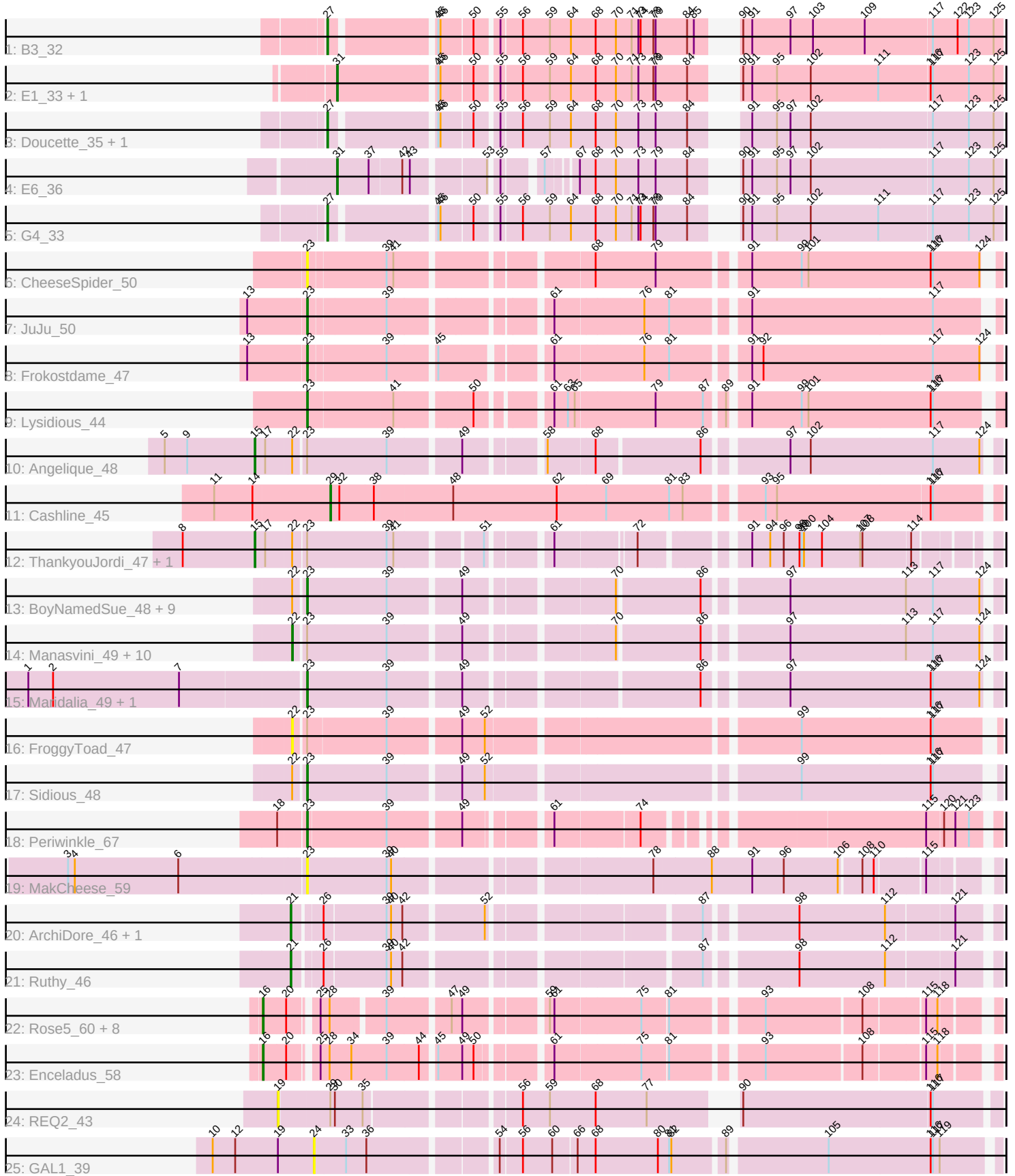


Pham 280488



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 280488 Report

This analysis was run 02/07/26 on database version 634.

Pham number 280488 has 57 members, 6 are drafts.

