



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 296624 Report

This analysis was run 04/25/26 on database version 644.

Pham number 296624 has 55 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Elva_19
- Track 2 : Finalfrontier_19
- Track 3 : Jovita_18
- Track 4 : Armstrong_17
- Track 5 : Softsoap_17, SirBeanington_18, BubbaBear_18
- Track 6 : Coltrane_17, Brahms_17
- Track 7 : Johnathan_18
- Track 8 : Buldak_17
- Track 9 : CliffHanger_18
- Track 10 : Albedo_18
- Track 11 : Cashington_18
- Track 12 : Eula_18, QMacho_19, Pecas_18
- Track 13 : Lahqtemish_18
- Track 14 : CroZenni_18
- Track 15 : Squircle_17, Olliecat_17
- Track 16 : Vitas_17
- Track 17 : Bengal_18, LimaBean_18
- Track 18 : Abigail_18
- Track 19 : Clayda5_17
- Track 20 : Swervy_18, SarBear_18
- Track 21 : MsUbiquitous_18, Jabb_18, CupcakePrincess_18
- Track 22 : Burritobowl_18
- Track 23 : AylexOG_19
- Track 24 : TukTuk_18
- Track 25 : Didgeridoo_19
- Track 26 : Phisb_18
- Track 27 : Arroyo_19
- Track 28 : AnnaLie_19, BelmontSKP_19
- Track 29 : CanFranMach_19
- Track 30 : Bernstein_17, Rollins_17
- Track 31 : DickRichards_18
- Track 32 : PastaFagioli_18
- Track 33 : Nicky22_19
- Track 34 : Slay_18
- Track 35 : Lilo27_18
- Track 36 : SansAfet_18
- Track 37 : BabyDaisy_19

- Track 38 : PhigPhack_19
- Track 39 : Skylord_17
- Track 40 : IndyLu_18
- Track 41 : Kate33_18
- Track 42 : Avocadoman_18
- Track 43 : Floof_17

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

The start number called the most often in the published annotations is 3, it was called in 49 of the 50 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abigail_18, Albedo_18, AnnaLie_19, Armstrong_17, Arroyo_19, Avocadoman_18, AylexOG_19, BabyDaisy_19, BelmontSKP_19, Bengal_18, Bernstein_17, Brahms_17, BubbaBear_18, Buldak_17, Burritobowl_18, CanFranMach_19, Cashington_18, Clayda5_17, CliffHanger_18, Coltrane_17, CroZenni_18, CupcakePrincess_18, DickRichards_18, Didgeridoo_19, Elva_19, Eula_18, Finalfrontier_19, IndyLu_18, Jabb_18, Johnathan_18, Jovita_18, Kate33_18, Lahqtemish_18, Lilo27_18, LimaBean_18, MsUbiquitous_18, Nicky22_19, Olliecat_17, PastaFagioli_18, Pecas_18, PhigPhack_19, Phisb_18, QMacho_19, Rollins_17, SansAfet_18, SarBear_18, SirBeanington_18, Skylord_17, Slay_18, Softsoap_17, Squircl_17, Swervy_18, TukTuk_18, Vitas_17,

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

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

- Floof_17,

Summary by start number:

Start 2:

- Found in 1 of 55 (1.8%) of genes in pham
- Manual Annotations of this start: 1 of 50
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Floof_17 (EH),

Start 3:

- Found in 54 of 55 (98.2%) of genes in pham
- Manual Annotations of this start: 49 of 50
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Abigail_18 (EB), Albedo_18 (EB), AnnaLie_19 (EB), Armstrong_17 (EB), Arroyo_19 (EB), Avocadoman_18 (EB), AylexOG_19 (EB), BabyDaisy_19 (EB), BelmontSKP_19 (EB), Bengal_18 (EB), Bernstein_17 (EB), Brahms_17 (EB), BubbaBear_18 (EB), Buldak_17 (EB), Burritobowl_18 (EB), CanFranMach_19 (EB), Cashington_18 (EB), Clayda5_17 (EB), CliffHanger_18 (EB), Coltrane_17 (EB), CroZenni_18 (EB), CupcakePrincess_18 (EB), DickRichards_18 (EB), Didgeridoo_19 (EB), Elva_19 (EB), Eula_18 (EB), Finalfrontier_19 (EB), IndyLu_18 (EB), Jabb_18 (EB), Johnathan_18 (EB), Jovita_18

