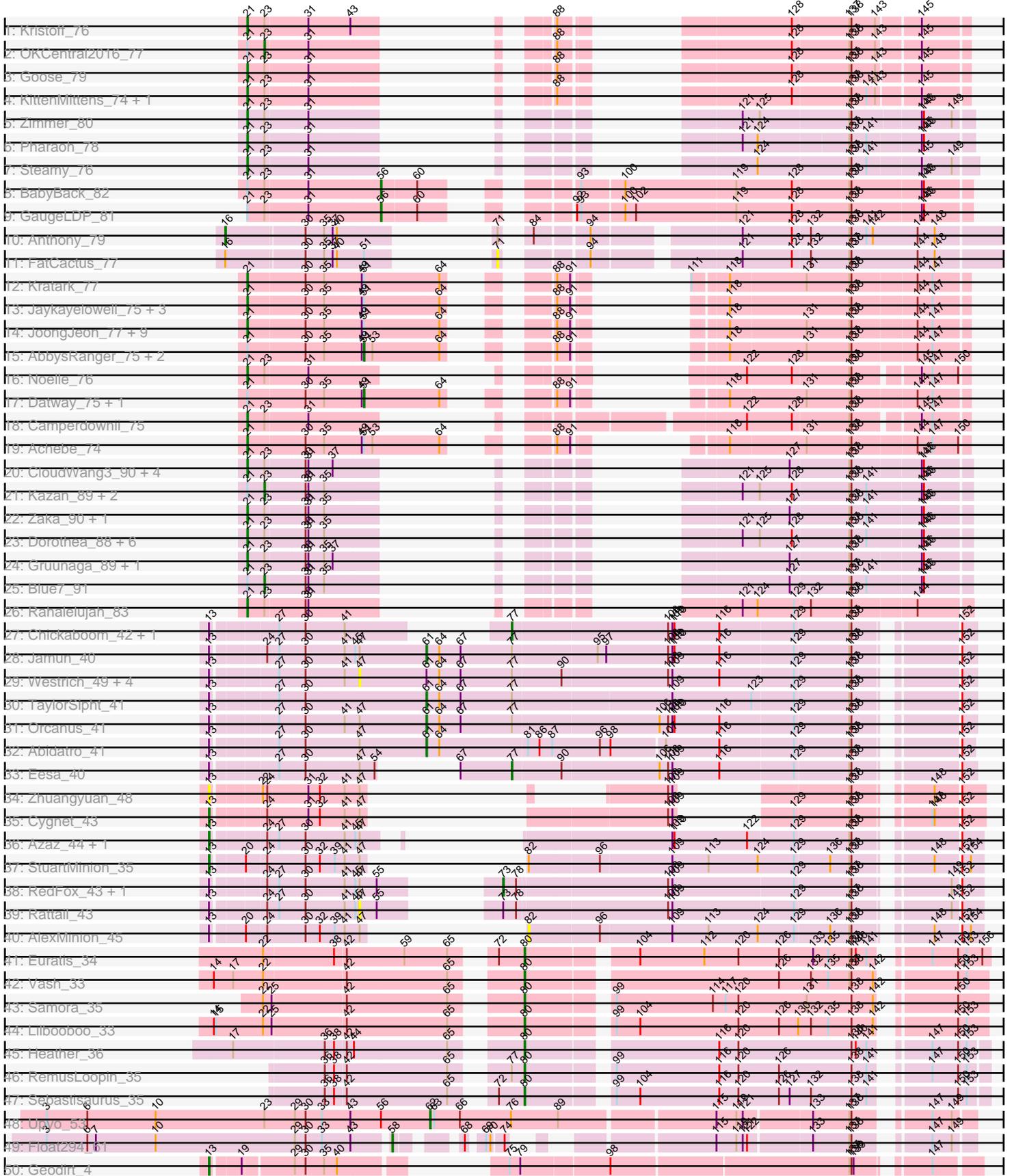


Pham 283677



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 283677 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283677 has 96 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Kristoff_76
- Track 2 : OKCentral2016_77
- Track 3 : Goose_79
- Track 4 : KittenMittens_74, Drake94_75
- Track 5 : Zimmer_80
- Track 6 : Pharaoh_78
- Track 7 : Steamy_76
- Track 8 : BabyBack_82
- Track 9 : GaugeLDP_81
- Track 10 : Anthony_79
- Track 11 : FatCactus_77
- Track 12 : Kratak_77
- Track 13 : Jaykayelowell_75, Florean_78, Bruiser_77, TinaFeyge_76
- Track 14 : JoongJeon_77, Clarenza_77, BubbleTrouble_77, KFPoly_77, Palestino_77, Eris_77, Albee_78, Thanksgivukkah_77, LittleB_78, Funston_77
- Track 15 : AbbysRanger_75, Backyardigan_73, PetiteSangsue_75
- Track 16 : Noelle_76
- Track 17 : Datway_75, Xena_74
- Track 18 : Camperdownii_75
- Track 19 : Achebe_74
- Track 20 : CloudWang3_90, Roksolana_90, Hexamo_89, Rifter_90, Artemis2UCLA_89
- Track 21 : Kazan_89, SmellyB_88, Cookiedough_88
- Track 22 : Zaka_90, Wiks_89
- Track 23 : Dorothea_88, Hoot_83, Polyphemus_81, Jordennis_86, Isiphiwo_84, BABullseye_81, JewelBug_80
- Track 24 : Gruunaga_89, Gladiator_86
- Track 25 : Blue7_91
- Track 26 : Rahalelujah_83
- Track 27 : Chickaboom_42, WileyE_46
- Track 28 : Jamun_40
- Track 29 : Westrich_49, KendraB23_51, Amanises_50, Gravel_50, Pelletreau_50
- Track 30 : TaylorSipht_41
- Track 31 : Orcanus_41
- Track 32 : Abidatro_41
- Track 33 : Eesa_40
- Track 34 : Zhuangyuan_48

- Track 35 : Cygnet_43
- Track 36 : Azaz_44, Leona_42
- Track 37 : StuartMinion_35
- Track 38 : RedFox_43, PhluffyCoco_43
- Track 39 : Rattail_43
- Track 40 : AlexMinion_45
- Track 41 : Euratis_34
- Track 42 : Vash_33
- Track 43 : Samora_35
- Track 44 : Lilbooboo_33
- Track 45 : Heather_36
- Track 46 : RemusLoopin_35
- Track 47 : Sebastisaurus_35
- Track 48 : Upyo_53
- Track 49 : Float294_61
- Track 50 : Geodirt_4
- Track 51 : PhilipPhlop_69, EmiMonkey_67
- Track 52 : Doomphist_74, Poenanya_74, RedBird_72, Empress_69
- Track 53 : GigiOuiOui_66
- Track 54 : Phanphagia_66
- Track 55 : Samy_50

