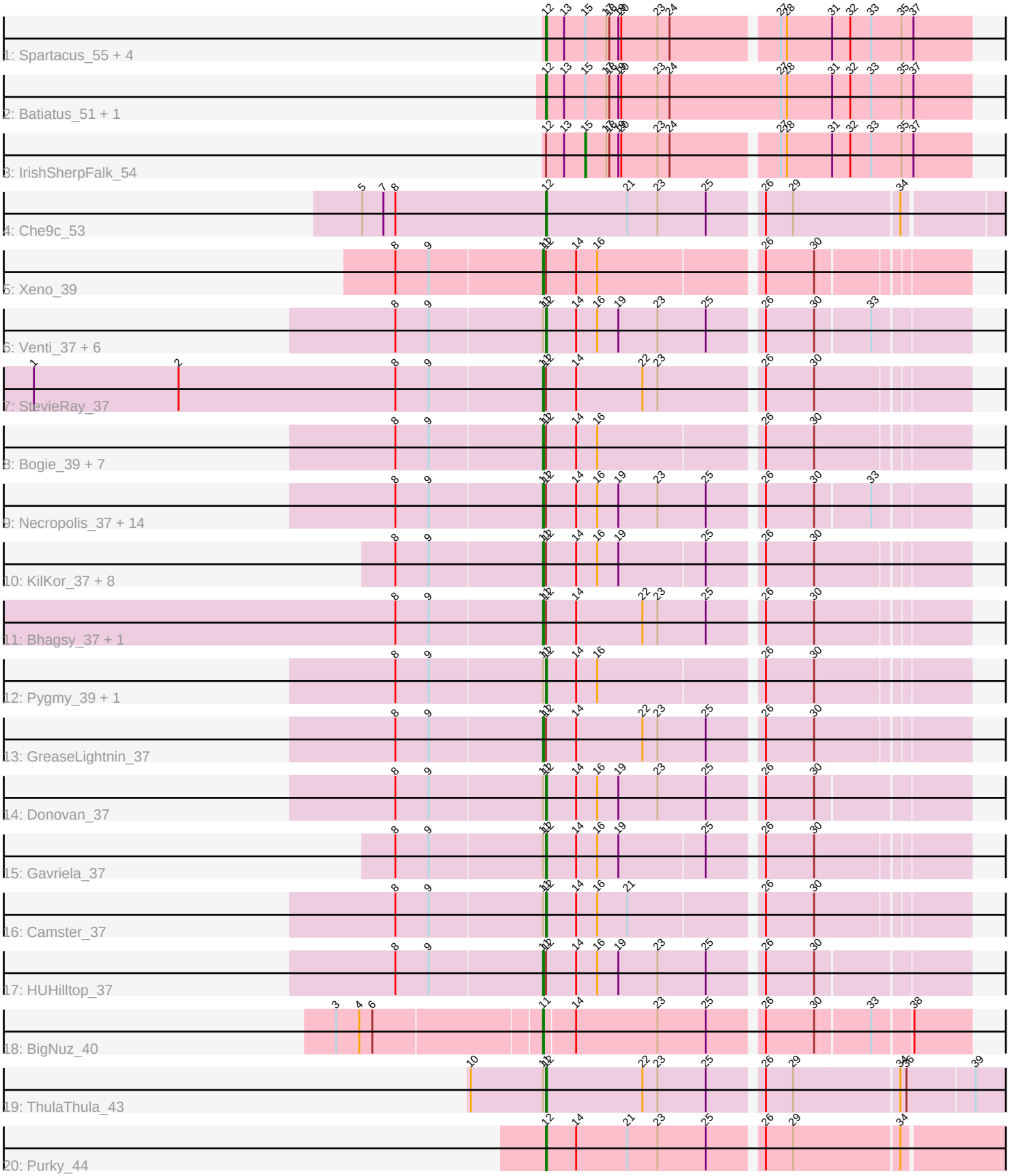
Pham 347627


1: Spartacus_55 + 4
2: Batiatus_51 + 1
3: IrishSherpFalk_54
4: Che9c_53
5: Xeno_39
6: Venti_37 + 6
7: StevieRay_37
8: Bogie_39 + 7
9: Necropolis_37 + 14
10: KilKor_37 + 8
11: Bhagsy_37 + 1
12: Pygmy_39 + 1
13: GreaseLightnin_37
14: Donovan_37
15: Gavriela_37
16: Camster_37
17: HUHilltop_37
18: BigNuz_40
19: ThulaThula_43
20: Purky_44

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 347627 Report

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

Pham number 347627 has 62 members, 5 are drafts.