(EB), Kate33_18 (EB), Lahqtemish_18 (EB), Lilo27_18 (EB), LimaBean_18 (EB), MsUbiquitous_18 (EB), Nicky22_19 (EB), Olliecat_17 (EB), PastaFagioli_18 (EB), Pecas_18 (EB), PhigPhack_19 (EB), Phisb_18 (EB), QMacho_19 (EB), Rollins_17 (EB), SansAfet_18 (EB), SarBear_18 (EB), SirBeanington_18 (EB), Skylord_17 (EB), Slay_18 (EB), Softsoap_17 (EB), Squircle_17 (EB), Swervy_18 (EB), TukTuk_18 (EB), Vitas_17 (EB),

Summary by clusters:

There are 2 clusters represented in this pham: EH, EB,

Info for manual annotations of cluster EB:

- Start number 3 was manually annotated 49 times for cluster EB.

Info for manual annotations of cluster EH:

- Start number 2 was manually annotated 1 time for cluster EH.

Gene Information:

Gene: Abigail_18 Start: 14117, Stop: 16090, Start Num: 3

Candidate Starts for Abigail_18:

(Start: 3 @14117 has 49 MA's), (19, 14363), (21, 14417), (29, 14537), (31, 14549), (48, 14888), (54, 15050), (59, 15116), (64, 15158), (69, 15215), (88, 15470), (90, 15494), (91, 15515), (100, 15554), (113, 15680), (125, 15839), (128, 15863), (136, 15926), (138, 15959), (143, 16058), (144, 16064),

Gene: Albedo_18 Start: 13985, Stop: 15955, Start Num: 3

Candidate Starts for Albedo_18:

(Start: 3 @13985 has 49 MA's), (14, 14174), (15, 14189), (19, 14231), (20, 14282), (28, 14402), (29, 14405), (46, 14723), (48, 14756), (59, 14984), (64, 15026), (79, 15245), (84, 15284), (90, 15359), (95, 15401), (118, 15629), (125, 15704), (132, 15749), (138, 15824), (139, 15833), (141, 15887), (144, 15929),

Gene: AnnaLie_19 Start: 14304, Stop: 16274, Start Num: 3

Candidate Starts for AnnaLie_19:

(Start: 3 @14304 has 49 MA's), (14, 14493), (19, 14550), (21, 14604), (23, 14625), (29, 14724), (35, 14802), (46, 15042), (59, 15303), (64, 15345), (69, 15402), (90, 15678), (95, 15720), (118, 15948), (125, 16023), (128, 16047), (132, 16068), (135, 16107), (138, 16143), (140, 16182), (141, 16206), (144, 16248),

Gene: Armstrong_17 Start: 12466, Stop: 14193, Start Num: 3

Candidate Starts for Armstrong_17:

(Start: 3 @12466 has 49 MA's), (8, 12514), (10, 12559), (13, 12625), (17, 12682), (19, 12712), (29, 12886), (31, 12898), (46, 13204), (47, 13207), (51, 13333), (53, 13384), (56, 13423), (58, 13435), (59, 13465), (61, 13471), (64, 13507), (107, 13963), (111, 14011), (126, 14167), (127, 14170),

Gene: Arroyo_19 Start: 14505, Stop: 16475, Start Num: 3

Candidate Starts for Arroyo_19:

(Start: 3 @14505 has 49 MA's), (14, 14694), (19, 14751), (21, 14805), (23, 14826), (29, 14925), (31, 14937), (35, 15003), (46, 15243), (48, 15276), (59, 15504), (64, 15546), (69, 15603), (88, 15855), (90, 15879), (95, 15921), (118, 16149), (125, 16224), (128, 16248), (132, 16269), (135, 16308), (138, 16344), (140, 16383), (141, 16407), (144, 16449),

Gene: Avocadoman_18 Start: 14060, Stop: 16033, Start Num: 3

Candidate Starts for Avocadoman_18:

(Start: 3 @14060 has 49 MA's), (19, 14306), (21, 14360), (29, 14480), (31, 14492), (48, 14831), (54, 14993), (59, 15059), (64, 15101), (69, 15158), (88, 15413), (90, 15437), (91, 15458), (100, 15497), (118, 15707), (121, 15737), (125, 15782), (128, 15806), (136, 15869), (138, 15902), (143, 16001), (144, 16007),

Gene: AylexOG_19 Start: 14319, Stop: 16292, Start Num: 3

Candidate Starts for AylexOG_19:

(Start: 3 @14319 has 49 MA's), (14, 14508), (15, 14523), (19, 14565), (28, 14736), (29, 14739), (46, 15057), (47, 15060), (48, 15090), (59, 15318), (64, 15360), (74, 15495), (79, 15579), (83, 15609), (97, 15744), (125, 16041), (132, 16086), (133, 16113), (138, 16161), (139, 16170), (141, 16224), (144, 16266),

Gene: BabyDaisy_19 Start: 14120, Stop: 16090, Start Num: 3

Candidate Starts for BabyDaisy_19:

(Start: 3 @14120 has 49 MA's), (10, 14213), (14, 14309), (16, 14333), (19, 14366), (20, 14417), (29, 14540), (31, 14552), (46, 14858), (48, 14891), (49, 14900), (59, 15119), (64, 15161), (73, 15275), (80, 15380), (89, 15479), (90, 15494), (118, 15764), (121, 15794), (125, 15839), (136, 15926), (143, 16058), (144, 16064),

Gene: BelmontSKP_19 Start: 14304, Stop: 16274, Start Num: 3

Candidate Starts for BelmontSKP_19:

(Start: 3 @14304 has 49 MA's), (14, 14493), (19, 14550), (21, 14604), (23, 14625), (29, 14724), (35, 14802), (46, 15042), (59, 15303), (64, 15345), (69, 15402), (90, 15678), (95, 15720), (118, 15948), (125, 16023), (128, 16047), (132, 16068), (135, 16107), (138, 16143), (140, 16182), (141, 16206), (144, 16248),

Gene: Bengal_18 Start: 13895, Stop: 15865, Start Num: 3

Candidate Starts for Bengal_18:

(Start: 3 @13895 has 49 MA's), (19, 14141), (21, 14195), (25, 14258), (29, 14315), (31, 14327), (46, 14633), (48, 14666), (54, 14828), (59, 14894), (64, 14936), (69, 14993), (79, 15155), (81, 15167), (89, 15254), (90, 15269), (118, 15539), (121, 15569), (125, 15614), (130, 15644), (136, 15701), (138, 15734), (143, 15833), (144, 15839),

Gene: Bernstein_17 Start: 12526, Stop: 14229, Start Num: 3

Candidate Starts for Bernstein_17:

(Start: 3 @12526 has 49 MA's), (8, 12574), (10, 12619), (17, 12742), (19, 12772), (29, 12946), (31, 12958), (46, 13264), (47, 13267), (51, 13393), (53, 13444), (56, 13483), (58, 13495), (59, 13525), (61, 13531), (64, 13567), (93, 13933), (107, 14023), (126, 14203), (127, 14206),

Gene: Brahms_17 Start: 12466, Stop: 14169, Start Num: 3

Candidate Starts for Brahms_17:

(Start: 3 @12466 has 49 MA's), (10, 12559), (17, 12682), (19, 12712), (29, 12886), (46, 13204), (47, 13207), (51, 13333), (53, 13384), (56, 13423), (58, 13435), (59, 13465), (61, 13471), (62, 13489), (64, 13507), (75, 13654), (76, 13669), (77, 13678), (78, 13717), (93, 13873), (107, 13963), (126, 14143), (127, 14146),

Gene: BubbaBear_18 Start: 13985, Stop: 15955, Start Num: 3

Candidate Starts for BubbaBear_18:

(Start: 3 @13985 has 49 MA's), (14, 14174), (15, 14189), (19, 14231), (20, 14282), (28, 14402), (29, 14405), (46, 14723), (48, 14756), (59, 14984), (64, 15026), (74, 15161), (79, 15245), (84, 15284), (90,

15359), (95, 15401), (118, 15629), (125, 15704), (132, 15749), (138, 15824), (139, 15833), (141, 15887), (144, 15929),

Gene: Buldak_17 Start: 13900, Stop: 15591, Start Num: 3

Candidate Starts for Buldak_17:

(Start: 3 @13900 has 49 MA's), (9, 13987), (11, 13999), (12, 14050), (13, 14059), (14, 14089), (19, 14128), (20, 14179), (22, 14191), (23, 14203), (24, 14206), (29, 14302), (33, 14371), (40, 14512), (46, 14620), (50, 14719), (53, 14800), (54, 14815), (55, 14818), (59, 14881), (63, 14914), (64, 14923), (71, 15004), (72, 15025), (74, 15058), (75, 15070), (82, 15151), (85, 15181), (90, 15256), (92, 15283), (106, 15367), (110, 15430), (112, 15433), (123, 15565),

