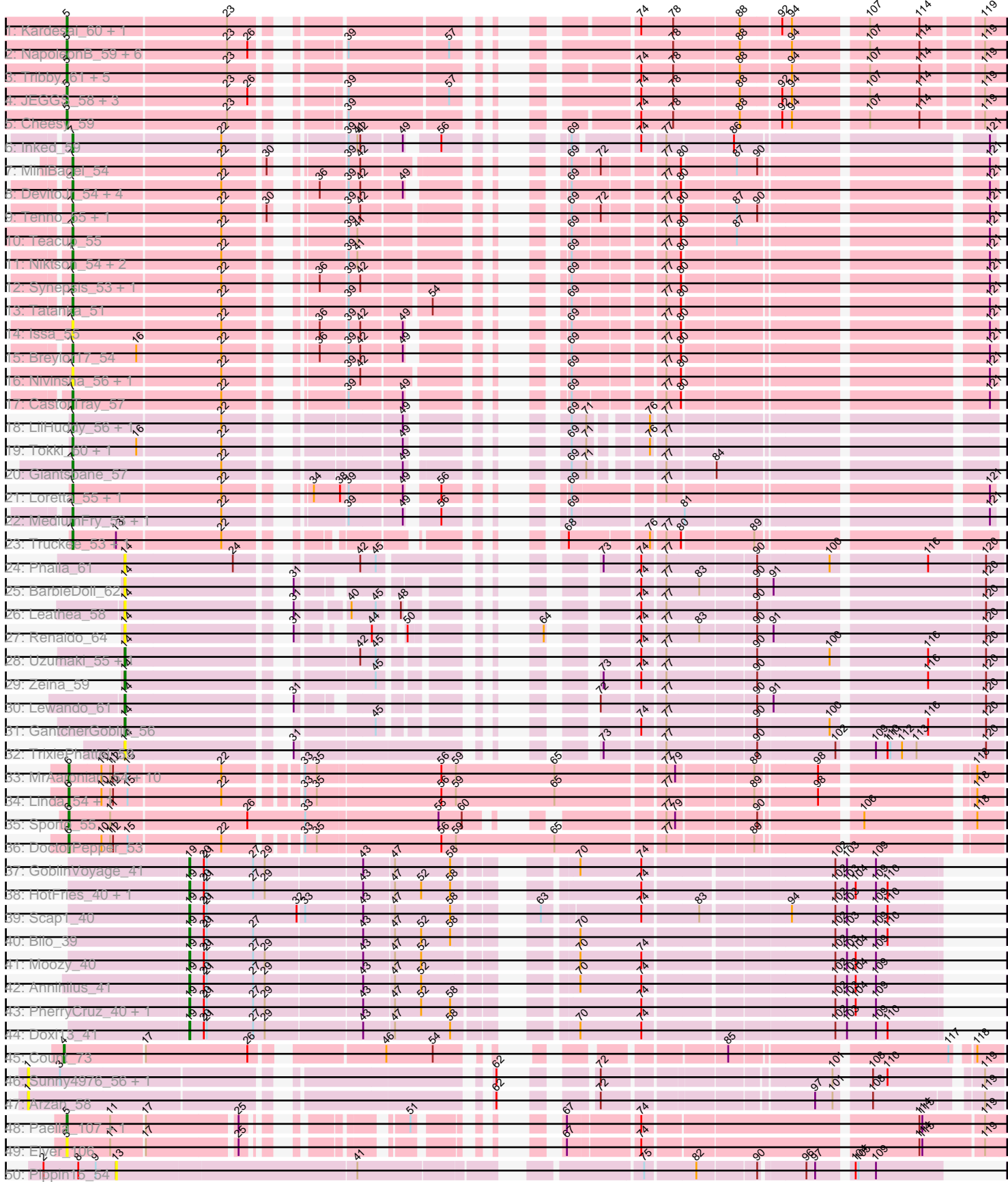
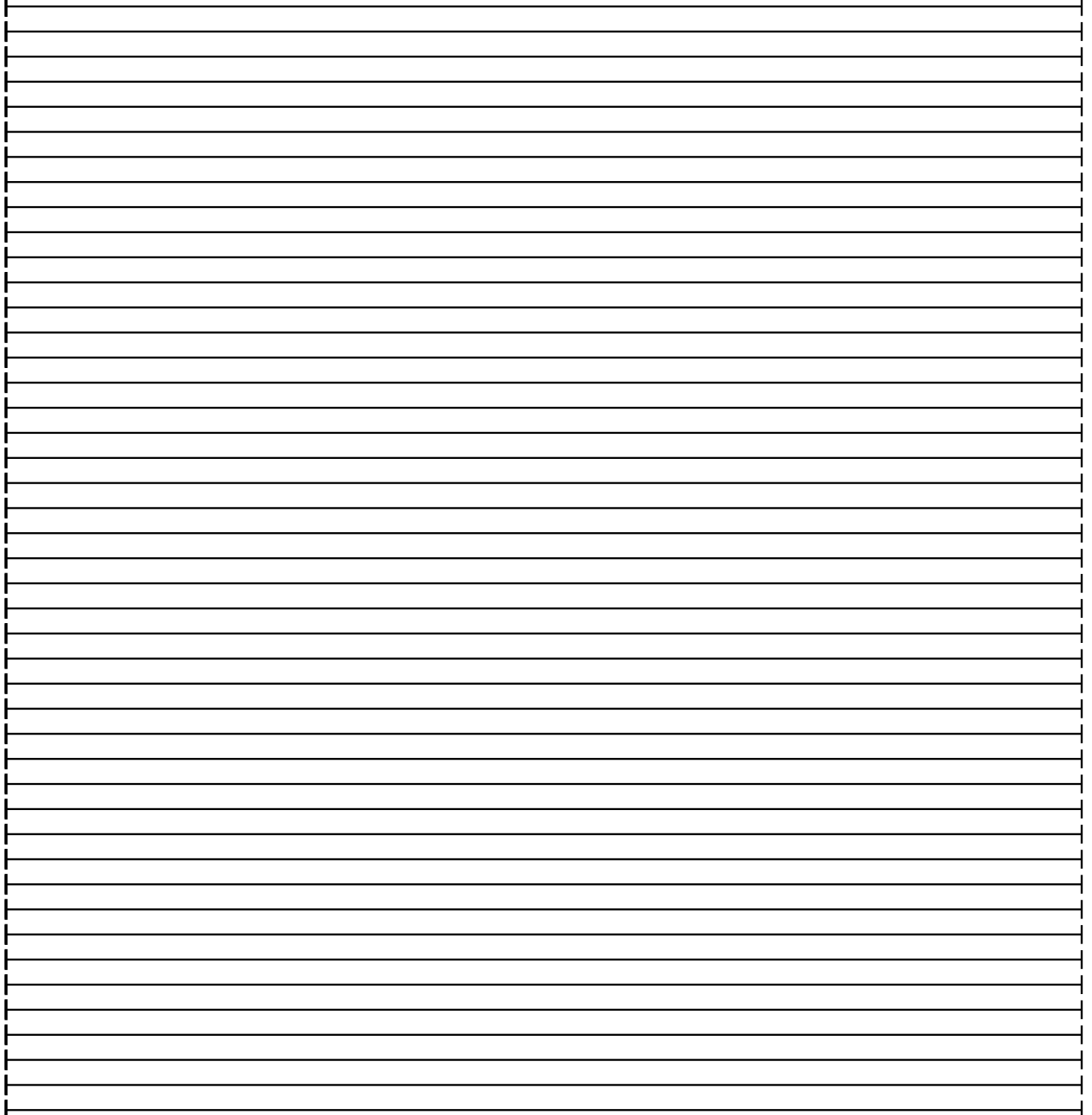
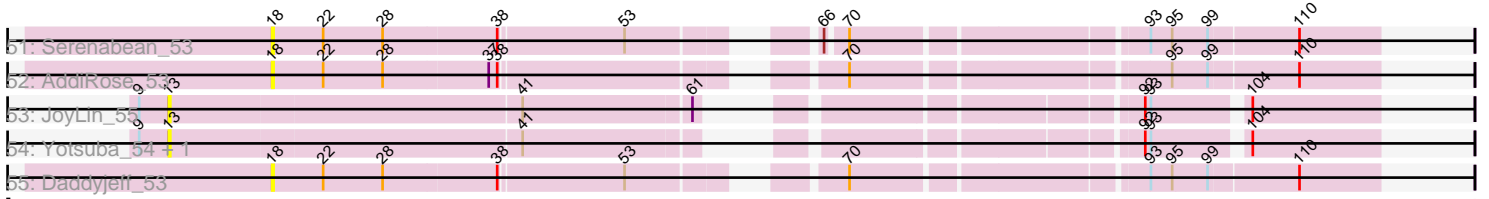