Phages represented in each track:

- Track 1 : B3_32
- Track 2 : E1_33, Anatole_33
- Track 3 : Doucette_35, B22_33
- Track 4 : E6_36
- Track 5 : G4_33
- Track 6 : CheeseSpider_50
- Track 7 : JuJu_50
- Track 8 : Frokostdame_47
- Track 9 : Lysidious_44
- Track 10 : Angelique_48
- Track 11 : Cashline_45
- Track 12 : ThankyouJordi_47, WelcomeAyanna_47
- Track 13 : BoyNamedSue_48, Polly_45, Agueybana_50, Eudoria_48, AlumE_48, Trumpet_48, Suscepit_48, Neobush_48, Tayonia_48, Zameen_48
- Track 14 : Manasvini_49, Yeet412_43, Attis_43, LordFarquaad_45, Zirinka_45, EdnaMode_42, Antonio_48, Pickett_41, SoilAssassin_43, Kita_49, Bialota_46
- Track 15 : Maridalia_49, Bunnybear_41
- Track 16 : FroggyToad_47
- Track 17 : Sidious_48
- Track 18 : Periwinkle_67
- Track 19 : MakCheese_59
- Track 20 : ArchiDore_46, DumpsterDude_48
- Track 21 : Ruthy_46
- Track 22 : Rose5_60, Silverleaf_60, CicholasNage_59, JoeDirt_59, Wyatt2_61, AvadaKedavra_60, Acquire49_60, Tyson_60, Poochiewood_60
- Track 23 : Enceladus_58
- Track 24 : REQ2_43
- Track 25 : GAL1_39

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

The start number called the most often in the published annotations is 23, it was called in 17 of the 51 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Agueybana_50, AlumE_48, BoyNamedSue_48, Bunnybear_41, CheeseSpider_50, Eudoria_48, Frokostdame_47, JuJu_50, Lysidious_44, MakCheese_59, Maridalia_49, Neobush_48, Periwinkle_67, Polly_45, Sidious_48, Suscepit_48, Tayonia_48, Trumpet_48, Zameen_48,

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

- Angelique_48, Antonio_48, Attis_43, Bialota_46, EdnaMode_42, FroggyToad_47, Kita_49, LordFarquaad_45, Manasvini_49, Pickett_41, SoilAssassin_43, ThankyouJordi_47, WelcomeAyanna_47, Yeet412_43, Zirinka_45,

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

- Acquire49_60, Anatole_33, ArchiDore_46, AvadaKedavra_60, B22_33, B3_32, Cashline_45, CicholasNage_59, Doucette_35, DumpsterDude_48, E1_33, E6_36, Enceladus_58, G4_33, GAL1_39, JoeDirt_59, Poochiewood_60, REQ2_43, Rose5_60, Ruthy_46, Silverleaf_60, Tyson_60, Wyatt2_61,

Summary by start number:

Start 15:

- Found in 3 of 57 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Angelique_48 (CY1), ThankyouJordi_47 (CZ1), WelcomeAyanna_47 (CZ1),

Start 16:

- Found in 10 of 57 (17.5%) of genes in pham
- Manual Annotations of this start: 9 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_60 (L1), AvadaKedavra_60 (L1), CicholasNage_59 (L1), Enceladus_58 (L1), JoeDirt_59 (L1), Poochiewood_60 (L1), Rose5_60 (L1), Silverleaf_60 (L1), Tyson_60 (L1), Wyatt2_61 (L1),

Start 19:

- Found in 2 of 57 (3.5%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: REQ2_43 (singleton),

Start 21:

- Found in 3 of 57 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: ArchiDore_46 (DW), DumpsterDude_48 (DW), Ruthy_46 (DW),

Start 22:

- Found in 26 of 57 (45.6%) of genes in pham
- Manual Annotations of this start: 11 of 51
- Called 46.2% of time when present
- Phage (with cluster) where this start called: Antonio_48 (CZ1), Attis_43 (CZ2), Bialota_46 (CZ1), EdnaMode_42 (CZ2), FroggyToad_47 (CZ2), Kita_49 (CZ1),

LordFarquaad_45 (CZ2), Manasvini_49 (CZ1), Pickett_41 (CZ2), SoilAssassin_43 (CZ2), Yeet412_43 (CZ2), Zirinka_45 (CZ1),

Start 23:

- Found in 34 of 57 (59.6%) of genes in pham
- Manual Annotations of this start: 17 of 51
- Called 55.9% of time when present
- Phage (with cluster) where this start called: Agueybana_50 (CZ1), AlumE_48 (CZ1), BoyNamedSue_48 (CZ1), Bunnybear_41 (CZ), CheeseSpider_50 (CV), Eudoria_48 (CZ1), Frokostdame_47 (CV), JuJu_50 (CV), Lysidious_44 (CV), MakCheese_59 (DW), Maridalia_49 (CZ1), Neobush_48 (CZ1), Periwinkle_67 (DN1), Polly_45 (CZ1), Sidious_48 (CZ7), Suscepit_48 (CZ1), Tayonia_48 (CZ1), Trumpet_48 (CZ1), Zameen_48 (CZ1),

Start 24:

- Found in 1 of 57 (1.8%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GAL1_39 (singleton),

Start 27:

- Found in 4 of 57 (7.0%) of genes in pham
- Manual Annotations of this start: 4 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: B22_33 (BW), B3_32 (BV), Doucette_35 (BW), G4_33 (BW),

Start 29:

- Found in 2 of 57 (3.5%) of genes in pham
- Manual Annotations of this start: 1 of 51
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Cashline_45 (CY6),

Start 31:

- Found in 3 of 57 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 51
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Anatole_33 (BV), E1_33 (BV), E6_36 (BW),

Summary by clusters:

There are 13 clusters represented in this pham: CY1, CY6, CZ2, CZ1, singleton, CZ7, CZ, BV, BW, DN1, L1, DW, CV,

Info for manual annotations of cluster BV:

- Start number 27 was manually annotated 1 time for cluster BV.
- Start number 31 was manually annotated 2 times for cluster BV.

Info for manual annotations of cluster BW:

- Start number 27 was manually annotated 3 times for cluster BW.
- Start number 31 was manually annotated 1 time for cluster BW.

Info for manual annotations of cluster CV:

- Start number 23 was manually annotated 3 times for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 15 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY6:

- Start number 29 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CZ:

- Start number 23 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:

- Start number 15 was manually annotated 2 times for cluster CZ1.
- Start number 22 was manually annotated 5 times for cluster CZ1.
- Start number 23 was manually annotated 11 times for cluster CZ1.

Info for manual annotations of cluster CZ2:

- Start number 22 was manually annotated 6 times for cluster CZ2.

Info for manual annotations of cluster CZ7:

- Start number 23 was manually annotated 1 time for cluster CZ7.

Info for manual annotations of cluster DN1:

- Start number 23 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster DW:

- Start number 21 was manually annotated 3 times for cluster DW.

Info for manual annotations of cluster L1:

- Start number 16 was manually annotated 9 times for cluster L1.

Gene Information:

Gene: Acquire49_60 Start: 42360, Stop: 43178, Start Num: 16

Candidate Starts for Acquire49_60:

(Start: 16 @42360 has 9 MA's), (20, 42387), (25, 42414), (28, 42426), (39, 42486), (47, 42561), (49, 42573), (59, 42663), (61, 42669), (75, 42774), (81, 42804), (93, 42909), (108, 43032), (115, 43107), (118, 43122),

Gene: Agueybana_50 Start: 37589, Stop: 38413, Start Num: 23

Candidate Starts for Agueybana_50:

(Start: 22 @37577 has 11 MA's), (Start: 23 @37589 has 17 MA's), (39, 37691), (49, 37778), (70, 37949), (86, 38054), (97, 38150), (113, 38303), (117, 38339), (124, 38399),

Gene: AlumE_48 Start: 36089, Stop: 36913, Start Num: 23

Candidate Starts for AlumE_48:

(Start: 22 @36077 has 11 MA's), (Start: 23 @36089 has 17 MA's), (39, 36191), (49, 36278), (70, 36449), (86, 36554), (97, 36650), (113, 36803), (117, 36839), (124, 36899),

Gene: Anatole_33 Start: 24569, Stop: 25372, Start Num: 31

Candidate Starts for Anatole_33:

(Start: 31 @24569 has 3 MA's), (45, 24692), (46, 24695), (50, 24734), (55, 24761), (56, 24785), (59, 24821), (64, 24848), (68, 24881), (70, 24908), (71, 24929), (73, 24938), (78, 24956), (79, 24959), (84, 25001), (90, 25031), (91, 25043), (95, 25076), (102, 25121), (111, 25211), (116, 25277), (117, 25280), (123, 25328), (125, 25361),