Gene: Burritobowl_18 Start: 14063, Stop: 16033, Start Num: 3

Candidate Starts for Burritobowl_18:

(Start: 3 @14063 has 49 MA's), (19, 14309), (21, 14363), (29, 14483), (31, 14495), (46, 14801), (48, 14834), (54, 14996), (59, 15062), (64, 15104), (69, 15161), (79, 15323), (88, 15413), (95, 15479), (97, 15485), (118, 15707), (121, 15737), (125, 15782), (128, 15806), (136, 15869), (138, 15902), (143, 16001), (144, 16007),

Gene: CanFranMach_19 Start: 13989, Stop: 15962, Start Num: 3

Candidate Starts for CanFranMach_19:

(Start: 3 @13989 has 49 MA's), (14, 14178), (18, 14220), (19, 14235), (29, 14409), (34, 14484), (46, 14727), (48, 14760), (53, 14907), (56, 14946), (59, 14988), (60, 14991), (64, 15030), (71, 15111), (84, 15288), (90, 15366), (97, 15414), (105, 15474), (113, 15552), (121, 15666), (125, 15711), (128, 15735), (133, 15783), (138, 15831), (144, 15936),

Gene: Cashington_18 Start: 13912, Stop: 15882, Start Num: 3

Candidate Starts for Cashington_18:

(Start: 3 @13912 has 49 MA's), (19, 14158), (21, 14212), (29, 14332), (31, 14344), (48, 14683), (54, 14845), (59, 14911), (64, 14953), (69, 15010), (79, 15172), (81, 15184), (89, 15271), (90, 15286), (118, 15556), (121, 15586), (125, 15631), (130, 15661), (136, 15718), (138, 15751), (143, 15850), (144, 15856),

Gene: Clayda5_17 Start: 12466, Stop: 14199, Start Num: 3

Candidate Starts for Clayda5_17:

(Start: 3 @12466 has 49 MA's), (8, 12514), (10, 12559), (13, 12625), (17, 12682), (19, 12712), (29, 12886), (31, 12898), (46, 13204), (47, 13207), (51, 13333), (53, 13384), (56, 13423), (58, 13435), (59, 13465), (61, 13471), (64, 13507), (93, 13873), (126, 14173), (127, 14176),

Gene: CliffHanger_18 Start: 13501, Stop: 15195, Start Num: 3

Candidate Starts for CliffHanger_18:

(Start: 3 @13501 has 49 MA's), (9, 13588), (12, 13651), (19, 13729), (26, 13879), (27, 13888), (29, 13903), (31, 13915), (32, 13921), (49, 14263), (54, 14416), (59, 14482), (71, 14605), (86, 14800), (90, 14857), (102, 14929), (104, 14932), (108, 15019), (113, 15040), (119, 15130), (123, 15169),

Gene: Coltrane_17 Start: 12466, Stop: 14169, Start Num: 3

Candidate Starts for Coltrane_17:

(Start: 3 @12466 has 49 MA's), (10, 12559), (17, 12682), (19, 12712), (29, 12886), (46, 13204), (47, 13207), (51, 13333), (53, 13384), (56, 13423), (58, 13435), (59, 13465), (61, 13471), (62, 13489), (64, 13507), (75, 13654), (76, 13669), (77, 13678), (78, 13717), (93, 13873), (107, 13963), (126, 14143), (127, 14146),

Gene: CroZenni_18 Start: 13895, Stop: 15865, Start Num: 3

Candidate Starts for CroZenni_18:

(Start: 3 @13895 has 49 MA's), (14, 14084), (19, 14141), (21, 14195), (23, 14216), (29, 14315), (31, 14327), (46, 14633), (48, 14666), (59, 14894), (64, 14936), (69, 14993), (89, 15254), (90, 15269), (118, 15539), (125, 15614), (128, 15638), (132, 15659), (135, 15698), (140, 15773), (141, 15797), (144, 15839),

Gene: CupcakePrincess_18 Start: 14012, Stop: 15982, Start Num: 3

Candidate Starts for CupcakePrincess_18:

(Start: 3 @14012 has 49 MA's), (14, 14201), (15, 14216), (19, 14258), (20, 14309), (21, 14312), (29, 14432), (46, 14750), (48, 14783), (64, 15053), (79, 15272), (84, 15311), (90, 15386), (95, 15428), (118, 15656), (125, 15731), (130, 15761), (138, 15851), (139, 15860), (141, 15914), (144, 15956),