Phages represented in each track:
• Track 1 : Spartacus_55, Shauna1_52, WillSterrel_54, SuperGrey_57, Phanphagia_51
• Track 2 : Batiatus_51, Filuzino_51
• Track 3 : IrishSherpFalk_54
• Track 4 : Che9c_53
• Track 5 : Xeno_39
• Track 6 : Venti_37, Dynamo_37, Langerak_37, Sonah_37, Phegasus_37, Kari_37, FirstPlacePfu_37
• Track 7 : StevieRay_37
• Track 8 : Bogie_39, Brusacoram_37, Bunnies_37, Ksquared_37, Malithi_37, Thespis_37, Atcoo_37, Shipwreck_39
• Track 9 : Necropolis_37, Jebeks_38, Fishburne_37, Phineas_37, GaloreK_37, BronnyJr_37, Techage_37, Mangethe_37, Majeke_37, Zilizebeth_37, Chubbello_37, Vidya_37, Bartholomew_36, Arib1_37, Etoile_37
• Track 10 : KilKor_37, Polkaroo_37, Phalm_37, Megiddo_37, Glaske_37, Willsammy_36, StressBall_37, CactusJack_37, Jung_36
• Track 11 : Bhagsy_37, PeanutPie_37
• Track 12 : Pygmy_39, Juniormint_37
• Track 13 : GreaseLightnin_37
• Track 14 : Donovan_37
• Track 15 : Gavriela_37
• Track 16 : Camster_37
• Track 17 : HUHilltop_37
• Track 18 : BigNuz_40
• Track 19 : ThulaThula_43
• Track 20 : Purky_44

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 34 of the 57 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Arib1_37, Atcoo_37, Bartholomew_36, Bhagsy_37, BigNuz_40, Bogie_39, BronnyJr_37, Brusacoram_37, Bunnies_37, CactusJack_37, Chubbello_37, Etoile_37, Fishburne_37, GaloreK_37, Glaske_37, GreaseLightnin_37, HUHilltop_37, Jebeks_38, Jung_36, KilKor_37, Ksquared_37, Majeke_37, Malithi_37, Mangethe_37, Megiddo_37, Necropolis_37, PeanutPie_37, Phalm_37, Phineas_37, Polkaroo_37, Shipwreck_39, StevieRay_37, StressBall_37, Techage_37, Thespis_37, Vidya_37, Willsammy_36, Xeno_39, Zilizebeth_37,

Genes that have the "Most Annotated" start but do not call it:
• Camster_37, Donovan_37, Dynamo_37, FirstPlacePfu_37, Gavriela_37, Juniormint_37, Kari_37, Langerak_37, Phegasus_37, Pygmy_39, Sonah_37, ThulaThula_43, Venti_37,

Genes that do not have the "Most Annotated" start:
• Batiatus_51, Che9c_53, Filuzino_51, IrishSherpFalk_54, Phanphagia_51, Purky_44, Shauna1_52, Spartacus_55, SuperGrey_57, WillSterrel_54,

Summary by start number:

Start 11:
• Found in 52 of 62 (83.9%) of genes in pham
• Manual Annotations of this start: 34 of 57
• Called 75.0% of time when present
• Phage (with cluster) where this start called: Arib1_37 (P1), Atcoo_37 (P1), Bartholomew_36 (P1), Bhagsy_37 (P1), BigNuz_40 (P4), Bogie_39 (P1), BronnyJr_37 (P1), Brusacoram_37 (P1), Bunnies_37 (P1), CactusJack_37 (P1), Chubbello_37 (P1), Etoile_37 (P1), Fishburne_37 (P1), GaloreK_37 (P1), Glaske_37 (P1), GreaseLightnin_37 (P1), HUHilltop_37 (P1), Jebeks_38 (P1), Jung_36 (P1), KilKor_37 (P1), Ksquared_37 (P1), Majeke_37 (P1), Malithi_37 (P1), Mangethe_37 (P1), Megiddo_37 (P1), Necropolis_37 (P1), PeanutPie_37 (P1), Phalm_37 (P1), Phineas_37 (P1), Polkaroo_37 (P1), Shipwreck_39 (P1), StevieRay_37 (P1), StressBall_37 (P1), Techage_37 (P1), Thespis_37 (P1), Vidya_37 (P1), Willsammy_36 (P1), Xeno_39 (N), Zilizebeth_37 (P1),

