 MA's), (4, 30539), (5, 30551), (6, 30593), (7, 30632), (10, 30671), (11, 30677), (14, 30737),

Gene: Stap_37 Start: 30373, Stop: 30663, Start Num: 2
Candidate Starts for Stap_37:
(Start: 2 @30373 has 49 MA's), (Start: 3 @30412 has 10 MA's), (4, 30430), (5, 30442), (6, 30484), (7, 30523), (10, 30562), (11, 30568), (14, 30628),

Gene: Starcevich_40 Start: 31076, Stop: 31387, Start Num: 1
Candidate Starts for Starcevich_40:
(Start: 1 @31076 has 22 MA's), (Start: 2 @31097 has 49 MA's), (Start: 3 @31136 has 10 MA's), (4, 31154), (5, 31166), (8, 31250), (9, 31262), (10, 31286), (11, 31292), (14, 31352),

Gene: Taj_36 Start: 30359, Stop: 30670, Start Num: 1
Candidate Starts for Taj_36:
(Start: 1 @30359 has 22 MA's), (Start: 2 @30380 has 49 MA's), (Start: 3 @30419 has 10 MA's), (4, 30437), (5, 30449), (6, 30491), (7, 30530), (8, 30533), (10, 30569), (12, 30590), (13, 30632), (14, 30635),

Gene: Totinger_37 Start: 30183, Stop: 30494, Start Num: 1
Candidate Starts for Totinger_37:
(Start: 1 @30183 has 22 MA's), (Start: 2 @30204 has 49 MA's), (Start: 3 @30243 has 10 MA's), (4, 30261), (5, 30273), (6, 30315), (8, 30357), (9, 30369), (10, 30393), (14, 30459),

Gene: VRedHorse_36 Start: 30390, Stop: 30680, Start Num: 2
Candidate Starts for VRedHorse_36:
(Start: 2 @30390 has 49 MA's), (Start: 3 @30429 has 10 MA's), (4, 30447), (5, 30459), (6, 30501), (8, 30543), (9, 30555), (10, 30579), (14, 30645),

Gene: Velveteen_31 Start: 26427, Stop: 26717, Start Num: 2
Candidate Starts for Velveteen_31:
(Start: 2 @26427 has 49 MA's), (Start: 3 @26466 has 10 MA's), (4, 26484), (5, 26496), (6, 26538), (8, 26580), (9, 26592), (10, 26616), (14, 26682),

Gene: Veteran_36 Start: 30220, Stop: 30531, Start Num: 1
Candidate Starts for Veteran_36:
(Start: 1 @30220 has 22 MA's), (Start: 2 @30241 has 49 MA's), (Start: 3 @30280 has 10 MA's), (4, 30298), (5, 30310), (8, 30394), (9, 30406), (10, 30430), (11, 30436), (14, 30496),

Gene: Vivum_37 Start: 30258, Stop: 30509, Start Num: 3
Candidate Starts for Vivum_37:
(Start: 2 @30219 has 49 MA's), (Start: 3 @30258 has 10 MA's), (4, 30276), (5, 30288), (6, 30330), (7, 30369), (10, 30408), (11, 30414), (12, 30429), (13, 30471), (14, 30474),

Gene: Wee_37 Start: 30918, Stop: 31208, Start Num: 2
Candidate Starts for Wee_37:
(Start: 1 @30897 has 22 MA's), (Start: 2 @30918 has 49 MA's), (Start: 3 @30957 has 10 MA's), (4, 30975), (5, 30987), (6, 31029), (7, 31068), (8, 31071), (10, 31107), (12, 31128), (13, 31170), (14, 31173),

Gene: Zerg_36 Start: 30233, Stop: 30544, Start Num: 1
Candidate Starts for Zerg_36:
(Start: 1 @30233 has 22 MA's), (Start: 2 @30254 has 49 MA's), (Start: 3 @30293 has 10 MA's), (4, 30311), (5, 30323), (6, 30365), (7, 30404), (10, 30443), (11, 30449), (14, 30509),