Gene: Angelique_48 Start: 37247, Stop: 38128, Start Num: 15

Candidate Starts for Angelique_48:

(5, 37127), (9, 37157), (Start: 15 @37247 has 3 MA's), (17, 37259), (Start: 22 @37292 has 11 MA's), (Start: 23 @37304 has 17 MA's), (39, 37406), (49, 37493), (58, 37580), (68, 37640), (86, 37769), (97, 37865), (102, 37892), (117, 38054), (124, 38114),

Gene: Antonio_48 Start: 35350, Stop: 36186, Start Num: 22

Candidate Starts for Antonio_48:

(Start: 22 @35350 has 11 MA's), (Start: 23 @35362 has 17 MA's), (39, 35464), (49, 35551), (70, 35722), (86, 35827), (97, 35923), (113, 36076), (117, 36112), (124, 36172),

Gene: ArchiDore_46 Start: 36606, Stop: 37415, Start Num: 21

Candidate Starts for ArchiDore_46:

(Start: 21 @36606 has 3 MA's), (26, 36636), (39, 36714), (40, 36720), (42, 36735), (52, 36831), (87, 37068), (98, 37170), (112, 37284), (121, 37371),

Gene: Attis_43 Start: 32483, Stop: 33319, Start Num: 22

Candidate Starts for Attis_43:

(Start: 22 @32483 has 11 MA's), (Start: 23 @32495 has 17 MA's), (39, 32597), (49, 32684), (70, 32855), (86, 32960), (97, 33056), (113, 33209), (117, 33245), (124, 33305),

Gene: AvadaKedavra_60 Start: 42433, Stop: 43251, Start Num: 16

Candidate Starts for AvadaKedavra_60:

(Start: 16 @42433 has 9 MA's), (20, 42460), (25, 42487), (28, 42499), (39, 42559), (47, 42634), (49, 42646), (59, 42736), (61, 42742), (75, 42847), (81, 42877), (93, 42982), (108, 43105), (115, 43180), (118, 43195),

Gene: B22_33 Start: 23699, Stop: 24502, Start Num: 27

Candidate Starts for B22_33:

(Start: 27 @23699 has 4 MA's), (45, 23822), (46, 23825), (50, 23864), (55, 23891), (56, 23915), (59, 23951), (64, 23978), (68, 24011), (70, 24038), (73, 24068), (79, 24089), (84, 24131), (91, 24173), (95, 24206), (97, 24224), (102, 24251), (117, 24410), (123, 24458), (125, 24491),

Gene: B3_32 Start: 23829, Stop: 24632, Start Num: 27

Candidate Starts for B3_32:

(Start: 27 @23829 has 4 MA's), (45, 23952), (46, 23955), (50, 23994), (55, 24021), (56, 24045), (59, 24081), (64, 24108), (68, 24141), (70, 24168), (71, 24189), (73, 24198), (74, 24201), (78, 24216), (79, 24219), (84, 24261), (85, 24270), (90, 24291), (91, 24303), (97, 24354), (103, 24384), (109, 24453), (117, 24540), (122, 24573), (123, 24588), (125, 24621),

Gene: Bialota_46 Start: 35982, Stop: 36818, Start Num: 22

Candidate Starts for Bialota_46:

(Start: 22 @35982 has 11 MA's), (Start: 23 @35994 has 17 MA's), (39, 36096), (49, 36183), (70, 36354), (86, 36459), (97, 36555), (113, 36708), (117, 36744), (124, 36804),

Gene: BoyNamedSue_48 Start: 36089, Stop: 36913, Start Num: 23

Candidate Starts for BoyNamedSue_48:

(Start: 22 @36077 has 11 MA's), (Start: 23 @36089 has 17 MA's), (39, 36191), (49, 36278), (70, 36449), (86, 36554), (97, 36650), (113, 36803), (117, 36839), (124, 36899),

Gene: Bunnybear_41 Start: 33762, Stop: 34586, Start Num: 23

Candidate Starts for Bunnybear_41:

(1, 33405), (2, 33438), (7, 33606), (Start: 23 @33762 has 17 MA's), (39, 33864), (49, 33951), (86, 34227), (97, 34323), (116, 34509), (117, 34512), (124, 34572),

Gene: Cashline_45 Start: 35939, Stop: 36781, Start Num: 29

Candidate Starts for Cashline_45:

(11, 35786), (14, 35837), (Start: 29 @35939 has 1 MA's), (32, 35951), (38, 35996), (48, 36098), (62, 36236), (69, 36299), (81, 36383), (83, 36401), (93, 36488), (95, 36503), (116, 36704), (117, 36707),

Gene: CheeseSpider_50 Start: 33609, Stop: 34427, Start Num: 23

Candidate Starts for CheeseSpider_50:

(Start: 23 @33609 has 17 MA's), (39, 33705), (41, 33714), (68, 33939), (79, 34014), (91, 34119), (99, 34185), (101, 34194), (116, 34356), (117, 34359), (124, 34419),

Gene: CicholasNage_59 Start: 42396, Stop: 43214, Start Num: 16

Candidate Starts for CicholasNage_59:

(Start: 16 @42396 has 9 MA's), (20, 42423), (25, 42450), (28, 42462), (39, 42522), (47, 42597), (49, 42609), (59, 42699), (61, 42705), (75, 42810), (81, 42840), (93, 42945), (108, 43068), (115, 43143), (118, 43158),

Gene: Doucette_35 Start: 25113, Stop: 25916, Start Num: 27

Candidate Starts for Doucette_35:

(Start: 27 @25113 has 4 MA's), (45, 25236), (46, 25239), (50, 25278), (55, 25305), (56, 25329), (59, 25365), (64, 25392), (68, 25425), (70, 25452), (73, 25482), (79, 25503), (84, 25545), (91, 25587), (95, 25620), (97, 25638), (102, 25665), (117, 25824), (123, 25872), (125, 25905),

Gene: DumpsterDude_48 Start: 38831, Stop: 39640, Start Num: 21

Candidate Starts for DumpsterDude_48:

(Start: 21 @38831 has 3 MA's), (26, 38861), (39, 38939), (40, 38945), (42, 38960), (52, 39056), (87, 39293), (98, 39395), (112, 39509), (121, 39596),

Gene: E1_33 Start: 24569, Stop: 25372, Start Num: 31

Candidate Starts for E1_33:

(Start: 31 @24569 has 3 MA's), (45, 24692), (46, 24695), (50, 24734), (55, 24761), (56, 24785), (59, 24821), (64, 24848), (68, 24881), (70, 24908), (71, 24929), (73, 24938), (78, 24956), (79, 24959), (84, 25001), (90, 25031), (91, 25043), (95, 25076), (102, 25121), (111, 25211), (116, 25277), (117, 25280), (123, 25328), (125, 25361),

Gene: E6_36 Start: 26500, Stop: 27273, Start Num: 31

Candidate Starts for E6_36:

(Start: 31 @26500 has 3 MA's), (37, 26542), (42, 26584), (43, 26593), (53, 26680), (55, 26689), (57, 26728), (67, 26761), (68, 26782), (70, 26809), (73, 26839), (79, 26860), (84, 26902), (90, 26932), (91, 26944), (95, 26977), (97, 26995), (102, 27022), (117, 27181), (123, 27229), (125, 27262),

Gene: EdnaMode_42 Start: 31171, Stop: 32007, Start Num: 22

Candidate Starts for EdnaMode_42:

(Start: 22 @31171 has 11 MA's), (Start: 23 @31183 has 17 MA's), (39, 31285), (49, 31372), (70, 31543), (86, 31648), (97, 31744), (113, 31897), (117, 31933), (124, 31993),

Gene: Enceladus_58 Start: 42233, Stop: 43060, Start Num: 16

Candidate Starts for Enceladus_58:

(Start: 16 @42233 has 9 MA's), (20, 42260), (25, 42287), (28, 42299), (34, 42326), (39, 42371), (44, 42413), (45, 42428), (49, 42458), (50, 42473), (61, 42551), (75, 42656), (81, 42686), (93, 42791), (108, 42914), (115, 42989), (118, 43004),

Gene: Eudoria_48 Start: 35362, Stop: 36186, Start Num: 23

Candidate Starts for Eudoria_48:

(Start: 22 @35350 has 11 MA's), (Start: 23 @35362 has 17 MA's), (39, 35464), (49, 35551), (70, 35722), (86, 35827), (97, 35923), (113, 36076), (117, 36112), (124, 36172),

Gene: FroggyToad_47 Start: 33512, Stop: 34357, Start Num: 22

Candidate Starts for FroggyToad_47:

(Start: 22 @33512 has 11 MA's), (Start: 23 @33524 has 17 MA's), (39, 33623), (49, 33710), (52, 33740), (99, 34115), (116, 34286), (117, 34289),

Gene: Frokostdame_47 Start: 34936, Stop: 35751, Start Num: 23

Candidate Starts for Frokostdame_47:

(13, 34861), (Start: 23 @34936 has 17 MA's), (39, 35032), (45, 35089), (61, 35212), (76, 35323), (81, 35356), (91, 35443), (92, 35458), (117, 35683), (124, 35743),

Gene: G4_33 Start: 24732, Stop: 25535, Start Num: 27

Candidate Starts for G4_33:

(Start: 27 @24732 has 4 MA's), (45, 24855), (46, 24858), (50, 24897), (55, 24924), (56, 24948), (59, 24984), (64, 25011), (68, 25044), (70, 25071), (71, 25092), (73, 25101), (74, 25104), (78, 25119), (79, 25122), (84, 25164), (90, 25194), (91, 25206), (95, 25239), (102, 25284), (111, 25374), (117, 25443), (123, 25491), (125, 25524),

Gene: GAL1_39 Start: 32334, Stop: 33173, Start Num: 24

Candidate Starts for GAL1_39:

(10, 32199), (12, 32229), (19, 32286), (24, 32334), (33, 32376), (36, 32403), (54, 32556), (56, 32583), (60, 32622), (66, 32652), (68, 32676), (80, 32757), (81, 32772), (82, 32775), (89, 32838), (105, 32961), (116, 33096), (117, 33099), (119, 33108),

Gene: JoeDirt_59 Start: 42675, Stop: 43493, Start Num: 16

Candidate Starts for JoeDirt_59:

(Start: 16 @42675 has 9 MA's), (20, 42702), (25, 42729), (28, 42741), (39, 42801), (47, 42876), (49, 42888), (59, 42978), (61, 42984), (75, 43089), (81, 43119), (93, 43224), (108, 43347), (115, 43422), (118, 43437),

Gene: JuJu_50 Start: 36277, Stop: 37092, Start Num: 23

Candidate Starts for JuJu_50:

(13, 36202), (Start: 23 @36277 has 17 MA's), (39, 36373), (61, 36553), (76, 36664), (81, 36697), (91, 36784), (117, 37024),

Gene: Kita_49 Start: 35359, Stop: 36195, Start Num: 22

Candidate Starts for Kita_49:

(Start: 22 @35359 has 11 MA's), (Start: 23 @35371 has 17 MA's), (39, 35473), (49, 35560), (70, 35731), (86, 35836), (97, 35932), (113, 36085), (117, 36121), (124, 36181),

Gene: LordFarquaad_45 Start: 32464, Stop: 33300, Start Num: 22

Candidate Starts for LordFarquaad_45:

(Start: 22 @32464 has 11 MA's), (Start: 23 @32476 has 17 MA's), (39, 32578), (49, 32665), (70, 32836), (86, 32941), (97, 33037), (113, 33190), (117, 33226), (124, 33286),

Gene: Lysidious_44 Start: 34244, Stop: 35065, Start Num: 23

Candidate Starts for Lysidious_44:

(Start: 23 @34244 has 17 MA's), (41, 34352), (50, 34442), (61, 34520), (63, 34538), (65, 34547), (79, 34646), (87, 34709), (89, 34730), (91, 34751), (99, 34817), (101, 34826), (116, 34988), (117, 34991),

Gene: MakCheese_59 Start: 40021, Stop: 40845, Start Num: 23

Candidate Starts for MakCheese_59:

(3, 39715), (4, 39724), (6, 39862), (Start: 23 @40021 has 17 MA's), (39, 40123), (40, 40129), (78, 40429), (88, 40504), (91, 40558), (96, 40600), (106, 40672), (108, 40699), (110, 40714), (115, 40774),

Gene: Manasvini_49 Start: 35374, Stop: 36210, Start Num: 22

Candidate Starts for Manasvini_49:

(Start: 22 @35374 has 11 MA's), (Start: 23 @35386 has 17 MA's), (39, 35488), (49, 35575), (70, 35746), (86, 35851), (97, 35947), (113, 36100), (117, 36136), (124, 36196),