Start 12:
• Found in 61 of 62 (98.4%) of genes in pham
• Manual Annotations of this start: 22 of 57
• Called 36.1% of time when present
• Phage (with cluster) where this start called: Batiatus_51 (F1), Camster_37 (P1), Che9c_53 (I2), Donovan_37 (P1), Dynamo_37 (P1), Filuzino_51 (F1), FirstPlacePfu_37 (P1), Gavriela_37 (P1), Juniormint_37 (P1), Kari_37 (P1), Langerak_37 (P1), Phanphagia_51 (F1), Phegasus_37 (P1), Purky_44 (P6), Pygmy_39 (P1), Shauna1_52 (F1), Sonah_37 (P1), Spartacus_55 (F1), SuperGrey_57 (F1), ThulaThula_43 (P5), Venti_37 (P1), WillSterrel_54 (F1),

Start 15:
• Found in 8 of 62 (12.9%) of genes in pham
• Manual Annotations of this start: 1 of 57
• Called 12.5% of time when present
• Phage (with cluster) where this start called: IrishSherpFalk_54 (F1),

Summary by clusters:

There are 7 clusters represented in this pham: F1, P1, P6, P4, P5, I2, N,

Info for manual annotations of cluster F1:
•Start number 12 was manually annotated 7 times for cluster F1.
•Start number 15 was manually annotated 1 time for cluster F1.

Info for manual annotations of cluster I2:
•Start number 12 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster N:
•Start number 11 was manually annotated 1 time for cluster N.

Info for manual annotations of cluster P1:
•Start number 11 was manually annotated 32 times for cluster P1.
•Start number 12 was manually annotated 12 times for cluster P1.

Info for manual annotations of cluster P4:
•Start number 11 was manually annotated 1 time for cluster P4.

Info for manual annotations of cluster P5:
•Start number 12 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:
•Start number 12 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Arib1_37 Start: 29346, Stop: 29747, Start Num: 11
Candidate Starts for Arib1_37:
(8, 29202), (9, 29235), (Start: 11 @29346 has 34 MA's), (Start: 12 @29349 has 22 MA's), (14, 29379), (16, 29400), (19, 29421), (23, 29460), (25, 29508), (26, 29556), (30, 29604), (33, 29655),

Gene: Atcoo_37 Start: 29830, Stop: 30222, Start Num: 11
Candidate Starts for Atcoo_37:
(8, 29686), (9, 29719), (Start: 11 @29830 has 34 MA's), (Start: 12 @29833 has 22 MA's), (14, 29863), (16, 29884), (26, 30037), (30, 30085),

Gene: Bartholomew_36 Start: 29343, Stop: 29744, Start Num: 11
Candidate Starts for Bartholomew_36:
(8, 29199), (9, 29232), (Start: 11 @29343 has 34 MA's), (Start: 12 @29346 has 22 MA's), (14, 29376), (16, 29397), (19, 29418), (23, 29457), (25, 29505), (26, 29553), (30, 29601), (33, 29652),

Gene: Batiatus_51 Start: 37273, Stop: 37695, Start Num: 12
Candidate Starts for Batiatus_51:
(Start: 12 @37273 has 22 MA's), (13, 37291), (Start: 15 @37312 has 1 MA's), (17, 37333), (18, 37336), (19, 37345), (20, 37348), (23, 37384), (24, 37396), (27, 37507), (28, 37513), (31, 37558), (32, 37576), (33, 37597), (35, 37627), (37, 37639),

Gene: Bhagsy_37 Start: 29336, Stop: 29734, Start Num: 11
Candidate Starts for Bhagsy_37:

(8, 29192), (9, 29225), (Start: 11 @29336 has 34 MA's), (Start: 12 @29339 has 22 MA's), (14, 29369), (22, 29435), (23, 29450), (25, 29498), (26, 29546), (30, 29594),

Gene: BigNuz_40 Start: 31449, Stop: 31847, Start Num: 11
Candidate Starts for BigNuz_40:
(3, 31257), (4, 31278), (6, 31290), (Start: 11 @31449 has 34 MA's), (14, 31479), (23, 31560), (25, 31608), (26, 31656), (30, 31704), (33, 31755), (38, 31791),

Gene: Bogie_39 Start: 31126, Stop: 31521, Start Num: 11
Candidate Starts for Bogie_39:
(8, 30982), (9, 31015), (Start: 11 @31126 has 34 MA's), (Start: 12 @31129 has 22 MA's), (14, 31159), (16, 31180), (26, 31333), (30, 31381),

Gene: BronnyJr_37 Start: 29840, Stop: 30241, Start Num: 11
Candidate Starts for BronnyJr_37:
(8, 29696), (9, 29729), (Start: 11 @29840 has 34 MA's), (Start: 12 @29843 has 22 MA's), (14, 29873), (16, 29894), (19, 29915), (23, 29954), (25, 30002), (26, 30050), (30, 30098), (33, 30149),

Gene: Brusacoram_37 Start: 29336, Stop: 29728, Start Num: 11
Candidate Starts for Brusacoram_37:
(8, 29192), (9, 29225), (Start: 11 @29336 has 34 MA's), (Start: 12 @29339 has 22 MA's), (14, 29369), (16, 29390), (26, 29543), (30, 29591),

Gene: Bunnies_37 Start: 29357, Stop: 29752, Start Num: 11
Candidate Starts for Bunnies_37:
(8, 29213), (9, 29246), (Start: 11 @29357 has 34 MA's), (Start: 12 @29360 has 22 MA's), (14, 29390), (16, 29411), (26, 29564), (30, 29612),

Gene: CactusJack_37 Start: 29597, Stop: 29992, Start Num: 11
Candidate Starts for CactusJack_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: Camster_37 Start: 29376, Stop: 29768, Start Num: 12
Candidate Starts for Camster_37:
(8, 29229), (9, 29262), (Start: 11 @29373 has 34 MA's), (Start: 12 @29376 has 22 MA's), (14, 29406), (16, 29427), (21, 29457), (26, 29580), (30, 29628),

Gene: Che9c_53 Start: 40661, Stop: 41131, Start Num: 12
Candidate Starts for Che9c_53:
(5, 40478), (7, 40499), (8, 40511), (Start: 12 @40661 has 22 MA's), (21, 40742), (23, 40772), (25, 40820), (26, 40868), (29, 40895), (34, 40997),

Gene: Chubbello_37 Start: 29339, Stop: 29740, Start Num: 11
Candidate Starts for Chubbello_37:
(8, 29195), (9, 29228), (Start: 11 @29339 has 34 MA's), (Start: 12 @29342 has 22 MA's), (14, 29372), (16, 29393), (19, 29414), (23, 29453), (25, 29501), (26, 29549), (30, 29597), (33, 29648),

Gene: Donovan_37 Start: 29365, Stop: 29763, Start Num: 12
Candidate Starts for Donovan_37:
(8, 29218), (9, 29251), (Start: 11 @29362 has 34 MA's), (Start: 12 @29365 has 22 MA's), (14, 29395), (16, 29416), (19, 29437), (23, 29476), (25, 29524), (26, 29572), (30, 29620),

Gene: Dynamo_37 Start: 29754, Stop: 30152, Start Num: 12
Candidate Starts for Dynamo_37:
(8, 29607), (9, 29640), (Start: 11 @29751 has 34 MA's), (Start: 12 @29754 has 22 MA's), (14, 29784), (16, 29805), (19, 29826), (23, 29865), (25, 29913), (26, 29961), (30, 30009), (33, 30060),