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

The start number called the most often in the published annotations is 21, it was called in 42 of the 84 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Achebe_74, Albee_78, Artemis2UCLA_89, BABullseye_81, Bruiser_77, BubbleTrouble_77, Camperdownii_75, Clarenza_77, CloudWang3_90, Dorothea_88, Drake94_75, Eris_77, Floean_78, Funston_77, Gladiator_86, Goose_79, Gruunaga_89, Hexamo_89, Hoot_83, Isiphiwo_84, Jaykayelowell_75, JewelBug_80, JoongJeon_77, Jordennis_86, KFPoly_77, KittenMittens_74, Kratark_77, Kristoff_76, LittleB_78, Noelle_76, Palestino_77, Pharaoh_78, Polyphemus_81, Rahalelujah_83, Rifter_90, Roksolana_90, Steamy_76, Thanksgivukkah_77, TinaFeyge_76, Wiks_89, Zaka_90, Zimmer_80,

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

- AbbysRanger_75, BabyBack_82, Backyardigan_73, Blue7_91, Cookiedough_88, Datway_75, GaugeLDP_81, Kazan_89, OKCentral2016_77, PetiteSangsue_75, SmellyB_88, Xena_74,

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

- Abidatro_41, AlexMinion_45, Amanises_50, Anthony_79, Azaz_44, Chickaboom_42, Cygnet_43, Doomphist_74, Eesa_40, EmiMonkey_67, Empress_69, Euratis_34, FatCactus_77, Float294_61, Geodirt_4, GigiOuiOui_66, Gravel_50, Heather_36, Jamun_40, KendraB23_51, Leona_42, Lilbooboo_33, Orcanus_41, Pelletreau_50, Phanphagia_66, PhilipPhlop_69, PhluffyCoco_43, Poenanya_74, Rattail_43, RedBird_72, RedFox_43, RemusLoopin_35, Samora_35, Samy_50, Sebastisaurus_35, StuartMinion_35, TaylorSipht_41, Upyo_53, Vash_33,

Westrich_49, WileyE_46, Zhuangyuan_48,

Summary by start number:

Start 13:

- Found in 28 of 96 (29.2%) of genes in pham
- Manual Annotations of this start: 9 of 84
- Called 39.3% of time when present
- Phage (with cluster) where this start called: Azaz_44 (AS3), Cygnet_43 (AS2), Doomphist_74 (F1), Empress_69 (F1), Geodirt_4 (DE1), GigiOuiOui_66 (F1), Leona_42 (AS3), Poenanya_74 (F1), RedBird_72 (F1), StuartMinion_35 (AS3), Zhuangyuan_48 (AS2),

Start 16:

- Found in 2 of 96 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Anthony_79 (A20),

Start 21:

- Found in 54 of 96 (56.2%) of genes in pham
- Manual Annotations of this start: 42 of 84
- Called 77.8% of time when present
- Phage (with cluster) where this start called: Achebe_74 (A4), Albee_78 (A4), Artemis2UCLA_89 (A6), BABullseye_81 (A6), Bruiser_77 (A4), BubbleTrouble_77 (A4), Camperdownii_75 (A4), Clarenza_77 (A4), CloudWang3_90 (A6), Dorothea_88 (A6), Drake94_75 (A10), Eris_77 (A4), Florean_78 (A4), Funston_77 (A4), Gladiator_86 (A6), Goose_79 (A10), Gruunaga_89 (A6), Hexamo_89 (A6), Hoot_83 (A6), Isiphiwo_84 (A6), Jaykayelowell_75 (A4), JewelBug_80 (A6), JoongJeon_77 (A4), Jordennis_86 (A6), KFPoly_77 (A4), KittenMittens_74 (A10), Kratark_77 (A4), Kristoff_76 (A10), LittleB_78 (A4), Noelle_76 (A4), Palestino_77 (A4), Pharaoh_78 (A12), Polyphemus_81 (A6), Rahalelujah_83 (A9), Rifter_90 (A6), Roksolana_90 (A6), Steamy_76 (A12), Thanksgivukkah_77 (A4), TinaFeyge_76 (A4), Wiks_89 (A6), Zaka_90 (A6), Zimmer_80 (A12),

Start 22:

- Found in 14 of 96 (14.6%) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 21.4% of time when present
- Phage (with cluster) where this start called: EmiMonkey_67 (F1), Phanphagia_66 (F1), PhlipPhlop_69 (F1),

Start 23:

- Found in 34 of 96 (35.4%) of genes in pham
- Manual Annotations of this start: 5 of 84
- Called 14.7% of time when present
- Phage (with cluster) where this start called: Blue7_91 (A6), Cookiedough_88 (A6), Kazan_89 (A6), OKCentral2016_77 (A10), SmellyB_88 (A6),

Start 46:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Samy_50 (singleton),

Start 47:

- Found in 18 of 96 (18.8%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Amanises_50 (AS1), Gravel_50 (AS1), KendraB23_51 (AS1), Pelletreau_50 (AS1), Rattail_43 (AS3), Westrich_49 (AS1),

Start 51:

- Found in 22 of 96 (22.9%) of genes in pham
- Manual Annotations of this start: 5 of 84
- Called 22.7% of time when present
- Phage (with cluster) where this start called: AbbysRanger_75 (A4), Backyardigan_73 (A4), Datway_75 (A4), PetiteSangsue_75 (A4), Xena_74 (A4),

Start 56:

- Found in 3 of 96 (3.1%) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 66.7% of time when present
- Phage (with cluster) where this start called: BabyBack_82 (A2), GaugeLDP_81 (A2),

Start 58:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Float294_61 (CR3),

Start 61:

- Found in 9 of 96 (9.4%) of genes in pham
- Manual Annotations of this start: 4 of 84
- Called 44.4% of time when present
- Phage (with cluster) where this start called: Abidatro_41 (AS1), Jamun_40 (AS1), Orcanus_41 (AS1), TaylorSipht_41 (AS1),

Start 62:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Upyo_53 (CD),

Start 71:

- Found in 2 of 96 (2.1%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: FatCactus_77 (A20),

Start 73:

- Found in 3 of 96 (3.1%) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 66.7% of time when present
- Phage (with cluster) where this start called: PhluffyCoco_43 (AS3), RedFox_43 (AS3),

Start 77:

- Found in 12 of 96 (12.5%) of genes in pham
- Manual Annotations of this start: 2 of 84
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Chickaboom_42 (AS1), Eesa_40 (AS1), WileyE_46 (AS1),

Start 80:

- Found in 7 of 96 (7.3%) of genes in pham
- Manual Annotations of this start: 7 of 84
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Euratis_34 (BB1), Heather_36 (BB2), Lilbooboo_33 (BB1), RemusLoopin_35 (BB2), Samora_35 (BB1), Sebastisaurus_35 (BB2), Vash_33 (BB1),

Start 82:

- Found in 2 of 96 (2.1%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AlexMinion_45 (AS3),

Summary by clusters:

There are 17 clusters represented in this pham: AS3, F1, AS1, A10, AS2, DE1, A12, singleton, CD, A20, A2, A4, A6, A9, BB2, BB1, CR3,

Info for manual annotations of cluster A10:

- Start number 21 was manually annotated 4 times for cluster A10.
- Start number 23 was manually annotated 1 time for cluster A10.

Info for manual annotations of cluster A12:

- Start number 21 was manually annotated 3 times for cluster A12.

Info for manual annotations of cluster A2:

- Start number 56 was manually annotated 2 times for cluster A2.

Info for manual annotations of cluster A20:

- Start number 16 was manually annotated 1 time for cluster A20.

Info for manual annotations of cluster A4:

- Start number 21 was manually annotated 18 times for cluster A4.
- Start number 51 was manually annotated 5 times for cluster A4.