Pham 192410



Pham 192410



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 192410 Report

This analysis was run 11/02/24 on database version 579.

Pham number 192410 has 101 members, 21 are drafts.

Phages represented in each track:

- Track 1 : Kardesai_60, Mooshroom_61
- Track 2 : NapoleonB_59, GoCrazy_58, Hankly_58, KeaneyLin_58, Benllo_60, Circum_61, Dynamite_59
- Track 3 : Tribby_61, Elsa_59, Arcadia_59, Correa_56, Xenomorph_56, Nason_59
- Track 4 : JEGGS_58, BenitoAntonio_59, Heisenberger_58, Mudcat_56
- Track 5 : Cheesy_59
- Track 6 : Inked_59
- Track 7 : MiniBagel_54
- Track 8 : DevitoJr_54, Trustiboi_54, Gordon_52, Nightmare_56, ScienceWizSam_55
- Track 9 : Tenno_55, CapnMurica_52
- Track 10 : Teacup_55
- Track 11 : Niktson_54, ElephantMan_54, Brunswick_55
- Track 12 : Synopsis_53, Darby_53
- Track 13 : Tatanka_51
- Track 14 : Issa_55
- Track 15 : Breylor17_54
- Track 16 : Nivinsha_56, AreFloNak_57
- Track 17 : CastorTray_57
- Track 18 : LilHuddy_56, Shepard_57
- Track 19 : Tokki_60, Phaby_57
- Track 20 : Giantsbane_57
- Track 21 : Loretta_55, Ingrid_58
- Track 22 : MediumFry_53, Caterpillar_52
- Track 23 : Truckee_53, Makai_55
- Track 24 : Phaila_61
- Track 25 : BarbieDoll_62
- Track 26 : Leathea_58
- Track 27 : Renaldo_64
- Track 28 : Uzumaki_55, Argan_56
- Track 29 : Zeina_59
- Track 30 : Lewando_61
- Track 31 : GantcherGoblin_56
- Track 32 : TrixiePhattel_59
- Track 33 : MrAaronian_54, Egad_54, Stayer_54, Sloopyjoe_54, BronxBay_54, Djungelskog_53, Raunak_57, StarLord_54, Shiba_53, ProfFrink_54, Michelle_54
- Track 34 : Linda_54, Salk_54

- Track 35 : Sporto_55
- Track 36 : DoctorPepper_53
- Track 37 : GoblinVoyage_41
- Track 38 : HotFries_40, SheRa_41
- Track 39 : Scap1_40
- Track 40 : Bilo_39
- Track 41 : Moozy_40
- Track 42 : Annihilus_41
- Track 43 : PherryCruz_40, RavenPuff_40
- Track 44 : Doxi13_41
- Track 45 : Count_73
- Track 46 : Sunny4976_56, Jazzy4900_57
- Track 47 : Arzan_58
- Track 48 : Paella_107, Qui_107
- Track 49 : Elver_106
- Track 50 : Pippin15_54
- Track 51 : Serenabean_53
- Track 52 : AddiRose_53
- Track 53 : JoyLin_55
- Track 54 : Yotsuba_54, Eevee_55
- Track 55 : Daddyjeff_53

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

The start number called the most often in the published annotations is 7, it was called in 29 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AreFloNak_57, Breylor17_54, Brunswick_55, CapnMurica_52, CastorTray_57, Caterpillar_52, Darby_53, DevitoJr_54, ElephantMan_54, Giantsbane_57, Gordon_52, Ingrid_58, Inked_59, Issa_55, LilHuddy_56, Loretta_55, Makai_55, MediumFry_53, MiniBagel_54, Nightmare_56, Niktson_54, Nivinsha_56, Phaby_57, ScienceWizSam_55, Shepard_57, Synopsis_53, Tatanka_51, Teacup_55, Tenno_55, Tokki_60, Truckee_53, Trustiboi_54,

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

-

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

- AddiRose_53, Annihilus_41, Arcadia_59, Argan_56, Arzan_58, BarbieDoll_62, BenitoAntonio_59, Benllo_60, Bilo_39, BronxBay_54, Cheesy_59, Circum_61, Correa_56, Count_73, Daddyjeff_53, Djungelskog_53, DoctorPepper_53, Doxi13_41, Dynamite_59, Eevee_55, Egad_54, Elsa_59, Elver_106, GantcherGoblin_56, GoCrazy_58, GoblinVoyage_41, Hankly_58, Heisenberger_58, HotFries_40, JEGGS_58, Jazzy4900_57, JoyLin_55, Kardesai_60, KeaneyLin_58, Leatheia_58, Lewando_61, Linda_54, Michelle_54, Mooshroom_61, Moozy_40, MrAaronian_54, Mudcat_56, NapoleonB_59, Nason_59, Paella_107, Phaila_61, PherryCruz_40, Pippin15_54, ProfFrink_54, Qui_107, Raunak_57, RavenPuff_40, Renaldo_64, Salk_54, Scap1_40, Serenabean_53, SheRa_41, Shiba_53, Sloopyjoe_54, Sporto_55, StarLord_54, Stayer_54, Sunny4976_56, Tribby_61, TrixiePhattel_59,