Gene: Etoile_37 Start: 29343, Stop: 29744, Start Num: 11
Candidate Starts for Etoile_37:
(8, 29199), (9, 29232), (Start: 11 @29343 has 34 MA's), (Start: 12 @29346 has 22 MA's), (14, 29376), (16, 29397), (19, 29418), (23, 29457), (25, 29505), (26, 29553), (30, 29601), (33, 29652),

Gene: Filuzino_51 Start: 36320, Stop: 36742, Start Num: 12
Candidate Starts for Filuzino_51:
(Start: 12 @36320 has 22 MA's), (13, 36338), (Start: 15 @36359 has 1 MA's), (17, 36380), (18, 36383), (19, 36392), (20, 36395), (23, 36431), (24, 36443), (27, 36554), (28, 36560), (31, 36605), (32, 36623), (33, 36644), (35, 36674), (37, 36686),

Gene: FirstPlacePfu_37 Start: 29378, Stop: 29776, Start Num: 12
Candidate Starts for FirstPlacePfu_37:
(8, 29231), (9, 29264), (Start: 11 @29375 has 34 MA's), (Start: 12 @29378 has 22 MA's), (14, 29408), (16, 29429), (19, 29450), (23, 29489), (25, 29537), (26, 29585), (30, 29633), (33, 29684),

Gene: Fishburne_37 Start: 29343, Stop: 29744, Start Num: 11
Candidate Starts for Fishburne_37:
(8, 29199), (9, 29232), (Start: 11 @29343 has 34 MA's), (Start: 12 @29346 has 22 MA's), (14, 29376), (16, 29397), (19, 29418), (23, 29457), (25, 29505), (26, 29553), (30, 29601), (33, 29652),

Gene: GaloreK_37 Start: 29336, Stop: 29737, Start Num: 11
Candidate Starts for GaloreK_37:
(8, 29192), (9, 29225), (Start: 11 @29336 has 34 MA's), (Start: 12 @29339 has 22 MA's), (14, 29369), (16, 29390), (19, 29411), (23, 29450), (25, 29498), (26, 29546), (30, 29594), (33, 29645),

Gene: Gavriela_37 Start: 29600, Stop: 29992, Start Num: 12
Candidate Starts for Gavriela_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: Glaske_37 Start: 29597, Stop: 29992, Start Num: 11
Candidate Starts for Glaske_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: GreaseLightnin_37 Start: 29583, Stop: 29981, Start Num: 11
Candidate Starts for GreaseLightnin_37:
(8, 29439), (9, 29472), (Start: 11 @29583 has 34 MA's), (Start: 12 @29586 has 22 MA's), (14, 29616), (22, 29682), (23, 29697), (25, 29745), (26, 29793), (30, 29841),

Gene: HUHilltop_37 Start: 29373, Stop: 29774, Start Num: 11
Candidate Starts for HUHilltop_37:
(8, 29229), (9, 29262), (Start: 11 @29373 has 34 MA's), (Start: 12 @29376 has 22 MA's), (14, 29406), (16, 29427), (19, 29448), (23, 29487), (25, 29535), (26, 29583), (30, 29631),

Gene: IrishSherpFalk_54 Start: 38745, Stop: 39116, Start Num: 15
Candidate Starts for IrishSherpFalk_54:

(Start: 12 @38706 has 22 MA's), (13, 38724), (Start: 15 @38745 has 1 MA's), (17, 38766), (18, 38769), (19, 38778), (20, 38781), (23, 38817), (24, 38829), (27, 38928), (28, 38934), (31, 38979), (32, 38997), (33, 39018), (35, 39048), (37, 39060),

Gene: Jebeks_38 Start: 29328, Stop: 29729, Start Num: 11
Candidate Starts for Jebeks_38:
(8, 29184), (9, 29217), (Start: 11 @29328 has 34 MA's), (Start: 12 @29331 has 22 MA's), (14, 29361), (16, 29382), (19, 29403), (23, 29442), (25, 29490), (26, 29538), (30, 29586), (33, 29637),

Gene: Jung_36 Start: 29304, Stop: 29699, Start Num: 11
Candidate Starts for Jung_36:
(8, 29160), (9, 29193), (Start: 11 @29304 has 34 MA's), (Start: 12 @29307 has 22 MA's), (14, 29337), (16, 29358), (19, 29379), (25, 29463), (26, 29511), (30, 29559),