Info for manual annotations of cluster A6:

- Start number 21 was manually annotated 16 times for cluster A6.
- Start number 23 was manually annotated 4 times for cluster A6.

Info for manual annotations of cluster A9:

- Start number 21 was manually annotated 1 time for cluster A9.

Info for manual annotations of cluster AS1:

- Start number 61 was manually annotated 4 times for cluster AS1.

- Start number 77 was manually annotated 2 times for cluster AS1.

Info for manual annotations of cluster AS2:

- Start number 13 was manually annotated 1 time for cluster AS2.

Info for manual annotations of cluster AS3:

- Start number 13 was manually annotated 2 times for cluster AS3.
- Start number 73 was manually annotated 2 times for cluster AS3.

Info for manual annotations of cluster BB1:

- Start number 80 was manually annotated 4 times for cluster BB1.

Info for manual annotations of cluster BB2:

- Start number 80 was manually annotated 3 times for cluster BB2.

Info for manual annotations of cluster CD:

- Start number 62 was manually annotated 1 time for cluster CD.

Info for manual annotations of cluster CR3:

- Start number 58 was manually annotated 1 time for cluster CR3.

Info for manual annotations of cluster DE1:

- Start number 13 was manually annotated 1 time for cluster DE1.

Info for manual annotations of cluster F1:

- Start number 13 was manually annotated 5 times for cluster F1.
- Start number 22 was manually annotated 2 times for cluster F1.

Gene Information:

Gene: AbbysRanger_75 Start: 46560, Stop: 45976, Start Num: 51

Candidate Starts for AbbysRanger_75:

(Start: 21 @46710 has 42 MA's), (30, 46632), (35, 46611), (49, 46563), (Start: 51 @46560 has 5 MA's), (53, 46548), (64, 46455), (88, 46383), (91, 46365), (118, 46299), (131, 46194), (137, 46134), (138, 46131), (144, 46044), (147, 46023),

Gene: Abidatro_41 Start: 27763, Stop: 28476, Start Num: 61

Candidate Starts for Abidatro_41:

(Start: 13 @27487 has 9 MA's), (27, 27568), (30, 27604), (47, 27670), (Start: 61 @27763 has 4 MA's), (64, 27781), (81, 27901), (86, 27916), (87, 27934), (96, 28000), (98, 28015), (107, 28087), (116, 28162), (129, 28264), (137, 28339), (138, 28342), (152, 28459),

Gene: Achebe_74 Start: 46689, Stop: 45955, Start Num: 21

Candidate Starts for Achebe_74:

(Start: 21 @46689 has 42 MA's), (30, 46611), (35, 46590), (49, 46542), (Start: 51 @46539 has 5 MA's), (53, 46527), (64, 46434), (88, 46362), (91, 46344), (118, 46278), (131, 46173), (137, 46113), (138, 46110), (144, 46023), (147, 46002), (150, 45966),

Gene: Albee_78 Start: 46898, Stop: 46164, Start Num: 21

Candidate Starts for Albee_78:

(Start: 21 @46898 has 42 MA's), (30, 46820), (35, 46799), (49, 46751), (Start: 51 @46748 has 5 MA's), (64, 46643), (88, 46571), (91, 46553), (118, 46487), (131, 46382), (137, 46322), (138, 46319), (144, 46232), (147, 46211),

Gene: AlexMinion_45 Start: 27531, Stop: 28121, Start Num: 82

Candidate Starts for AlexMinion_45:

(Start: 13 @27336 has 9 MA's), (20, 27375), (24, 27402), (30, 27453), (32, 27468), (39, 27489), (41, 27501), (47, 27519), (82, 27531), (96, 27627), (109, 27726), (113, 27777), (124, 27846), (129, 27897), (136, 27945), (137, 27972), (138, 27975), (148, 28059), (152, 28092), (154, 28104),

Gene: Amanises_50 Start: 28732, Stop: 29547, Start Num: 47

Candidate Starts for Amanises_50:

(Start: 13 @28549 has 9 MA's), (27, 28630), (30, 28666), (41, 28714), (47, 28732), (Start: 61 @28825 has 4 MA's), (64, 28843), (67, 28873), (Start: 77 @28945 has 2 MA's), (90, 29011), (108, 29158), (109, 29164), (116, 29230), (129, 29332), (137, 29407), (138, 29410), (152, 29527),

Gene: Anthony_79 Start: 47520, Stop: 46663, Start Num: 16

Candidate Starts for Anthony_79:

(Start: 16 @47520 has 1 MA's), (30, 47415), (35, 47394), (37, 47382), (40, 47376), (71, 47298), (84, 47280), (94, 47214), (121, 47034), (128, 46965), (132, 46941), (137, 46887), (138, 46884), (141, 46863), (142, 46854), (144, 46791), (148, 46767),

Gene: Artemis2UCLA_89 Start: 47205, Stop: 46558, Start Num: 21

Candidate Starts for Artemis2UCLA_89:

(Start: 21 @47205 has 42 MA's), (Start: 23 @47181 has 5 MA's), (30, 47127), (31, 47124), (37, 47094), (127, 46800), (137, 46719), (138, 46716), (145, 46623), (146, 46620),

Gene: Azaz_44 Start: 27236, Stop: 28045, Start Num: 13

Candidate Starts for Azaz_44:

(Start: 13 @27236 has 9 MA's), (24, 27302), (27, 27317), (30, 27353), (41, 27401), (45, 27413), (47, 27419), (109, 27653), (110, 27656), (122, 27758), (129, 27821), (137, 27896), (138, 27899), (152, 28016),

Gene: BABullseye_81 Start: 45537, Stop: 44887, Start Num: 21

Candidate Starts for BABullseye_81:

(Start: 21 @45537 has 42 MA's), (Start: 23 @45513 has 5 MA's), (30, 45459), (31, 45456), (35, 45438), (121, 45198), (125, 45174), (128, 45129), (137, 45051), (138, 45048), (141, 45027), (145, 44952), (146, 44949),

Gene: BabyBack_82 Start: 48998, Stop: 48291, Start Num: 56

Candidate Starts for BabyBack_82:

(Start: 21 @49172 has 42 MA's), (Start: 23 @49148 has 5 MA's), (31, 49091), (Start: 56 @48998 has 2 MA's), (60, 48950), (93, 48821), (100, 48764), (119, 48611), (128, 48533), (137, 48455), (138, 48452), (145, 48356), (146, 48353),

Gene: Backyardigan_73 Start: 46576, Stop: 45992, Start Num: 51

Candidate Starts for Backyardigan_73:

(Start: 21 @46726 has 42 MA's), (30, 46648), (35, 46627), (49, 46579), (Start: 51 @46576 has 5 MA's), (53, 46564), (64, 46471), (88, 46399), (91, 46381), (118, 46315), (131, 46210), (137, 46150), (138, 46147), (144, 46060), (147, 46039),

Gene: Blue7_91 Start: 47412, Stop: 46786, Start Num: 23

Candidate Starts for Blue7_91:

(Start: 21 @47436 has 42 MA's), (Start: 23 @47412 has 5 MA's), (30, 47358), (31, 47355), (35, 47337), (127, 47031), (137, 46950), (138, 46947), (141, 46926), (145, 46851), (146, 46848),