Uzumaki_55, Xenomorph_56, Yotsuba_54, Zeina_59,

Summary by start number:

Start 1:

- Found in 3 of 101 (3.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arzan_58 (FI), Jazzy4900_57 (FI), Sunny4976_56 (FI),

Start 4:

- Found in 1 of 101 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Count_73 (EL),

Start 5:

- Found in 23 of 101 (22.8%) of genes in pham
- Manual Annotations of this start: 21 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Arcadia_59 (AM), BenitoAntonio_59 (AM), Benllo_60 (AM), Cheesy_59 (AM), Circum_61 (AM), Correa_56 (AM), Dynamite_59 (AM), Elsa_59 (AM), Elver_106 (FK), GoCrazy_58 (AM), Hankly_58 (AM), Heisenberger_58 (AM), JEGGS_58 (AM), Kardesai_60 (AM), KeaneyLin_58 (AM), Mooshroom_61 (AM), Mudcat_56 (AM), NapoleonB_59 (AM), Nason_59 (AM), Paella_107 (FK), Qui_107 (FK), Tribby_61 (AM), Xenomorph_56 (AM),

Start 6:

- Found in 15 of 101 (14.9%) of genes in pham
- Manual Annotations of this start: 14 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BronxBay_54 (AW), Djungelskog_53 (AW), DoctorPepper_53 (AW), Egad_54 (AW), Linda_54 (AW), Michelle_54 (AW), MrAaronian_54 (AW), ProfFrink_54 (AW), Raunak_57 (AW), Salk_54 (AW), Shiba_53 (AW), Sloopyjoe_54 (AW), Sporto_55 (AW), StarLord_54 (AW), Stayer_54 (AW),

Start 7:

- Found in 32 of 101 (31.7%) of genes in pham
- Manual Annotations of this start: 29 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AreFloNak_57 (AU1), Breylor17_54 (AU1), Brunswick_55 (AU1), CapnMurica_52 (AU1), CastorTray_57 (AU1), Caterpillar_52 (AU4), Darby_53 (AU1), DevitoJr_54 (AU1), ElephantMan_54 (AU1), Giantsbane_57 (AU2), Gordon_52 (AU1), Ingrid_58 (AU3), Inked_59 (AU), Issa_55 (AU1), LilHuddy_56 (AU2), Loretta_55 (AU3), Makai_55 (AU5), MediumFry_53 (AU4), MiniBagel_54 (AU1), Nightmare_56 (AU1), Niktson_54 (AU1), Nivinsha_56 (AU1), Phaby_57 (AU2), ScienceWizSam_55 (AU1), Shepard_57 (AU2), Synopsis_53 (AU1), Tatanka_51 (AU1), Teacup_55 (AU1), Tenno_55 (AU1), Tokki_60 (AU2), Truckee_53 (AU5), Trustiboi_54 (AU1),

Start 13:

- Found in 6 of 101 (5.9%) of genes in pham

- No Manual Annotations of this start.
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Eevee_55 (JA), JoyLin_55 (JA), Pippin15_54 (JA), Yotsuba_54 (JA),

Start 14:

- Found in 10 of 101 (9.9%) of genes in pham
- Manual Annotations of this start: 5 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Argan_56 (AU6), BarbieDoll_62 (AU6), GantcherGoblin_56 (AU6), Leatheia_58 (AU6), Lewando_61 (AU6), Phaila_61 (AU6), Renaldo_64 (AU6), TrixiePhattel_59 (AU6), Uzumaki_55 (AU6), Zeina_59 (AU6),

Start 18:

- Found in 3 of 101 (3.0%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AddiRose_53 (JA), Daddyjeff_53 (JA), Serenabean_53 (JA),

Start 19:

- Found in 10 of 101 (9.9%) of genes in pham
- Manual Annotations of this start: 10 of 80
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Annihilus_41 (BI2), Bilo_39 (BI2), Doxi13_41 (BI2), GoblinVoyage_41 (BI2), HotFries_40 (BI2), Moozy_40 (BI2), PherryCruz_40 (BI2), RavenPuff_40 (BI2), Scap1_40 (BI2), SheRa_41 (BI2),

Summary by clusters:

There are 14 clusters represented in this pham: EL, AU5, AM, AU1, AU3, AU2, AU, AU4, AW, AU6, FI, FK, BI2, JA,

Info for manual annotations of cluster AM:

- Start number 5 was manually annotated 19 times for cluster AM.

Info for manual annotations of cluster AU:

- Start number 7 was manually annotated 1 time for cluster AU.

Info for manual annotations of cluster AU1:

- Start number 7 was manually annotated 17 times for cluster AU1.

Info for manual annotations of cluster AU2:

- Start number 7 was manually annotated 5 times for cluster AU2.

Info for manual annotations of cluster AU3:

- Start number 7 was manually annotated 2 times for cluster AU3.

Info for manual annotations of cluster AU4:

- Start number 7 was manually annotated 2 times for cluster AU4.

Info for manual annotations of cluster AU5:

- Start number 7 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:

- Start number 14 was manually annotated 5 times for cluster AU6.

Info for manual annotations of cluster AW:

- Start number 6 was manually annotated 14 times for cluster AW.

Info for manual annotations of cluster BI2:

- Start number 19 was manually annotated 10 times for cluster BI2.

Info for manual annotations of cluster EL:

- Start number 4 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster FK:

- Start number 5 was manually annotated 2 times for cluster FK.

Gene Information:

Gene: AddiRose_53 Start: 34578, Stop: 35276, Start Num: 18

Candidate Starts for AddiRose_53:

(18, 34578), (22, 34614), (28, 34656), (37, 34728), (38, 34734), (70, 34932), (95, 35136), (99, 35160), (110, 35220),

Gene: Annihilus_41 Start: 29092, Stop: 29790, Start Num: 19

Candidate Starts for Annihilus_41:

(Start: 19 @29092 has 10 MA's), (20, 29107), (21, 29110), (27, 29158), (29, 29170), (43, 29266), (47, 29296), (52, 29323), (70, 29437), (74, 29500), (102, 29683), (103, 29695), (104, 29704), (109, 29725),

Gene: Arcadia_59 Start: 35986, Stop: 36783, Start Num: 5

Candidate Starts for Arcadia_59:

(Start: 5 @35986 has 21 MA's), (23, 36148), (74, 36439), (78, 36472), (88, 36538), (94, 36586), (107, 36655), (114, 36706), (119, 36763),