Gene: Juniormint_37 Start: 29382, Stop: 29774, Start Num: 12
Candidate Starts for Juniormint_37:
(8, 29235), (9, 29268), (Start: 11 @29379 has 34 MA's), (Start: 12 @29382 has 22 MA's), (14, 29412), (16, 29433), (26, 29586), (30, 29634),

Gene: Kari_37 Start: 29343, Stop: 29741, Start Num: 12
Candidate Starts for Kari_37:
(8, 29196), (9, 29229), (Start: 11 @29340 has 34 MA's), (Start: 12 @29343 has 22 MA's), (14, 29373), (16, 29394), (19, 29415), (23, 29454), (25, 29502), (26, 29550), (30, 29598), (33, 29649),

Gene: KilKor_37 Start: 29597, Stop: 29992, Start Num: 11
Candidate Starts for KilKor_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: Ksquared_37 Start: 29357, Stop: 29752, Start Num: 11
Candidate Starts for Ksquared_37:
(8, 29213), (9, 29246), (Start: 11 @29357 has 34 MA's), (Start: 12 @29360 has 22 MA's), (14, 29390), (16, 29411), (26, 29564), (30, 29612),

Gene: Langerak_37 Start: 29359, Stop: 29757, Start Num: 12
Candidate Starts for Langerak_37:
(8, 29212), (9, 29245), (Start: 11 @29356 has 34 MA's), (Start: 12 @29359 has 22 MA's), (14, 29389), (16, 29410), (19, 29431), (23, 29470), (25, 29518), (26, 29566), (30, 29614), (33, 29665),

Gene: Majeke_37 Start: 29381, Stop: 29782, Start Num: 11
Candidate Starts for Majeke_37:
(8, 29237), (9, 29270), (Start: 11 @29381 has 34 MA's), (Start: 12 @29384 has 22 MA's), (14, 29414), (16, 29435), (19, 29456), (23, 29495), (25, 29543), (26, 29591), (30, 29639), (33, 29690),

Gene: Malithi_37 Start: 29266, Stop: 29661, Start Num: 11
Candidate Starts for Malithi_37:
(8, 29122), (9, 29155), (Start: 11 @29266 has 34 MA's), (Start: 12 @29269 has 22 MA's), (14, 29299), (16, 29320), (26, 29473), (30, 29521),

Gene: Mangethe_37 Start: 29381, Stop: 29782, Start Num: 11
Candidate Starts for Mangethe_37:
(8, 29237), (9, 29270), (Start: 11 @29381 has 34 MA's), (Start: 12 @29384 has 22 MA's), (14, 29414), (16, 29435), (19, 29456), (23, 29495), (25, 29543), (26, 29591), (30, 29639), (33, 29690),

Gene: Megiddo_37 Start: 29597, Stop: 29992, Start Num: 11
Candidate Starts for Megiddo_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: Necropolis_37 Start: 29340, Stop: 29741, Start Num: 11
Candidate Starts for Necropolis_37:
(8, 29196), (9, 29229), (Start: 11 @29340 has 34 MA's), (Start: 12 @29343 has 22 MA's), (14, 29373), (16, 29394), (19, 29415), (23, 29454), (25, 29502), (26, 29550), (30, 29598), (33, 29649),

Gene: PeanutPie_37 Start: 29336, Stop: 29734, Start Num: 11
Candidate Starts for PeanutPie_37:
(8, 29192), (9, 29225), (Start: 11 @29336 has 34 MA's), (Start: 12 @29339 has 22 MA's), (14, 29369), (22, 29435), (23, 29450), (25, 29498), (26, 29546), (30, 29594),

Gene: Phalm_37 Start: 29597, Stop: 29992, Start Num: 11
Candidate Starts for Phalm_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: Phanphagia_51 Start: 37739, Stop: 38149, Start Num: 12
Candidate Starts for Phanphagia_51:
(Start: 12 @37739 has 22 MA's), (13, 37757), (Start: 15 @37778 has 1 MA's), (17, 37799), (18, 37802), (19, 37811), (20, 37814), (23, 37850), (24, 37862), (27, 37961), (28, 37967), (31, 38012), (32, 38030), (33, 38051), (35, 38081), (37, 38093),