Gene: Bruiser_77 Start: 46898, Stop: 46164, Start Num: 21

Candidate Starts for Bruiser_77:

(Start: 21 @46898 has 42 MA's), (30, 46820), (35, 46799), (49, 46751), (Start: 51 @46748 has 5 MA's), (64, 46643), (88, 46571), (91, 46553), (118, 46487), (137, 46322), (138, 46319), (144, 46232), (147, 46211),

Gene: BubbleTrouble_77 Start: 46925, Stop: 46191, Start Num: 21

Candidate Starts for BubbleTrouble_77:

(Start: 21 @46925 has 42 MA's), (30, 46847), (35, 46826), (49, 46778), (Start: 51 @46775 has 5 MA's), (64, 46670), (88, 46598), (91, 46580), (118, 46514), (131, 46409), (137, 46349), (138, 46346), (144, 46259), (147, 46238),

Gene: Camperdownii_75 Start: 46323, Stop: 45583, Start Num: 21

Candidate Starts for Camperdownii_75:

(Start: 21 @46323 has 42 MA's), (Start: 23 @46299 has 5 MA's), (31, 46242), (122, 45870), (128, 45807), (137, 45729), (138, 45726), (145, 45645), (147, 45630),

Gene: Chickaboom_42 Start: 27783, Stop: 28385, Start Num: 77

Candidate Starts for Chickaboom_42:

(Start: 13 @27504 has 9 MA's), (27, 27585), (30, 27621), (41, 27669), (Start: 77 @27783 has 2 MA's), (108, 27996), (109, 28002), (110, 28005), (116, 28068), (129, 28170), (137, 28245), (138, 28248), (152, 28365),

Gene: Clarenza_77 Start: 46895, Stop: 46161, Start Num: 21

Candidate Starts for Clarenza_77:

(Start: 21 @46895 has 42 MA's), (30, 46817), (35, 46796), (49, 46748), (Start: 51 @46745 has 5 MA's), (64, 46640), (88, 46568), (91, 46550), (118, 46484), (131, 46379), (137, 46319), (138, 46316), (144, 46229), (147, 46208),

Gene: CloudWang3_90 Start: 47734, Stop: 47087, Start Num: 21

Candidate Starts for CloudWang3_90:

(Start: 21 @47734 has 42 MA's), (Start: 23 @47710 has 5 MA's), (30, 47656), (31, 47653), (37, 47623), (127, 47329), (137, 47248), (138, 47245), (145, 47152), (146, 47149),

Gene: Cookiedough_88 Start: 47826, Stop: 47200, Start Num: 23

Candidate Starts for Cookiedough_88:

(Start: 21 @47850 has 42 MA's), (Start: 23 @47826 has 5 MA's), (30, 47772), (31, 47769), (35, 47751), (121, 47511), (125, 47487), (128, 47442), (137, 47364), (138, 47361), (141, 47340), (145, 47265), (146, 47262),

Gene: Cygnet_43 Start: 28047, Stop: 28715, Start Num: 13

Candidate Starts for Cygnet_43:

(Start: 13 @28047 has 9 MA's), (24, 28113), (31, 28167), (32, 28179), (41, 28212), (47, 28230), (108, 28431), (109, 28437), (129, 28488), (137, 28563), (138, 28566), (147, 28647), (148, 28650), (152, 28683),

Gene: Datway_75 Start: 46559, Stop: 45975, Start Num: 51

Candidate Starts for Datway_75:

(Start: 21 @46709 has 42 MA's), (30, 46631), (35, 46610), (49, 46562), (Start: 51 @46559 has 5 MA's), (64, 46454), (88, 46382), (91, 46364), (118, 46298), (131, 46193), (137, 46133), (138, 46130), (144,

46043), (147, 46022),

Gene: Doomphist_74 Start: 45998, Stop: 46735, Start Num: 13

Candidate Starts for Doomphist_74:

(Start: 13 @45998 has 9 MA's), (Start: 22 @46055 has 2 MA's), (28, 46079), (29, 46097), (30, 46112), (35, 46133), (43, 46166), (52, 46184), (105, 46343), (128, 46505), (137, 46583), (138, 46586), (141, 46607), (142, 46616), (144, 46643), (155, 46724),

Gene: Dorothea_88 Start: 47842, Stop: 47192, Start Num: 21

Candidate Starts for Dorothea_88:

(Start: 21 @47842 has 42 MA's), (Start: 23 @47818 has 5 MA's), (30, 47764), (31, 47761), (35, 47743), (121, 47503), (125, 47479), (128, 47434), (137, 47356), (138, 47353), (141, 47332), (145, 47257), (146, 47254),

Gene: Drake94_75 Start: 45844, Stop: 45209, Start Num: 21

Candidate Starts for Drake94_75:

(Start: 21 @45844 has 42 MA's), (Start: 23 @45820 has 5 MA's), (31, 45763), (88, 45628), (128, 45439), (137, 45361), (138, 45358), (141, 45337), (143, 45325), (145, 45271),

Gene: Eesa_40 Start: 28668, Stop: 29270, Start Num: 77

Candidate Starts for Eesa_40:

(Start: 13 @28389 has 9 MA's), (27, 28470), (30, 28506), (47, 28572), (54, 28593), (67, 28596), (Start: 77 @28668 has 2 MA's), (90, 28734), (106, 28869), (108, 28881), (109, 28887), (116, 28953), (129, 29055), (137, 29130), (138, 29133), (152, 29250),

Gene: EmiMonkey_67 Start: 47844, Stop: 48557, Start Num: 22

Candidate Starts for EmiMonkey_67:

(1, 47481), (2, 47538), (4, 47580), (5, 47595), (8, 47616), (11, 47697), (Start: 22 @47844 has 2 MA's), (26, 47865), (34, 47925), (105, 48165), (137, 48405), (138, 48408), (142, 48438), (144, 48465), (155, 48546),

Gene: Empress_69 Start: 44809, Stop: 45546, Start Num: 13

Candidate Starts for Empress_69:

(Start: 13 @44809 has 9 MA's), (Start: 22 @44866 has 2 MA's), (28, 44890), (29, 44908), (30, 44923), (35, 44944), (43, 44977), (52, 44995), (105, 45154), (128, 45316), (137, 45394), (138, 45397), (141, 45418), (142, 45427), (144, 45454), (155, 45535),

Gene: Eris_77 Start: 46910, Stop: 46176, Start Num: 21

Candidate Starts for Eris_77:

(Start: 21 @46910 has 42 MA's), (30, 46832), (35, 46811), (49, 46763), (Start: 51 @46760 has 5 MA's), (64, 46655), (88, 46583), (91, 46565), (118, 46499), (131, 46394), (137, 46334), (138, 46331), (144, 46244), (147, 46223),

Gene: Euratis_34 Start: 26257, Stop: 26847, Start Num: 80

Candidate Starts for Euratis_34:

(Start: 22 @25936 has 2 MA's), (38, 26032), (42, 26047), (59, 26125), (65, 26185), (72, 26221), (Start: 80 @26257 has 7 MA's), (104, 26392), (112, 26482), (120, 26530), (126, 26587), (133, 26635), (135, 26656), (137, 26686), (138, 26689), (140, 26695), (141, 26710), (147, 26767), (150, 26803), (153, 26815), (156, 26836),