Gene: AreFloNak_57 Start: 37264, Stop: 38031, Start Num: 7

Candidate Starts for AreFloNak_57:

(Start: 7 @37264 has 29 MA's), (22, 37414), (39, 37504), (42, 37516), (69, 37645), (77, 37729), (80, 37744), (121, 38023),

Gene: Argan_56 Start: 35931, Stop: 36647, Start Num: 14

Candidate Starts for Argan_56:

(Start: 14 @35931 has 5 MA's), (42, 36135), (45, 36150), (74, 36303), (77, 36324), (90, 36411), (100, 36483), (116, 36573), (120, 36630),

Gene: Arzan_58 Start: 36809, Stop: 37624, Start Num: 1

Candidate Starts for Arzan_58:

(1, 36809), (62, 37223), (72, 37271), (97, 37463), (101, 37481), (108, 37511), (119, 37607),

Gene: BarbieDoll_62 Start: 37638, Stop: 38342, Start Num: 14

Candidate Starts for BarbieDoll_62:

(Start: 14 @37638 has 5 MA's), (31, 37782), (74, 37998), (77, 38019), (83, 38052), (90, 38106), (91, 38121), (120, 38325),

Gene: BenitoAntonio_59 Start: 35510, Stop: 36310, Start Num: 5

Candidate Starts for BenitoAntonio_59:

(Start: 5 @35510 has 21 MA's), (23, 35672), (26, 35693), (39, 35753), (57, 35852), (74, 35966), (78, 35999), (88, 36065), (92, 36104), (94, 36113), (107, 36182), (114, 36233), (119, 36290),

Gene: Benllo_60 Start: 36188, Stop: 36988, Start Num: 5

Candidate Starts for Benllo_60:

(Start: 5 @36188 has 21 MA's), (23, 36350), (26, 36371), (39, 36431), (57, 36530), (78, 36677), (88, 36743), (94, 36791), (107, 36860), (114, 36911), (119, 36968),

Gene: Bilo_39 Start: 29209, Stop: 29907, Start Num: 19

Candidate Starts for Bilo_39:

(Start: 19 @29209 has 10 MA's), (20, 29224), (21, 29227), (27, 29275), (43, 29383), (47, 29413), (52, 29440), (58, 29470), (70, 29554), (102, 29800), (103, 29812), (109, 29842), (110, 29854),

Gene: Breylor17_54 Start: 37846, Stop: 38604, Start Num: 7

Candidate Starts for Breylor17_54:

(Start: 7 @37846 has 29 MA's), (16, 37912), (22, 37996), (36, 38059), (39, 38086), (42, 38098), (49, 38137), (69, 38218), (77, 38302), (80, 38317), (121, 38596),

Gene: BronxBay_54 Start: 34994, Stop: 35869, Start Num: 6

Candidate Starts for BronxBay_54:

(Start: 6 @34994 has 14 MA's), (10, 35027), (11, 35036), (12, 35039), (15, 35054), (22, 35147), (33, 35210), (35, 35222), (56, 35345), (59, 35360), (65, 35462), (77, 35567), (79, 35576), (89, 35648), (98, 35705), (118, 35843),

Gene: Brunswick_55 Start: 37137, Stop: 37901, Start Num: 7

Candidate Starts for Brunswick_55:

(Start: 7 @37137 has 29 MA's), (22, 37287), (39, 37377), (41, 37386), (69, 37518), (77, 37599), (80, 37614), (121, 37893),

Gene: CapnMurica_52 Start: 38039, Stop: 38800, Start Num: 7

Candidate Starts for CapnMurica_52:

(Start: 7 @38039 has 29 MA's), (22, 38189), (30, 38228), (39, 38279), (42, 38291), (69, 38417), (72, 38444), (77, 38498), (80, 38513), (87, 38564), (90, 38585), (121, 38792),

Gene: CastorTray_57 Start: 37910, Stop: 38665, Start Num: 7

Candidate Starts for CastorTray_57:

(Start: 7 @37910 has 29 MA's), (22, 38060), (39, 38150), (49, 38201), (69, 38282), (77, 38363), (80, 38378), (121, 38657),

Gene: Caterpillar_52 Start: 36399, Stop: 37157, Start Num: 7

Candidate Starts for Caterpillar_52:

(Start: 7 @36399 has 29 MA's), (22, 36549), (39, 36639), (49, 36690), (56, 36714), (69, 36771), (81, 36873), (121, 37152),

Gene: Cheesy_59 Start: 35695, Stop: 36489, Start Num: 5

Candidate Starts for Cheesy_59:

(Start: 5 @35695 has 21 MA's), (23, 35857), (39, 35938), (74, 36145), (78, 36178), (88, 36244), (92, 36283), (94, 36292), (107, 36361), (114, 36412), (119, 36469),

Gene: Circum_61 Start: 36379, Stop: 37179, Start Num: 5

Candidate Starts for Circum_61:

(Start: 5 @36379 has 21 MA's), (23, 36541), (26, 36562), (39, 36622), (57, 36721), (78, 36868), (88, 36934), (94, 36982), (107, 37051), (114, 37102), (119, 37159),

Gene: Correa_56 Start: 34853, Stop: 35650, Start Num: 5

Candidate Starts for Correa_56:

(Start: 5 @34853 has 21 MA's), (23, 35015), (74, 35306), (78, 35339), (88, 35405), (94, 35453), (107, 35522), (114, 35573), (119, 35630),

Gene: Count_73 Start: 48676, Stop: 49458, Start Num: 4

Candidate Starts for Count_73:

(Start: 4 @48676 has 1 MA's), (17, 48757), (26, 48862), (46, 48973), (54, 49021), (85, 49213), (117, 49417), (118, 49432),

Gene: Daddyjeff_53 Start: 34798, Stop: 35496, Start Num: 18

Candidate Starts for Daddyjeff_53:

(18, 34798), (22, 34834), (28, 34876), (38, 34954), (53, 35038), (70, 35152), (93, 35341), (95, 35356), (99, 35380), (110, 35440),

Gene: Darby_53 Start: 37084, Stop: 37848, Start Num: 7

Candidate Starts for Darby_53:

(Start: 7 @37084 has 29 MA's), (22, 37234), (36, 37297), (39, 37324), (42, 37336), (69, 37462), (77, 37546), (80, 37561), (121, 37840),

Gene: DevitoJr_54 Start: 37476, Stop: 38234, Start Num: 7

Candidate Starts for DevitoJr_54:

(Start: 7 @37476 has 29 MA's), (22, 37626), (36, 37689), (39, 37716), (42, 37728), (49, 37767), (69, 37848), (77, 37932), (80, 37947), (121, 38226),

Gene: Djungelskog_53 Start: 34993, Stop: 35868, Start Num: 6

Candidate Starts for Djungelskog_53:

(Start: 6 @34993 has 14 MA's), (10, 35026), (11, 35035), (12, 35038), (15, 35053), (22, 35146), (33, 35209), (35, 35221), (56, 35344), (59, 35359), (65, 35461), (77, 35566), (79, 35575), (89, 35647), (98, 35704), (118, 35842),

Gene: DoctorPepper_53 Start: 34698, Stop: 35573, Start Num: 6

Candidate Starts for DoctorPepper_53:

(Start: 6 @34698 has 14 MA's), (10, 34731), (11, 34740), (12, 34743), (15, 34758), (22, 34851), (33, 34914), (35, 34926), (56, 35049), (59, 35064), (65, 35166), (77, 35271), (89, 35352),

Gene: Doxi13_41 Start: 29065, Stop: 29763, Start Num: 19

Candidate Starts for Doxi13_41:

(Start: 19 @29065 has 10 MA's), (20, 29080), (21, 29083), (27, 29131), (29, 29143), (43, 29239), (47, 29269), (58, 29326), (70, 29410), (74, 29473), (102, 29656), (103, 29668), (109, 29698), (110, 29710),

Gene: Dynamite_59 Start: 35903, Stop: 36703, Start Num: 5

Candidate Starts for Dynamite_59:

(Start: 5 @35903 has 21 MA's), (23, 36065), (26, 36086), (39, 36146), (57, 36245), (78, 36392), (88, 36458), (94, 36506), (107, 36575), (114, 36626), (119, 36683),

Gene: Eevee_55 Start: 37790, Stop: 38530, Start Num: 13

Candidate Starts for Eevee_55:

(9, 37769), (13, 37790), (41, 38033), (92, 38378), (93, 38381), (104, 38441),

Gene: Egad_54 Start: 34995, Stop: 35870, Start Num: 6

Candidate Starts for Egad_54:

(Start: 6 @34995 has 14 MA's), (10, 35028), (11, 35037), (12, 35040), (15, 35055), (22, 35148), (33, 35211), (35, 35223), (56, 35346), (59, 35361), (65, 35463), (77, 35568), (79, 35577), (89, 35649), (98, 35706), (118, 35844),

Gene: ElephantMan_54 Start: 37760, Stop: 38524, Start Num: 7

Candidate Starts for ElephantMan_54:

(Start: 7 @37760 has 29 MA's), (22, 37910), (39, 38000), (41, 38009), (69, 38141), (77, 38222), (80, 38237), (121, 38516),

Gene: Elsa_59 Start: 35986, Stop: 36783, Start Num: 5

Candidate Starts for Elsa_59:

(Start: 5 @35986 has 21 MA's), (23, 36148), (74, 36439), (78, 36472), (88, 36538), (94, 36586), (107, 36655), (114, 36706), (119, 36763),

Gene: Elver_106 Start: 57707, Stop: 58456, Start Num: 5

Candidate Starts for Elver_106:

(Start: 5 @57707 has 21 MA's), (11, 57752), (17, 57785), (25, 57872), (67, 58043), (74, 58109), (114, 58373), (115, 58376), (119, 58436),

Gene: GantcherGoblin_56 Start: 36006, Stop: 36722, Start Num: 14

Candidate Starts for GantcherGoblin_56:

(Start: 14 @36006 has 5 MA's), (45, 36225), (74, 36378), (77, 36399), (90, 36486), (100, 36558), (116, 36648), (120, 36705),

Gene: Giantsbane_57 Start: 36358, Stop: 37107, Start Num: 7

Candidate Starts for Giantsbane_57:

(Start: 7 @36358 has 29 MA's), (22, 36508), (49, 36649), (69, 36733), (71, 36748), (77, 36805), (84, 36850),

Gene: GoCrazy_58 Start: 35844, Stop: 36644, Start Num: 5

Candidate Starts for GoCrazy_58:

(Start: 5 @35844 has 21 MA's), (23, 36006), (26, 36027), (39, 36087), (57, 36186), (78, 36333), (88, 36399), (94, 36447), (107, 36516), (114, 36567), (119, 36624),

Gene: GoblinVoyage_41 Start: 29065, Stop: 29763, Start Num: 19

Candidate Starts for GoblinVoyage_41:

(Start: 19 @29065 has 10 MA's), (20, 29080), (21, 29083), (27, 29131), (29, 29143), (43, 29239), (47, 29269), (58, 29326), (70, 29410), (74, 29473), (102, 29656), (103, 29668), (109, 29698),

Gene: Gordon_52 Start: 37901, Stop: 38656, Start Num: 7

Candidate Starts for Gordon_52:

(Start: 7 @37901 has 29 MA's), (22, 38051), (36, 38114), (39, 38141), (42, 38153), (49, 38192), (69, 38273), (77, 38357), (80, 38372), (121, 38651),

Gene: Hankly_58 Start: 35118, Stop: 35918, Start Num: 5

Candidate Starts for Hankly_58:

(Start: 5 @35118 has 21 MA's), (23, 35280), (26, 35301), (39, 35361), (57, 35460), (78, 35607), (88, 35673), (94, 35721), (107, 35790), (114, 35841), (119, 35898),

Gene: Heisenberger_58 Start: 35412, Stop: 36188, Start Num: 5

Candidate Starts for Heisenberger_58:

(Start: 5 @35412 has 21 MA's), (23, 35574), (26, 35595), (39, 35655), (57, 35730), (74, 35844), (78, 35877), (88, 35943), (92, 35982), (94, 35991), (107, 36060), (114, 36111), (119, 36168),

Gene: HotFries_40 Start: 29110, Stop: 29808, Start Num: 19

Candidate Starts for HotFries_40:

(Start: 19 @29110 has 10 MA's), (20, 29125), (21, 29128), (27, 29176), (29, 29188), (43, 29284), (47, 29314), (52, 29341), (58, 29371), (74, 29518), (102, 29701), (103, 29713), (104, 29722), (109, 29743), (110, 29755),

Gene: Ingrid_58 Start: 37183, Stop: 37938, Start Num: 7

Candidate Starts for Ingrid_58:

(Start: 7 @37183 has 29 MA's), (22, 37333), (34, 37390), (38, 37417), (39, 37423), (49, 37474), (56, 37498), (69, 37555), (77, 37639), (121, 37933),

Gene: Inked_59 Start: 38306, Stop: 39055, Start Num: 7

Candidate Starts for Inked_59:

(Start: 7 @38306 has 29 MA's), (22, 38456), (39, 38546), (41, 38555), (42, 38558), (49, 38597), (56, 38621), (69, 38678), (74, 38735), (77, 38756), (86, 38819), (121, 39050),

Gene: Issa_55 Start: 37136, Stop: 37894, Start Num: 7

Candidate Starts for Issa_55:

(Start: 7 @37136 has 29 MA's), (22, 37286), (36, 37349), (39, 37376), (42, 37388), (49, 37427), (69, 37508), (77, 37592), (80, 37607), (121, 37886),

Gene: JEGGS_58 Start: 35467, Stop: 36267, Start Num: 5

Candidate Starts for JEGGS_58:

(Start: 5 @35467 has 21 MA's), (23, 35629), (26, 35650), (39, 35710), (57, 35809), (74, 35923), (78, 35956), (88, 36022), (92, 36061), (94, 36070), (107, 36139), (114, 36190), (119, 36247),

Gene: Jazzy4900_57 Start: 37585, Stop: 38403, Start Num: 1

Candidate Starts for Jazzy4900_57:

(1, 37585), (3, 37618), (62, 37999), (72, 38047), (101, 38257), (108, 38287), (110, 38302), (119, 38386),

Gene: JoyLin_55 Start: 37910, Stop: 38650, Start Num: 13

Candidate Starts for JoyLin_55:

(9, 37889), (13, 37910), (41, 38153), (61, 38267), (92, 38498), (93, 38501), (104, 38561),

Gene: Kardesai_60 Start: 36088, Stop: 36885, Start Num: 5

Candidate Starts for Kardesai_60:

(Start: 5 @36088 has 21 MA's), (23, 36250), (74, 36541), (78, 36574), (88, 36640), (92, 36679), (94, 36688), (107, 36757), (114, 36808), (119, 36865),

Gene: KeaneyLin_58 Start: 35844, Stop: 36644, Start Num: 5

Candidate Starts for KeaneyLin_58:

(Start: 5 @35844 has 21 MA's), (23, 36006), (26, 36027), (39, 36087), (57, 36186), (78, 36333), (88, 36399), (94, 36447), (107, 36516), (114, 36567), (119, 36624),

Gene: Leathea_58 Start: 35757, Stop: 36464, Start Num: 14

Candidate Starts for Leathea_58:

(Start: 14 @35757 has 5 MA's), (31, 35901), (40, 35943), (45, 35967), (48, 35985), (74, 36120), (77, 36141), (90, 36228), (120, 36447),

Gene: Lewando_61 Start: 37710, Stop: 38414, Start Num: 14

Candidate Starts for Lewando_61:

(Start: 14 @37710 has 5 MA's), (31, 37854), (72, 38034), (77, 38091), (90, 38178), (91, 38193), (120, 38397),

Gene: LilHuddy_56 Start: 37293, Stop: 38045, Start Num: 7

Candidate Starts for LilHuddy_56:

(Start: 7 @37293 has 29 MA's), (22, 37443), (49, 37584), (69, 37671), (71, 37686), (76, 37731), (77, 37743),

Gene: Linda_54 Start: 34991, Stop: 35866, Start Num: 6

Candidate Starts for Linda_54:

(Start: 6 @34991 has 14 MA's), (10, 35024), (11, 35033), (12, 35036), (15, 35051), (22, 35144), (33, 35207), (35, 35219), (56, 35342), (59, 35357), (65, 35459), (77, 35564), (89, 35645), (98, 35702), (118, 35840),

Gene: Loretta_55 Start: 37183, Stop: 37938, Start Num: 7

Candidate Starts for Loretta_55:

(Start: 7 @37183 has 29 MA's), (22, 37333), (34, 37390), (38, 37417), (39, 37423), (49, 37474), (56, 37498), (69, 37555), (77, 37639), (121, 37933),

Gene: Makai_55 Start: 37391, Stop: 38140, Start Num: 7

Candidate Starts for Makai_55:

(Start: 7 @37391 has 29 MA's), (13, 37436), (22, 37541), (68, 37751), (76, 37826), (77, 37838), (80, 37853), (89, 37922),

Gene: MediumFry_53 Start: 36688, Stop: 37446, Start Num: 7

Candidate Starts for MediumFry_53:

(Start: 7 @36688 has 29 MA's), (22, 36838), (39, 36928), (49, 36979), (56, 37003), (69, 37060), (81, 37162), (121, 37441),

Gene: Michelle_54 Start: 34993, Stop: 35868, Start Num: 6

Candidate Starts for Michelle_54:

(Start: 6 @34993 has 14 MA's), (10, 35026), (11, 35035), (12, 35038), (15, 35053), (22, 35146), (33, 35209), (35, 35221), (56, 35344), (59, 35359), (65, 35461), (77, 35566), (79, 35575), (89, 35647), (98, 35704), (118, 35842),

Gene: MiniBagel_54 Start: 38021, Stop: 38782, Start Num: 7

Candidate Starts for MiniBagel_54:

(Start: 7 @38021 has 29 MA's), (22, 38171), (30, 38210), (39, 38261), (42, 38273), (69, 38399), (72, 38426), (77, 38480), (80, 38495), (87, 38546), (90, 38567), (121, 38774),

Gene: Mooshroom_61 Start: 36088, Stop: 36885, Start Num: 5

Candidate Starts for Mooshroom_61:

(Start: 5 @36088 has 21 MA's), (23, 36250), (74, 36541), (78, 36574), (88, 36640), (92, 36679), (94, 36688), (107, 36757), (114, 36808), (119, 36865),

Gene: Moozy_40 Start: 29067, Stop: 29765, Start Num: 19

Candidate Starts for Moozy_40:

(Start: 19 @29067 has 10 MA's), (20, 29082), (21, 29085), (27, 29133), (29, 29145), (43, 29241), (47, 29271), (52, 29298), (70, 29412), (74, 29475), (102, 29658), (103, 29670), (104, 29679), (109, 29700),

Gene: MrAaronian_54 Start: 34993, Stop: 35868, Start Num: 6

Candidate Starts for MrAaronian_54:

(Start: 6 @34993 has 14 MA's), (10, 35026), (11, 35035), (12, 35038), (15, 35053), (22, 35146), (33, 35209), (35, 35221), (56, 35344), (59, 35359), (65, 35461), (77, 35566), (79, 35575), (89, 35647), (98, 35704), (118, 35842),

Gene: Mudcat_56 Start: 36825, Stop: 37625, Start Num: 5

Candidate Starts for Mudcat_56:

(Start: 5 @36825 has 21 MA's), (23, 36987), (26, 37008), (39, 37068), (57, 37167), (74, 37281), (78, 37314), (88, 37380), (92, 37419), (94, 37428), (107, 37497), (114, 37548), (119, 37605),

Gene: NapoleonB_59 Start: 35903, Stop: 36703, Start Num: 5

Candidate Starts for NapoleonB_59:

(Start: 5 @35903 has 21 MA's), (23, 36065), (26, 36086), (39, 36146), (57, 36245), (78, 36392), (88, 36458), (94, 36506), (107, 36575), (114, 36626), (119, 36683),

Gene: Nason_59 Start: 35986, Stop: 36783, Start Num: 5

Candidate Starts for Nason_59:

(Start: 5 @35986 has 21 MA's), (23, 36148), (74, 36439), (78, 36472), (88, 36538), (94, 36586), (107, 36655), (114, 36706), (119, 36763),

Gene: Nightmare_56 Start: 38318, Stop: 39076, Start Num: 7

Candidate Starts for Nightmare_56:

(Start: 7 @38318 has 29 MA's), (22, 38468), (36, 38531), (39, 38558), (42, 38570), (49, 38609), (69, 38690), (77, 38774), (80, 38789), (121, 39068),

Gene: Niktson_54 Start: 37760, Stop: 38524, Start Num: 7

Candidate Starts for Niktson_54:

(Start: 7 @37760 has 29 MA's), (22, 37910), (39, 38000), (41, 38009), (69, 38141), (77, 38222), (80, 38237), (121, 38516),

Gene: Nivinsha_56 Start: 37264, Stop: 38031, Start Num: 7

Candidate Starts for Nivinsha_56:

(Start: 7 @37264 has 29 MA's), (22, 37414), (39, 37504), (42, 37516), (69, 37645), (77, 37729), (80, 37744), (121, 38023),

Gene: Paella_107 Start: 58297, Stop: 59046, Start Num: 5

Candidate Starts for Paella_107:

(Start: 5 @58297 has 21 MA's), (11, 58342), (17, 58375), (25, 58462), (51, 58564), (67, 58633), (74, 58699), (114, 58963), (115, 58966), (119, 59026),

Gene: Phaby_57 Start: 37911, Stop: 38663, Start Num: 7

Candidate Starts for Phaby_57:

(Start: 7 @37911 has 29 MA's), (16, 37977), (22, 38061), (49, 38202), (69, 38289), (71, 38304), (76, 38349), (77, 38361),

Gene: Phaila_61 Start: 36120, Stop: 36854, Start Num: 14

Candidate Starts for Phaila_61:

(Start: 14 @36120 has 5 MA's), (24, 36231), (42, 36327), (45, 36342), (73, 36477), (74, 36510), (77, 36531), (90, 36618), (100, 36690), (116, 36780), (120, 36837),

Gene: PherryCruz_40 Start: 29061, Stop: 29759, Start Num: 19

Candidate Starts for PherryCruz_40:

(Start: 19 @29061 has 10 MA's), (20, 29076), (21, 29079), (27, 29127), (29, 29139), (43, 29235), (47, 29265), (52, 29292), (58, 29322), (74, 29469), (102, 29652), (103, 29664), (104, 29673), (109, 29694),

Gene: Pippin15_54 Start: 34805, Stop: 35566, Start Num: 13

Candidate Starts for Pippin15_54:

(2, 34730), (8, 34766), (9, 34784), (13, 34805), (41, 35048), (75, 35291), (82, 35339), (90, 35396), (96, 35438), (97, 35447), (104, 35477), (105, 35480), (109, 35498),

Gene: ProfFrink_54 Start: 34994, Stop: 35869, Start Num: 6

Candidate Starts for ProfFrink_54:

(Start: 6 @34994 has 14 MA's), (10, 35027), (11, 35036), (12, 35039), (15, 35054), (22, 35147), (33, 35210), (35, 35222), (56, 35345), (59, 35360), (65, 35462), (77, 35567), (79, 35576), (89, 35648), (98, 35705), (118, 35843),

Gene: Qui_107 Start: 58297, Stop: 59046, Start Num: 5

Candidate Starts for Qui_107:

(Start: 5 @58297 has 21 MA's), (11, 58342), (17, 58375), (25, 58462), (51, 58564), (67, 58633), (74, 58699), (114, 58963), (115, 58966), (119, 59026),

Gene: Raunak_57 Start: 34691, Stop: 35566, Start Num: 6

Candidate Starts for Raunak_57:

(Start: 6 @34691 has 14 MA's), (10, 34724), (11, 34733), (12, 34736), (15, 34751), (22, 34844), (33, 34907), (35, 34919), (56, 35042), (59, 35057), (65, 35159), (77, 35264), (79, 35273), (89, 35345), (98, 35402), (118, 35540),

Gene: RavenPuff_40 Start: 29061, Stop: 29759, Start Num: 19

Candidate Starts for RavenPuff_40:

(Start: 19 @29061 has 10 MA's), (20, 29076), (21, 29079), (27, 29127), (29, 29139), (43, 29235), (47, 29265), (52, 29292), (58, 29322), (74, 29469), (102, 29652), (103, 29664), (104, 29673), (109, 29694),

Gene: Renaldo_64 Start: 37949, Stop: 38638, Start Num: 14

Candidate Starts for Renaldo_64:

(Start: 14 @37949 has 5 MA's), (31, 38093), (44, 38144), (50, 38162), (64, 38231), (74, 38294), (77, 38315), (83, 38348), (90, 38402), (91, 38417), (120, 38621),

Gene: Salk_54 Start: 34991, Stop: 35866, Start Num: 6

Candidate Starts for Salk_54:

(Start: 6 @34991 has 14 MA's), (10, 35024), (11, 35033), (12, 35036), (15, 35051), (22, 35144), (33, 35207), (35, 35219), (56, 35342), (59, 35357), (65, 35459), (77, 35564), (89, 35645), (98, 35702), (118, 35840),

Gene: Scap1_40 Start: 28953, Stop: 29648, Start Num: 19

Candidate Starts for Scap1_40:

(Start: 19 @28953 has 10 MA's), (20, 28968), (21, 28971), (32, 29064), (33, 29070), (43, 29127), (47, 29157), (58, 29214), (63, 29268), (74, 29358), (83, 29412), (94, 29496), (102, 29541), (103, 29553), (109, 29583), (110, 29595),

Gene: ScienceWizSam_55 Start: 37372, Stop: 38130, Start Num: 7

Candidate Starts for ScienceWizSam_55:

(Start: 7 @37372 has 29 MA's), (22, 37522), (36, 37585), (39, 37612), (42, 37624), (49, 37663), (69, 37744), (77, 37828), (80, 37843), (121, 38122),

Gene: Serenabean_53 Start: 34832, Stop: 35524, Start Num: 18

Candidate Starts for Serenabean_53:

(18, 34832), (22, 34868), (28, 34910), (38, 34988), (53, 35072), (66, 35168), (70, 35180), (93, 35369), (95, 35384), (99, 35408), (110, 35468),

Gene: SheRa_41 Start: 29108, Stop: 29806, Start Num: 19

Candidate Starts for SheRa_41:

(Start: 19 @29108 has 10 MA's), (20, 29123), (21, 29126), (27, 29174), (29, 29186), (43, 29282), (47, 29312), (52, 29339), (58, 29369), (74, 29516), (102, 29699), (103, 29711), (104, 29720), (109, 29741), (110, 29753),