Gene: Phegasus_37 Start: 29351, Stop: 29749, Start Num: 12
Candidate Starts for Phegasus_37:
(8, 29204), (9, 29237), (Start: 11 @29348 has 34 MA's), (Start: 12 @29351 has 22 MA's), (14, 29381), (16, 29402), (19, 29423), (23, 29462), (25, 29510), (26, 29558), (30, 29606), (33, 29657),

Gene: Phineas_37 Start: 29711, Stop: 30112, Start Num: 11
Candidate Starts for Phineas_37:
(8, 29567), (9, 29600), (Start: 11 @29711 has 34 MA's), (Start: 12 @29714 has 22 MA's), (14, 29744), (16, 29765), (19, 29786), (23, 29825), (25, 29873), (26, 29921), (30, 29969), (33, 30020),

Gene: Polkaroo_37 Start: 29354, Stop: 29749, Start Num: 11
Candidate Starts for Polkaroo_37:
(8, 29210), (9, 29243), (Start: 11 @29354 has 34 MA's), (Start: 12 @29357 has 22 MA's), (14, 29387), (16, 29408), (19, 29429), (25, 29513), (26, 29561), (30, 29609),

Gene: Purky_44 Start: 32059, Stop: 32535, Start Num: 12
Candidate Starts for Purky_44:
(Start: 12 @32059 has 22 MA's), (14, 32089), (21, 32140), (23, 32170), (25, 32218), (26, 32266), (29, 32293), (34, 32395),

Gene: Pygmy_39 Start: 31185, Stop: 31577, Start Num: 12
Candidate Starts for Pygmy_39:
(8, 31038), (9, 31071), (Start: 11 @31182 has 34 MA's), (Start: 12 @31185 has 22 MA's), (14, 31215), (16, 31236), (26, 31389), (30, 31437),

Gene: Shauna1_52 Start: 37720, Stop: 38130, Start Num: 12

Candidate Starts for Shauna1_52:
(Start: 12 @37720 has 22 MA's), (13, 37738), (Start: 15 @37759 has 1 MA's), (17, 37780), (18, 37783), (19, 37792), (20, 37795), (23, 37831), (24, 37843), (27, 37942), (28, 37948), (31, 37993), (32, 38011), (33, 38032), (35, 38062), (37, 38074),

Gene: Shipwreck_39 Start: 31157, Stop: 31552, Start Num: 11
Candidate Starts for Shipwreck_39:
(8, 31013), (9, 31046), (Start: 11 @31157 has 34 MA's), (Start: 12 @31160 has 22 MA's), (14, 31190), (16, 31211), (26, 31364), (30, 31412),

Gene: Sonah_37 Start: 29332, Stop: 29730, Start Num: 12
Candidate Starts for Sonah_37:
(8, 29185), (9, 29218), (Start: 11 @29329 has 34 MA's), (Start: 12 @29332 has 22 MA's), (14, 29362), (16, 29383), (19, 29404), (23, 29443), (25, 29491), (26, 29539), (30, 29587), (33, 29638),

Gene: Spartacus_55 Start: 37623, Stop: 38033, Start Num: 12
Candidate Starts for Spartacus_55:
(Start: 12 @37623 has 22 MA's), (13, 37641), (Start: 15 @37662 has 1 MA's), (17, 37683), (18, 37686), (19, 37695), (20, 37698), (23, 37734), (24, 37746), (27, 37845), (28, 37851), (31, 37896), (32, 37914), (33, 37935), (35, 37965), (37, 37977),

Gene: StevieRay_37 Start: 29296, Stop: 29694, Start Num: 11
Candidate Starts for StevieRay_37:
(1, 28792), (2, 28936), (8, 29152), (9, 29185), (Start: 11 @29296 has 34 MA's), (Start: 12 @29299 has 22 MA's), (14, 29329), (22, 29395), (23, 29410), (26, 29506), (30, 29554),