Gene: FatCactus_77 Start: 46761, Stop: 46126, Start Num: 71

Candidate Starts for FatCactus_77:

(Start: 16 @46983 has 1 MA's), (30, 46878), (35, 46857), (37, 46845), (40, 46839), (Start: 51 @46806 has 5 MA's), (71, 46761), (94, 46677), (121, 46497), (128, 46428), (132, 46404), (137, 46350), (138, 46347), (144, 46254), (148, 46230),

Gene: Float294_61 Start: 49716, Stop: 49099, Start Num: 58

Candidate Starts for Float294_61:

(3, 50178), (6, 50121), (7, 50109), (10, 50025), (29, 49830), (30, 49815), (33, 49797), (43, 49761), (Start: 58 @49716 has 1 MA's), (68, 49653), (69, 49638), (70, 49632), (74, 49617), (115, 49413), (119, 49386), (121, 49377), (122, 49371), (133, 49287), (137, 49236), (138, 49233), (147, 49155), (149, 49128),

Gene: Florean_78 Start: 46897, Stop: 46163, Start Num: 21

Candidate Starts for Florean_78:

(Start: 21 @46897 has 42 MA's), (30, 46819), (35, 46798), (49, 46750), (Start: 51 @46747 has 5 MA's), (64, 46642), (88, 46570), (91, 46552), (118, 46486), (137, 46321), (138, 46318), (144, 46231), (147, 46210),

Gene: Funston_77 Start: 46895, Stop: 46161, Start Num: 21

Candidate Starts for Funston_77:

(Start: 21 @46895 has 42 MA's), (30, 46817), (35, 46796), (49, 46748), (Start: 51 @46745 has 5 MA's), (64, 46640), (88, 46568), (91, 46550), (118, 46484), (131, 46379), (137, 46319), (138, 46316), (144, 46229), (147, 46208),

Gene: GaugeLDP_81 Start: 48551, Stop: 47844, Start Num: 56

Candidate Starts for GaugeLDP_81:

(Start: 21 @48725 has 42 MA's), (Start: 23 @48701 has 5 MA's), (31, 48644), (Start: 56 @48551 has 2 MA's), (60, 48503), (92, 48380), (93, 48374), (100, 48317), (102, 48302), (119, 48164), (128, 48086), (137, 48008), (138, 48005), (145, 47909), (146, 47906),

Gene: Geodirt_4 Start: 2785, Stop: 3651, Start Num: 13

Candidate Starts for Geodirt_4:

(Start: 13 @2785 has 9 MA's), (19, 2821), (29, 2884), (30, 2899), (35, 2920), (40, 2938), (75, 3049), (79, 3064), (98, 3181), (137, 3505), (138, 3508), (139, 3511), (147, 3589),

Gene: GigiOuiOui_66 Start: 44414, Stop: 45145, Start Num: 13

Candidate Starts for GigiOuiOui_66:

(Start: 13 @44414 has 9 MA's), (Start: 22 @44471 has 2 MA's), (29, 44513), (30, 44528), (35, 44549), (101, 44729), (128, 44921), (137, 45002), (138, 45005), (144, 45062), (149, 45110), (155, 45134),

Gene: Gladiator_86 Start: 47390, Stop: 46743, Start Num: 21

Candidate Starts for Gladiator_86:

(Start: 21 @47390 has 42 MA's), (Start: 23 @47366 has 5 MA's), (30, 47312), (31, 47309), (35, 47291), (37, 47279), (127, 46985), (137, 46904), (138, 46901), (145, 46808), (146, 46805),

Gene: Goose_79 Start: 46498, Stop: 45863, Start Num: 21

Candidate Starts for Goose_79:

(Start: 21 @46498 has 42 MA's), (Start: 23 @46474 has 5 MA's), (31, 46417), (88, 46282), (128, 46093), (137, 46015), (138, 46012), (143, 45979), (145, 45925),

Gene: Gravel_50 Start: 28545, Stop: 29360, Start Num: 47

Candidate Starts for Gravel_50:

(Start: 13 @28362 has 9 MA's), (27, 28443), (30, 28479), (41, 28527), (47, 28545), (Start: 61 @28638 has 4 MA's), (64, 28656), (67, 28686), (Start: 77 @28758 has 2 MA's), (90, 28824), (108, 28971), (109,

28977), (116, 29043), (129, 29145), (137, 29220), (138, 29223), (152, 29340),

Gene: Gruunaga_89 Start: 47345, Stop: 46698, Start Num: 21

Candidate Starts for Gruunaga_89:

(Start: 21 @47345 has 42 MA's), (Start: 23 @47321 has 5 MA's), (30, 47267), (31, 47264), (35, 47246), (37, 47234), (127, 46940), (137, 46859), (138, 46856), (145, 46763), (146, 46760),

Gene: Heather_36 Start: 27272, Stop: 27856, Start Num: 80

Candidate Starts for Heather_36:

(17, 26909), (36, 27035), (38, 27047), (42, 27062), (44, 27071), (65, 27200), (Start: 80 @27272 has 7 MA's), (116, 27518), (120, 27545), (138, 27704), (140, 27710), (141, 27725), (147, 27782), (150, 27818), (153, 27830),

Gene: Hexamo_89 Start: 47220, Stop: 46573, Start Num: 21

Candidate Starts for Hexamo_89:

(Start: 21 @47220 has 42 MA's), (Start: 23 @47196 has 5 MA's), (30, 47142), (31, 47139), (37, 47109), (127, 46815), (137, 46734), (138, 46731), (145, 46638), (146, 46635),

Gene: Hoot_83 Start: 45056, Stop: 44406, Start Num: 21

Candidate Starts for Hoot_83:

(Start: 21 @45056 has 42 MA's), (Start: 23 @45032 has 5 MA's), (30, 44978), (31, 44975), (35, 44957), (121, 44717), (125, 44693), (128, 44648), (137, 44570), (138, 44567), (141, 44546), (145, 44471), (146, 44468),

Gene: Isiphiwo_84 Start: 46767, Stop: 46117, Start Num: 21

Candidate Starts for Isiphiwo_84:

(Start: 21 @46767 has 42 MA's), (Start: 23 @46743 has 5 MA's), (30, 46689), (31, 46686), (35, 46668), (121, 46428), (125, 46404), (128, 46359), (137, 46281), (138, 46278), (141, 46257), (145, 46182), (146, 46179),

Gene: Jamun_40 Start: 27823, Stop: 28545, Start Num: 61

Candidate Starts for Jamun_40:

(Start: 13 @27547 has 9 MA's), (24, 27613), (27, 27628), (30, 27664), (41, 27712), (45, 27724), (47, 27730), (Start: 61 @27823 has 4 MA's), (64, 27841), (67, 27871), (Start: 77 @27943 has 2 MA's), (95, 28057), (97, 28069), (108, 28156), (109, 28162), (110, 28165), (116, 28228), (129, 28330), (137, 28405), (138, 28408), (152, 28525),

Gene: Jaykayelowell_75 Start: 46891, Stop: 46157, Start Num: 21

Candidate Starts for Jaykayelowell_75:

(Start: 21 @46891 has 42 MA's), (30, 46813), (35, 46792), (49, 46744), (Start: 51 @46741 has 5 MA's), (64, 46636), (88, 46564), (91, 46546), (118, 46480), (137, 46315), (138, 46312), (144, 46225), (147, 46204),

Gene: JewelBug_80 Start: 45535, Stop: 44885, Start Num: 21

Candidate Starts for JewelBug_80:

(Start: 21 @45535 has 42 MA's), (Start: 23 @45511 has 5 MA's), (30, 45457), (31, 45454), (35, 45436), (121, 45196), (125, 45172), (128, 45127), (137, 45049), (138, 45046), (141, 45025), (145, 44950), (146, 44947),

Gene: JoongJeon_77 Start: 46892, Stop: 46158, Start Num: 21

Candidate Starts for JoongJeon_77:

(Start: 21 @46892 has 42 MA's), (30, 46814), (35, 46793), (49, 46745), (Start: 51 @46742 has 5 MA's), (64, 46637), (88, 46565), (91, 46547), (118, 46481), (131, 46376), (137, 46316), (138, 46313), (144,

46226), (147, 46205),

Gene: Jordennis_86 Start: 47439, Stop: 46789, Start Num: 21

Candidate Starts for Jordennis_86:

(Start: 21 @47439 has 42 MA's), (Start: 23 @47415 has 5 MA's), (30, 47361), (31, 47358), (35, 47340), (121, 47100), (125, 47076), (128, 47031), (137, 46953), (138, 46950), (141, 46929), (145, 46854), (146, 46851),

Gene: KFPoly_77 Start: 46892, Stop: 46158, Start Num: 21

Candidate Starts for KFPoly_77:

(Start: 21 @46892 has 42 MA's), (30, 46814), (35, 46793), (49, 46745), (Start: 51 @46742 has 5 MA's), (64, 46637), (88, 46565), (91, 46547), (118, 46481), (131, 46376), (137, 46316), (138, 46313), (144, 46226), (147, 46205),

Gene: Kazan_89 Start: 47187, Stop: 46561, Start Num: 23

Candidate Starts for Kazan_89:

(Start: 21 @47211 has 42 MA's), (Start: 23 @47187 has 5 MA's), (30, 47133), (31, 47130), (35, 47112), (121, 46872), (125, 46848), (128, 46803), (137, 46725), (138, 46722), (141, 46701), (145, 46626), (146, 46623),

Gene: KendraB23_51 Start: 28732, Stop: 29547, Start Num: 47

Candidate Starts for KendraB23_51:

(Start: 13 @28549 has 9 MA's), (27, 28630), (30, 28666), (41, 28714), (47, 28732), (Start: 61 @28825 has 4 MA's), (64, 28843), (67, 28873), (Start: 77 @28945 has 2 MA's), (90, 29011), (108, 29158), (109, 29164), (116, 29230), (129, 29332), (137, 29407), (138, 29410), (152, 29527),

Gene: KittenMittens_74 Start: 45854, Stop: 45219, Start Num: 21

Candidate Starts for KittenMittens_74:

(Start: 21 @45854 has 42 MA's), (Start: 23 @45830 has 5 MA's), (31, 45773), (88, 45638), (128, 45449), (137, 45371), (138, 45368), (141, 45347), (143, 45335), (145, 45281),

Gene: Kratark_77 Start: 46932, Stop: 46198, Start Num: 21

Candidate Starts for Kratark_77:

(Start: 21 @46932 has 42 MA's), (30, 46854), (35, 46833), (49, 46785), (Start: 51 @46782 has 5 MA's), (64, 46677), (88, 46605), (91, 46587), (111, 46566), (118, 46521), (131, 46416), (137, 46356), (138, 46353), (144, 46266), (147, 46245),

Gene: Kristoff_76 Start: 47122, Stop: 46487, Start Num: 21

Candidate Starts for Kristoff_76:

(Start: 21 @47122 has 42 MA's), (Start: 23 @47098 has 5 MA's), (31, 47041), (43, 46990), (88, 46906), (128, 46717), (137, 46639), (138, 46636), (143, 46603), (145, 46549),

Gene: Leona_42 Start: 27237, Stop: 28046, Start Num: 13

Candidate Starts for Leona_42:

(Start: 13 @27237 has 9 MA's), (24, 27303), (27, 27318), (30, 27354), (41, 27402), (45, 27414), (47, 27420), (109, 27654), (110, 27657), (122, 27759), (129, 27822), (137, 27897), (138, 27900), (152, 28017),

Gene: Lilbooboo_33 Start: 26272, Stop: 26859, Start Num: 80

Candidate Starts for Lilbooboo_33:

(14, 25882), (15, 25885), (Start: 22 @25951 has 2 MA's), (25, 25963), (42, 26062), (65, 26200), (Start: 80 @26272 has 7 MA's), (99, 26374), (104, 26407), (120, 26545), (126, 26602), (130, 26629), (132, 26647), (135, 26671), (138, 26704), (142, 26734), (150, 26818), (153, 26830),

Gene: LittleB_78 Start: 46899, Stop: 46165, Start Num: 21

Candidate Starts for LittleB_78:

(Start: 21 @46899 has 42 MA's), (30, 46821), (35, 46800), (49, 46752), (Start: 51 @46749 has 5 MA's), (64, 46644), (88, 46572), (91, 46554), (118, 46488), (131, 46383), (137, 46323), (138, 46320), (144, 46233), (147, 46212),

Gene: Noelle_76 Start: 46925, Stop: 46305, Start Num: 21

Candidate Starts for Noelle_76:

(Start: 21 @46925 has 42 MA's), (Start: 23 @46901 has 5 MA's), (31, 46844), (122, 46592), (128, 46529), (137, 46451), (138, 46448), (145, 46367), (147, 46352), (150, 46316),

Gene: OKCentral2016_77 Start: 45901, Stop: 45290, Start Num: 23

Candidate Starts for OKCentral2016_77:

(Start: 21 @45925 has 42 MA's), (Start: 23 @45901 has 5 MA's), (31, 45844), (88, 45709), (128, 45520), (137, 45442), (138, 45439), (143, 45406), (145, 45352),

Gene: Orcanus_41 Start: 28182, Stop: 28904, Start Num: 61

Candidate Starts for Orcanus_41:

(Start: 13 @27906 has 9 MA's), (27, 27987), (30, 28023), (41, 28071), (47, 28089), (Start: 61 @28182 has 4 MA's), (64, 28200), (67, 28230), (Start: 77 @28302 has 2 MA's), (106, 28503), (108, 28515), (109, 28521), (110, 28524), (116, 28587), (129, 28689), (137, 28764), (138, 28767), (152, 28884),

Gene: Palestino_77 Start: 46895, Stop: 46161, Start Num: 21

Candidate Starts for Palestino_77:

(Start: 21 @46895 has 42 MA's), (30, 46817), (35, 46796), (49, 46748), (Start: 51 @46745 has 5 MA's), (64, 46640), (88, 46568), (91, 46550), (118, 46484), (131, 46379), (137, 46319), (138, 46316), (144, 46229), (147, 46208),

Gene: Pelletreau_50 Start: 28545, Stop: 29360, Start Num: 47

Candidate Starts for Pelletreau_50:

(Start: 13 @28362 has 9 MA's), (27, 28443), (30, 28479), (41, 28527), (47, 28545), (Start: 61 @28638 has 4 MA's), (64, 28656), (67, 28686), (Start: 77 @28758 has 2 MA's), (90, 28824), (108, 28971), (109, 28977), (116, 29043), (129, 29145), (137, 29220), (138, 29223), (152, 29340),

Gene: PetiteSangsue_75 Start: 46546, Stop: 45962, Start Num: 51

Candidate Starts for PetiteSangsue_75:

(Start: 21 @46696 has 42 MA's), (30, 46618), (35, 46597), (49, 46549), (Start: 51 @46546 has 5 MA's), (53, 46534), (64, 46441), (88, 46369), (91, 46351), (118, 46285), (131, 46180), (137, 46120), (138, 46117), (144, 46030), (147, 46009),

Gene: Phanphagia_66 Start: 43660, Stop: 44277, Start Num: 22

Candidate Starts for Phanphagia_66:

(Start: 13 @43603 has 9 MA's), (Start: 22 @43660 has 2 MA's), (28, 43684), (30, 43717), (35, 43738), (43, 43771), (52, 43789), (57, 43798), (105, 43876), (137, 44125), (138, 44128), (142, 44158), (144, 44185), (155, 44266),

Gene: Pharaoh_78 Start: 47942, Stop: 47292, Start Num: 21

Candidate Starts for Pharaoh_78:

(Start: 21 @47942 has 42 MA's), (Start: 23 @47918 has 5 MA's), (31, 47861), (121, 47600), (124, 47579), (137, 47456), (138, 47453), (141, 47432), (145, 47360), (146, 47357),

Gene: PhlipPhlop_69 Start: 47844, Stop: 48557, Start Num: 22

Candidate Starts for PhlipPhlop_69:

(1, 47481), (2, 47538), (4, 47580), (5, 47595), (8, 47616), (11, 47697), (Start: 22 @47844 has 2 MA's), (26, 47865), (34, 47925), (105, 48165), (137, 48405), (138, 48408), (142, 48438), (144, 48465), (155, 48546),

Gene: PhluffyCoco_43 Start: 27444, Stop: 28064, Start Num: 73

Candidate Starts for PhluffyCoco_43:

(Start: 13 @27168 has 9 MA's), (24, 27234), (27, 27249), (30, 27285), (41, 27333), (45, 27345), (47, 27351), (55, 27375), (Start: 73 @27444 has 2 MA's), (78, 27462), (108, 27666), (109, 27672), (129, 27840), (137, 27915), (138, 27918), (149, 28026), (152, 28035),

Gene: Poenanya_74 Start: 45998, Stop: 46735, Start Num: 13

Candidate Starts for Poenanya_74:

(Start: 13 @45998 has 9 MA's), (Start: 22 @46055 has 2 MA's), (28, 46079), (29, 46097), (30, 46112), (35, 46133), (43, 46166), (52, 46184), (105, 46343), (128, 46505), (137, 46583), (138, 46586), (141, 46607), (142, 46616), (144, 46643), (155, 46724),

Gene: Polyphemus_81 Start: 45619, Stop: 44969, Start Num: 21

Candidate Starts for Polyphemus_81:

(Start: 21 @45619 has 42 MA's), (Start: 23 @45595 has 5 MA's), (30, 45541), (31, 45538), (35, 45520), (121, 45280), (125, 45256), (128, 45211), (137, 45133), (138, 45130), (141, 45109), (145, 45034), (146, 45031),

Gene: Rahalelujah_83 Start: 46456, Stop: 45809, Start Num: 21

Candidate Starts for Rahalelujah_83:

(Start: 21 @46456 has 42 MA's), (Start: 23 @46432 has 5 MA's), (30, 46378), (31, 46375), (121, 46117), (124, 46096), (129, 46045), (132, 46024), (137, 45970), (138, 45967), (144, 45880),

Gene: Rattail_43 Start: 27437, Stop: 28150, Start Num: 47

Candidate Starts for Rattail_43:

(Start: 13 @27254 has 9 MA's), (24, 27320), (27, 27335), (30, 27371), (41, 27419), (45, 27431), (47, 27437), (55, 27461), (Start: 73 @27530 has 2 MA's), (78, 27548), (108, 27752), (109, 27758), (129, 27926), (137, 28001), (138, 28004), (149, 28112), (152, 28121),

Gene: RedBird_72 Start: 44502, Stop: 45227, Start Num: 13

Candidate Starts for RedBird_72:

(Start: 13 @44502 has 9 MA's), (Start: 22 @44559 has 2 MA's), (28, 44583), (29, 44589), (30, 44604), (35, 44625), (43, 44658), (52, 44676), (105, 44835), (128, 44997), (137, 45075), (138, 45078), (141, 45099), (142, 45108), (144, 45135), (155, 45216),

Gene: RedFox_43 Start: 27443, Stop: 28063, Start Num: 73

Candidate Starts for RedFox_43:

(Start: 13 @27167 has 9 MA's), (24, 27233), (27, 27248), (30, 27284), (41, 27332), (45, 27344), (47, 27350), (55, 27374), (Start: 73 @27443 has 2 MA's), (78, 27461), (108, 27665), (109, 27671), (129, 27839), (137, 27914), (138, 27917), (149, 28025), (152, 28034),

Gene: RemusLoopin_35 Start: 27467, Stop: 28051, Start Num: 80

Candidate Starts for RemusLoopin_35:

(36, 27230), (38, 27242), (42, 27257), (65, 27395), (Start: 77 @27449 has 2 MA's), (Start: 80 @27467 has 7 MA's), (99, 27569), (116, 27713), (120, 27740), (126, 27797), (138, 27899), (141, 27920), (147, 27977), (150, 28013), (153, 28025),

Gene: Rifter_90 Start: 46847, Stop: 46200, Start Num: 21

Candidate Starts for Rifter_90:

(Start: 21 @46847 has 42 MA's), (Start: 23 @46823 has 5 MA's), (30, 46769), (31, 46766), (37, 46736), (127, 46442), (137, 46361), (138, 46358), (145, 46265), (146, 46262),

Gene: Roksolana_90 Start: 47563, Stop: 46916, Start Num: 21

Candidate Starts for Roksolana_90:

(Start: 21 @47563 has 42 MA's), (Start: 23 @47539 has 5 MA's), (30, 47485), (31, 47482), (37, 47452), (127, 47158), (137, 47077), (138, 47074), (145, 46981), (146, 46978),

Gene: Samora_35 Start: 26872, Stop: 27459, Start Num: 80

Candidate Starts for Samora_35:

(Start: 22 @26551 has 2 MA's), (25, 26563), (42, 26662), (65, 26800), (Start: 80 @26872 has 7 MA's), (99, 26974), (114, 27109), (117, 27127), (120, 27145), (131, 27241), (138, 27304), (142, 27334), (150, 27418),

Gene: Samy_50 Start: 33615, Stop: 34364, Start Num: 46

Candidate Starts for Samy_50:

(9, 33303), (12, 33345), (14, 33414), (18, 33444), (Start: 22 @33483 has 2 MA's), (Start: 46 @33615 has 1 MA's), (48, 33618), (50, 33621), (65, 33735), (83, 33819), (85, 33822), (103, 33933), (124, 34071), (129, 34122), (134, 34152), (138, 34203), (141, 34224), (144, 34260), (147, 34281), (148, 34284), (151, 34320),

Gene: Sebastisaurus_35 Start: 27189, Stop: 27773, Start Num: 80

Candidate Starts for Sebastisaurus_35:

(36, 26952), (38, 26964), (42, 26979), (65, 27117), (72, 27153), (Start: 80 @27189 has 7 MA's), (99, 27291), (104, 27324), (116, 27435), (120, 27462), (126, 27519), (127, 27534), (132, 27564), (138, 27621), (141, 27642), (150, 27735), (153, 27747),

Gene: SmellyB_88 Start: 47181, Stop: 46555, Start Num: 23

Candidate Starts for SmellyB_88:

(Start: 21 @47205 has 42 MA's), (Start: 23 @47181 has 5 MA's), (30, 47127), (31, 47124), (35, 47106), (121, 46866), (125, 46842), (128, 46797), (137, 46719), (138, 46716), (141, 46695), (145, 46620), (146, 46617),

Gene: Steamy_76 Start: 47037, Stop: 46378, Start Num: 21

Candidate Starts for Steamy_76:

(Start: 21 @47037 has 42 MA's), (Start: 23 @47013 has 5 MA's), (31, 46956), (124, 46674), (137, 46548), (138, 46545), (141, 46524), (145, 46452), (149, 46410),

Gene: StuartMinion_35 Start: 24235, Stop: 25020, Start Num: 13

Candidate Starts for StuartMinion_35:

(Start: 13 @24235 has 9 MA's), (20, 24274), (24, 24301), (30, 24352), (32, 24367), (39, 24388), (41, 24400), (47, 24418), (82, 24430), (96, 24526), (109, 24625), (113, 24676), (124, 24745), (129, 24796), (136, 24844), (137, 24871), (138, 24874), (148, 24958), (152, 24991), (154, 25003),

Gene: TaylorSipht_41 Start: 27587, Stop: 28306, Start Num: 61

Candidate Starts for TaylorSipht_41:

(Start: 13 @27311 has 9 MA's), (27, 27392), (30, 27428), (Start: 61 @27587 has 4 MA's), (64, 27605), (67, 27635), (Start: 77 @27707 has 2 MA's), (109, 27923), (123, 28034), (129, 28091), (137, 28166), (138, 28169), (152, 28286),

Gene: Thanksgivukkah_77 Start: 46896, Stop: 46162, Start Num: 21

Candidate Starts for Thanksgivukkah_77:

(Start: 21 @46896 has 42 MA's), (30, 46818), (35, 46797), (49, 46749), (Start: 51 @46746 has 5 MA's), (64, 46641), (88, 46569), (91, 46551), (118, 46485), (131, 46380), (137, 46320), (138, 46317), (144, 46230), (147, 46209),

Gene: TinaFeyge_76 Start: 46893, Stop: 46159, Start Num: 21

Candidate Starts for TinaFeyge_76:

(Start: 21 @46893 has 42 MA's), (30, 46815), (35, 46794), (49, 46746), (Start: 51 @46743 has 5 MA's), (64, 46638), (88, 46566), (91, 46548), (118, 46482), (137, 46317), (138, 46314), (144, 46227), (147, 46206),

Gene: Upyo_53 Start: 39312, Stop: 38611, Start Num: 62

Candidate Starts for Upyo_53:

(3, 39840), (6, 39783), (10, 39687), (Start: 23 @39534 has 5 MA's), (29, 39492), (30, 39477), (33, 39459), (43, 39423), (Start: 56 @39381 has 2 MA's), (Start: 62 @39312 has 1 MA's), (63, 39306), (66, 39270), (76, 39198), (89, 39132), (115, 38925), (119, 38898), (121, 38889), (133, 38799), (137, 38748), (138, 38745), (147, 38667), (149, 38640),

Gene: Vash_33 Start: 26115, Stop: 26702, Start Num: 80

Candidate Starts for Vash_33:

(14, 25725), (17, 25752), (Start: 22 @25794 has 2 MA's), (42, 25905), (65, 26043), (Start: 80 @26115 has 7 MA's), (126, 26445), (132, 26490), (135, 26514), (137, 26544), (138, 26547), (142, 26577), (150, 26661), (153, 26673),

Gene: Westrich_49 Start: 28469, Stop: 29284, Start Num: 47

Candidate Starts for Westrich_49:

(Start: 13 @28286 has 9 MA's), (27, 28367), (30, 28403), (41, 28451), (47, 28469), (Start: 61 @28562 has 4 MA's), (64, 28580), (67, 28610), (Start: 77 @28682 has 2 MA's), (90, 28748), (108, 28895), (109, 28901), (116, 28967), (129, 29069), (137, 29144), (138, 29147), (152, 29264),

Gene: Wiks_89 Start: 47310, Stop: 46660, Start Num: 21

Candidate Starts for Wiks_89:

(Start: 21 @47310 has 42 MA's), (Start: 23 @47286 has 5 MA's), (30, 47232), (31, 47229), (35, 47211), (127, 46905), (137, 46824), (138, 46821), (141, 46800), (145, 46725), (146, 46722),

Gene: WileyE_46 Start: 27783, Stop: 28385, Start Num: 77

Candidate Starts for WileyE_46:

(Start: 13 @27504 has 9 MA's), (27, 27585), (30, 27621), (41, 27669), (Start: 77 @27783 has 2 MA's), (108, 27996), (109, 28002), (110, 28005), (116, 28068), (129, 28170), (137, 28245), (138, 28248), (152, 28365),

Gene: Xena_74 Start: 46567, Stop: 45983, Start Num: 51

Candidate Starts for Xena_74:

(Start: 21 @46717 has 42 MA's), (30, 46639), (35, 46618), (49, 46570), (Start: 51 @46567 has 5 MA's), (64, 46462), (88, 46390), (91, 46372), (118, 46306), (131, 46201), (137, 46141), (138, 46138), (144, 46051), (147, 46030),

Gene: Zaka_90 Start: 47310, Stop: 46660, Start Num: 21

Candidate Starts for Zaka_90:

(Start: 21 @47310 has 42 MA's), (Start: 23 @47286 has 5 MA's), (30, 47232), (31, 47229), (35, 47211), (127, 46905), (137, 46824), (138, 46821), (141, 46800), (145, 46725), (146, 46722),

Gene: Zhuangyuan_48 Start: 27978, Stop: 28547, Start Num: 13

Candidate Starts for Zhuangyuan_48:

(Start: 13 @27978 has 9 MA's), (Start: 22 @28038 has 2 MA's), (24, 28044), (31, 28098), (32, 28110), (41, 28143), (47, 28161), (108, 28263), (109, 28269), (137, 28395), (138, 28398), (148, 28482), (152, 28515),

Gene: Zimmer_80 Start: 47793, Stop: 47140, Start Num: 21

Candidate Starts for Zimmer_80:

(Start: 21 @47793 has 42 MA's), (Start: 23 @47769 has 5 MA's), (31, 47712), (121, 47451), (125, 47427), (137, 47304), (138, 47301), (145, 47208), (146, 47205), (149, 47166),