Gene: Shepard_57 Start: 37134, Stop: 37886, Start Num: 7

Candidate Starts for Shepard_57:

(Start: 7 @37134 has 29 MA's), (22, 37284), (49, 37425), (69, 37512), (71, 37527), (76, 37572), (77, 37584),

Gene: Shiba_53 Start: 34691, Stop: 35566, Start Num: 6

Candidate Starts for Shiba_53:

(Start: 6 @34691 has 14 MA's), (10, 34724), (11, 34733), (12, 34736), (15, 34751), (22, 34844), (33, 34907), (35, 34919), (56, 35042), (59, 35057), (65, 35159), (77, 35264), (79, 35273), (89, 35345), (98, 35402), (118, 35540),

Gene: Sloopyjoe_54 Start: 34995, Stop: 35870, Start Num: 6

Candidate Starts for Sloopyjoe_54:

(Start: 6 @34995 has 14 MA's), (10, 35028), (11, 35037), (12, 35040), (15, 35055), (22, 35148), (33, 35211), (35, 35223), (56, 35346), (59, 35361), (65, 35463), (77, 35568), (79, 35577), (89, 35649), (98, 35706), (118, 35844),

Gene: Sporto_55 Start: 36496, Stop: 37332, Start Num: 6

Candidate Starts for Sporto_55:

(Start: 6 @36496 has 14 MA's), (11, 36538), (26, 36676), (33, 36736), (55, 36868), (60, 36892), (77, 37027), (79, 37036), (90, 37111), (106, 37201), (118, 37306),

Gene: StarLord_54 Start: 34994, Stop: 35869, Start Num: 6

Candidate Starts for StarLord_54:

(Start: 6 @34994 has 14 MA's), (10, 35027), (11, 35036), (12, 35039), (15, 35054), (22, 35147), (33, 35210), (35, 35222), (56, 35345), (59, 35360), (65, 35462), (77, 35567), (79, 35576), (89, 35648), (98, 35705), (118, 35843),

Gene: Stayer_54 Start: 34991, Stop: 35866, Start Num: 6

Candidate Starts for Stayer_54:

(Start: 6 @34991 has 14 MA's), (10, 35024), (11, 35033), (12, 35036), (15, 35051), (22, 35144), (33, 35207), (35, 35219), (56, 35342), (59, 35357), (65, 35459), (77, 35564), (79, 35573), (89, 35645), (98, 35702), (118, 35840),

Gene: Sunny4976_56 Start: 37585, Stop: 38403, Start Num: 1

Candidate Starts for Sunny4976_56:

(1, 37585), (3, 37618), (62, 37999), (72, 38047), (101, 38257), (108, 38287), (110, 38302), (119, 38386),

Gene: Synopsis_53 Start: 37431, Stop: 38198, Start Num: 7

Candidate Starts for Synopsis_53:

(Start: 7 @37431 has 29 MA's), (22, 37581), (36, 37644), (39, 37671), (42, 37683), (69, 37812), (77, 37896), (80, 37911), (121, 38190),

Gene: Tatanka_51 Start: 37563, Stop: 38327, Start Num: 7

Candidate Starts for Tatanka_51:

(Start: 7 @37563 has 29 MA's), (22, 37713), (39, 37803), (54, 37878), (69, 37944), (77, 38025), (80, 38040), (121, 38319),

Gene: Teacup_55 Start: 37789, Stop: 38553, Start Num: 7

Candidate Starts for Teacup_55:

(Start: 7 @37789 has 29 MA's), (22, 37939), (39, 38029), (41, 38038), (69, 38170), (77, 38251), (80, 38266), (87, 38317), (121, 38545),

Gene: Tenno_55 Start: 38094, Stop: 38855, Start Num: 7

Candidate Starts for Tenno_55:

(Start: 7 @38094 has 29 MA's), (22, 38244), (30, 38283), (39, 38334), (42, 38346), (69, 38472), (72, 38499), (77, 38553), (80, 38568), (87, 38619), (90, 38640), (121, 38847),

Gene: Tokki_60 Start: 37524, Stop: 38276, Start Num: 7

Candidate Starts for Tokki_60:

(Start: 7 @37524 has 29 MA's), (16, 37590), (22, 37674), (49, 37815), (69, 37902), (71, 37917), (76, 37962), (77, 37974),

Gene: Tribby_61 Start: 36239, Stop: 37036, Start Num: 5

Candidate Starts for Tribby_61:

(Start: 5 @36239 has 21 MA's), (23, 36401), (74, 36692), (78, 36725), (88, 36791), (94, 36839), (107, 36908), (114, 36959), (119, 37016),

Gene: TrixiePhattel_59 Start: 36099, Stop: 36839, Start Num: 14

Candidate Starts for TrixiePhattel_59:

(Start: 14 @36099 has 5 MA's), (31, 36243), (73, 36459), (77, 36513), (90, 36600), (102, 36678), (109, 36708), (110, 36720), (111, 36723), (112, 36735), (113, 36750), (120, 36822),

Gene: Truckee_53 Start: 37181, Stop: 37930, Start Num: 7

Candidate Starts for Truckee_53:

(Start: 7 @37181 has 29 MA's), (13, 37226), (22, 37331), (68, 37541), (76, 37616), (77, 37628), (80, 37643), (89, 37712),

Gene: Trustiboi_54 Start: 37632, Stop: 38390, Start Num: 7

Candidate Starts for Trustiboi_54:

(Start: 7 @37632 has 29 MA's), (22, 37782), (36, 37845), (39, 37872), (42, 37884), (49, 37923), (69, 38004), (77, 38088), (80, 38103), (121, 38382),

Gene: Uzumaki_55 Start: 36107, Stop: 36823, Start Num: 14

Candidate Starts for Uzumaki_55:

(Start: 14 @36107 has 5 MA's), (42, 36311), (45, 36326), (74, 36479), (77, 36500), (90, 36587), (100, 36659), (116, 36749), (120, 36806),

Gene: Xenomorph_56 Start: 35657, Stop: 36454, Start Num: 5

Candidate Starts for Xenomorph_56:

(Start: 5 @35657 has 21 MA's), (23, 35819), (74, 36110), (78, 36143), (88, 36209), (94, 36257), (107, 36326), (114, 36377), (119, 36434),

Gene: Yotsuba_54 Start: 37928, Stop: 38668, Start Num: 13

Candidate Starts for Yotsuba_54:

(9, 37907), (13, 37928), (41, 38171), (92, 38516), (93, 38519), (104, 38579),

Gene: Zeina_59 Start: 36674, Stop: 37390, Start Num: 14

Candidate Starts for Zeina_59:

(Start: 14 @36674 has 5 MA's), (45, 36893), (73, 37013), (74, 37046), (77, 37067), (90, 37154), (116, 37316), (120, 37373),