Gene: Maridalia_49 Start: 35508, Stop: 36332, Start Num: 23

Candidate Starts for Maridalia_49:

(1, 35151), (2, 35184), (7, 35352), (Start: 23 @35508 has 17 MA's), (39, 35610), (49, 35697), (86, 35973), (97, 36069), (116, 36255), (117, 36258), (124, 36318),

Gene: Neobush_48 Start: 35356, Stop: 36180, Start Num: 23

Candidate Starts for Neobush_48:

(Start: 22 @35344 has 11 MA's), (Start: 23 @35356 has 17 MA's), (39, 35458), (49, 35545), (70, 35716), (86, 35821), (97, 35917), (113, 36070), (117, 36106), (124, 36166),

Gene: Periwinkle_67 Start: 39705, Stop: 40481, Start Num: 23

Candidate Starts for Periwinkle_67:

(18, 39675), (Start: 23 @39705 has 17 MA's), (39, 39804), (49, 39891), (61, 39984), (74, 40083), (115, 40401), (120, 40422), (121, 40437), (123, 40455),

Gene: Pickett_41 Start: 29647, Stop: 30483, Start Num: 22

Candidate Starts for Pickett_41:

(Start: 22 @29647 has 11 MA's), (Start: 23 @29659 has 17 MA's), (39, 29761), (49, 29848), (70, 30019), (86, 30124), (97, 30220), (113, 30373), (117, 30409), (124, 30469),

Gene: Polly_45 Start: 34805, Stop: 35629, Start Num: 23

Candidate Starts for Polly_45:

(Start: 22 @34793 has 11 MA's), (Start: 23 @34805 has 17 MA's), (39, 34907), (49, 34994), (70, 35165), (86, 35270), (97, 35366), (113, 35519), (117, 35555), (124, 35615),

Gene: Poochiewood_60 Start: 42683, Stop: 43501, Start Num: 16

Candidate Starts for Poochiewood_60:

(Start: 16 @42683 has 9 MA's), (20, 42710), (25, 42737), (28, 42749), (39, 42809), (47, 42884), (49, 42896), (59, 42986), (61, 42992), (75, 43097), (81, 43127), (93, 43232), (108, 43355), (115, 43430), (118, 43445),

Gene: REQ2_43 Start: 33255, Stop: 34112, Start Num: 19

Candidate Starts for REQ2_43:

(19, 33255), (Start: 29 @33318 has 1 MA's), (30, 33324), (35, 33360), (56, 33540), (59, 33576), (68, 33633), (77, 33699), (90, 33783), (116, 34029), (117, 34032),

Gene: Rose5_60 Start: 42695, Stop: 43513, Start Num: 16

Candidate Starts for Rose5_60:

(Start: 16 @42695 has 9 MA's), (20, 42722), (25, 42749), (28, 42761), (39, 42821), (47, 42896), (49, 42908), (59, 42998), (61, 43004), (75, 43109), (81, 43139), (93, 43244), (108, 43367), (115, 43442), (118, 43457),

Gene: Ruthy_46 Start: 36193, Stop: 37002, Start Num: 21

Candidate Starts for Ruthy_46:

(Start: 21 @36193 has 3 MA's), (26, 36223), (39, 36301), (40, 36307), (42, 36322), (87, 36655), (98, 36757), (112, 36871), (121, 36958),

Gene: Sidious_48 Start: 36674, Stop: 37510, Start Num: 23

Candidate Starts for Sidious_48:

(Start: 22 @36662 has 11 MA's), (Start: 23 @36674 has 17 MA's), (39, 36776), (49, 36863), (52, 36893), (99, 37268), (116, 37439), (117, 37442),

Gene: Silverleaf_60 Start: 42430, Stop: 43248, Start Num: 16

Candidate Starts for Silverleaf_60:

(Start: 16 @42430 has 9 MA's), (20, 42457), (25, 42484), (28, 42496), (39, 42556), (47, 42631), (49, 42643), (59, 42733), (61, 42739), (75, 42844), (81, 42874), (93, 42979), (108, 43102), (115, 43177), (118, 43192),

Gene: SoilAssassin_43 Start: 32482, Stop: 33318, Start Num: 22

Candidate Starts for SoilAssassin_43:

(Start: 22 @32482 has 11 MA's), (Start: 23 @32494 has 17 MA's), (39, 32596), (49, 32683), (70, 32854), (86, 32959), (97, 33055), (113, 33208), (117, 33244), (124, 33304),