Gene: StressBall_37 Start: 29597, Stop: 29992, Start Num: 11
Candidate Starts for StressBall_37:
(8, 29453), (9, 29486), (Start: 11 @29597 has 34 MA's), (Start: 12 @29600 has 22 MA's), (14, 29630), (16, 29651), (19, 29672), (25, 29756), (26, 29804), (30, 29852),

Gene: SuperGrey_57 Start: 39146, Stop: 39556, Start Num: 12
Candidate Starts for SuperGrey_57:
(Start: 12 @39146 has 22 MA's), (13, 39164), (Start: 15 @39185 has 1 MA's), (17, 39206), (18, 39209), (19, 39218), (20, 39221), (23, 39257), (24, 39269), (27, 39368), (28, 39374), (31, 39419), (32, 39437), (33, 39458), (35, 39488), (37, 39500),

Gene: Techage_37 Start: 29366, Stop: 29767, Start Num: 11
Candidate Starts for Techage_37:
(8, 29222), (9, 29255), (Start: 11 @29366 has 34 MA's), (Start: 12 @29369 has 22 MA's), (14, 29399), (16, 29420), (19, 29441), (23, 29480), (25, 29528), (26, 29576), (30, 29624), (33, 29675),

Gene: Thespis_37 Start: 29336, Stop: 29728, Start Num: 11
Candidate Starts for Thespis_37:
(8, 29192), (9, 29225), (Start: 11 @29336 has 34 MA's), (Start: 12 @29339 has 22 MA's), (14, 29369), (16, 29390), (26, 29543), (30, 29591),

Gene: ThulaThula_43 Start: 33482, Stop: 33961, Start Num: 12
Candidate Starts for ThulaThula_43:
(10, 33407), (Start: 11 @33479 has 34 MA's), (Start: 12 @33482 has 22 MA's), (22, 33578), (23, 33593), (25, 33641), (26, 33689), (29, 33716), (34, 33818), (36, 33824), (39, 33890),

Gene: Venti_37 Start: 29346, Stop: 29744, Start Num: 12

Candidate Starts for Venti_37:
(8, 29199), (9, 29232), (Start: 11 @29343 has 34 MA's), (Start: 12 @29346 has 22 MA's), (14, 29376), (16, 29397), (19, 29418), (23, 29457), (25, 29505), (26, 29553), (30, 29601), (33, 29652),

Gene: Vidya_37 Start: 29376, Stop: 29777, Start Num: 11
Candidate Starts for Vidya_37:
(8, 29232), (9, 29265), (Start: 11 @29376 has 34 MA's), (Start: 12 @29379 has 22 MA's), (14, 29409), (16, 29430), (19, 29451), (23, 29490), (25, 29538), (26, 29586), (30, 29634), (33, 29685),

Gene: WillSterrel_54 Start: 38739, Stop: 39149, Start Num: 12
Candidate Starts for WillSterrel_54:
(Start: 12 @38739 has 22 MA's), (13, 38757), (Start: 15 @38778 has 1 MA's), (17, 38799), (18, 38802), (19, 38811), (20, 38814), (23, 38850), (24, 38862), (27, 38961), (28, 38967), (31, 39012), (32, 39030), (33, 39051), (35, 39081), (37, 39093),

Gene: Willsammy_36 Start: 29080, Stop: 29475, Start Num: 11
Candidate Starts for Willsammy_36:
(8, 28936), (9, 28969), (Start: 11 @29080 has 34 MA's), (Start: 12 @29083 has 22 MA's), (14, 29113), (16, 29134), (19, 29155), (25, 29239), (26, 29287), (30, 29335),

Gene: Xeno_39 Start: 28678, Stop: 29070, Start Num: 11
Candidate Starts for Xeno_39:
(8, 28534), (9, 28567), (Start: 11 @28678 has 34 MA's), (Start: 12 @28681 has 22 MA's), (14, 28711), (16, 28732), (26, 28885), (30, 28933),

Gene: Zilizebeth_37 Start: 29375, Stop: 29776, Start Num: 11
Candidate Starts for Zilizebeth_37:
(8, 29231), (9, 29264), (Start: 11 @29375 has 34 MA's), (Start: 12 @29378 has 22 MA's), (14, 29408), (16, 29429), (19, 29450), (23, 29489), (25, 29537), (26, 29585), (30, 29633), (33, 29684),