Gene: Suscepit_48 Start: 35363, Stop: 36187, Start Num: 23

Candidate Starts for Suscepit_48:

(Start: 22 @35351 has 11 MA's), (Start: 23 @35363 has 17 MA's), (39, 35465), (49, 35552), (70, 35723), (86, 35828), (97, 35924), (113, 36077), (117, 36113), (124, 36173),

Gene: Tayonia_48 Start: 35362, Stop: 36186, Start Num: 23

Candidate Starts for Tayonia_48:

(Start: 22 @35350 has 11 MA's), (Start: 23 @35362 has 17 MA's), (39, 35464), (49, 35551), (70, 35722), (86, 35827), (97, 35923), (113, 36076), (117, 36112), (124, 36172),

Gene: ThankyouJordi_47 Start: 37192, Stop: 38031, Start Num: 15

Candidate Starts for ThankyouJordi_47:

(8, 37096), (Start: 15 @37192 has 3 MA's), (17, 37204), (Start: 22 @37237 has 11 MA's), (Start: 23 @37249 has 17 MA's), (39, 37351), (41, 37360), (51, 37462), (61, 37531), (72, 37624), (91, 37738), (94, 37762), (96, 37780), (98, 37801), (99, 37804), (100, 37807), (104, 37831), (107, 37882), (108, 37885), (114, 37945),

Gene: Trumpet_48 Start: 35363, Stop: 36187, Start Num: 23

Candidate Starts for Trumpet_48:

(Start: 22 @35351 has 11 MA's), (Start: 23 @35363 has 17 MA's), (39, 35465), (49, 35552), (70, 35723), (86, 35828), (97, 35924), (113, 36077), (117, 36113), (124, 36173),

Gene: Tyson_60 Start: 42697, Stop: 43515, Start Num: 16

Candidate Starts for Tyson_60:

(Start: 16 @42697 has 9 MA's), (20, 42724), (25, 42751), (28, 42763), (39, 42823), (47, 42898), (49, 42910), (59, 43000), (61, 43006), (75, 43111), (81, 43141), (93, 43246), (108, 43369), (115, 43444), (118, 43459),

Gene: WelcomeAyanna_47 Start: 37339, Stop: 38178, Start Num: 15

Candidate Starts for WelcomeAyanna_47:

(8, 37243), (Start: 15 @37339 has 3 MA's), (17, 37351), (Start: 22 @37384 has 11 MA's), (Start: 23 @37396 has 17 MA's), (39, 37498), (41, 37507), (51, 37609), (61, 37678), (72, 37771), (91, 37885), (94, 37909), (96, 37927), (98, 37948), (99, 37951), (100, 37954), (104, 37978), (107, 38029), (108, 38032), (114, 38092),

Gene: Wyatt2_61 Start: 42695, Stop: 43513, Start Num: 16

Candidate Starts for Wyatt2_61:

(Start: 16 @42695 has 9 MA's), (20, 42722), (25, 42749), (28, 42761), (39, 42821), (47, 42896), (49, 42908), (59, 42998), (61, 43004), (75, 43109), (81, 43139), (93, 43244), (108, 43367), (115, 43442), (118, 43457),

Gene: Yeet412_43 Start: 32483, Stop: 33319, Start Num: 22

Candidate Starts for Yeet412_43:

(Start: 22 @32483 has 11 MA's), (Start: 23 @32495 has 17 MA's), (39, 32597), (49, 32684), (70, 32855), (86, 32960), (97, 33056), (113, 33209), (117, 33245), (124, 33305),

Gene: Zameen_48 Start: 35362, Stop: 36186, Start Num: 23

Candidate Starts for Zameen_48:

(Start: 22 @35350 has 11 MA's), (Start: 23 @35362 has 17 MA's), (39, 35464), (49, 35551), (70, 35722), (86, 35827), (97, 35923), (113, 36076), (117, 36112), (124, 36172),

Gene: Zirinka_45 Start: 35970, Stop: 36806, Start Num: 22

Candidate Starts for Zirinka_45:

(Start: 22 @35970 has 11 MA's), (Start: 23 @35982 has 17 MA's), (39, 36084), (49, 36171), (70, 36342), (86, 36447), (97, 36543), (113, 36696), (117, 36732), (124, 36792),