Gene: DickRichards_18 Start: 14390, Stop: 16360, Start Num: 3

Candidate Starts for DickRichards_18:

(Start: 3 @14390 has 49 MA's), (14, 14579), (17, 14606), (19, 14636), (21, 14690), (23, 14711), (29, 14810), (31, 14822), (38, 14945), (46, 15128), (48, 15161), (59, 15389), (64, 15431), (90, 15764), (95, 15806), (113, 15950), (118, 16034), (125, 16109), (128, 16133), (132, 16154), (135, 16193), (138, 16229), (140, 16268), (141, 16292), (144, 16334),

Gene: Didgeridoo_19 Start: 14122, Stop: 16092, Start Num: 3

Candidate Starts for Didgeridoo_19:

(Start: 3 @14122 has 49 MA's), (10, 14215), (14, 14311), (16, 14335), (19, 14368), (29, 14542), (31, 14554), (46, 14860), (48, 14893), (49, 14902), (59, 15121), (64, 15163), (74, 15298), (89, 15481), (90, 15496), (118, 15766), (121, 15796), (125, 15841), (136, 15928), (143, 16060), (144, 16066),

Gene: Elva_19 Start: 13907, Stop: 16039, Start Num: 3

Candidate Starts for Elva_19:

(Start: 3 @13907 has 49 MA's), (7, 13943), (15, 14108), (19, 14150), (29, 14324), (31, 14336), (33, 14393), (37, 14447), (41, 14540), (51, 14771), (56, 14861), (59, 14903), (63, 14936), (64, 14945), (68, 14990), (72, 15047), (87, 15245), (96, 15332), (99, 15344), (103, 15365), (107, 15434), (109, 15479), (113, 15491), (114, 15521), (115, 15533), (117, 15554), (122, 15623), (133, 15722), (134, 15725), (148, 16019),

Gene: Eula_18 Start: 13973, Stop: 15943, Start Num: 3

Candidate Starts for Eula_18:

(Start: 3 @13973 has 49 MA's), (14, 14162), (15, 14177), (17, 14189), (19, 14219), (20, 14270), (29, 14393), (46, 14711), (48, 14744), (59, 14972), (73, 15128), (74, 15149), (79, 15233), (84, 15272), (90, 15347), (95, 15389), (125, 15692), (132, 15737), (133, 15764), (138, 15812), (139, 15821), (141, 15875), (144, 15917),

Gene: Finalfrontier_19 Start: 14486, Stop: 16459, Start Num: 3

Candidate Starts for Finalfrontier_19:

(Start: 3 @14486 has 49 MA's), (10, 14579), (14, 14675), (16, 14699), (19, 14732), (20, 14783), (29, 14906), (31, 14918), (46, 15224), (48, 15257), (49, 15266), (59, 15485), (64, 15527), (73, 15641), (74, 15662), (84, 15785), (90, 15863), (97, 15911), (113, 16049), (125, 16208), (128, 16232), (136, 16295), (143, 16427), (144, 16433),

Gene: Floof_17 Start: 13331, Stop: 15664, Start Num: 2

Candidate Starts for Floof_17:

(Start: 2 @13331 has 1 MA's), (5, 13352), (14, 13553), (19, 13604), (39, 13994), (42, 14054), (43, 14060), (44, 14084), (52, 14285), (56, 14345), (60, 14390), (63, 14420), (65, 14441), (67, 14465), (70, 14498), (89, 14795), (95, 14852), (105, 14918), (124, 15158), (129, 15203), (131, 15215), (137, 15293), (142, 15392), (145, 15410), (146, 15431), (147, 15494), (149, 15560), (150, 15581), (151, 15638),

Gene: IndyLu_18 Start: 13944, Stop: 15914, Start Num: 3

Candidate Starts for IndyLu_18:

(Start: 3 @13944 has 49 MA's), (10, 14037), (14, 14133), (16, 14157), (19, 14190), (20, 14241), (29, 14364), (31, 14376), (46, 14682), (48, 14715), (49, 14724), (59, 14943), (73, 15099), (74, 15120), (79, 15204), (88, 15294), (91, 15339), (113, 15504), (125, 15663), (128, 15687), (136, 15750), (138, 15783), (144, 15888),

Gene: Jabb_18 Start: 14012, Stop: 15982, Start Num: 3

Candidate Starts for Jabb_18:

(Start: 3 @14012 has 49 MA's), (14, 14201), (15, 14216), (19, 14258), (20, 14309), (21, 14312), (29, 14432), (46, 14750), (48, 14783), (64, 15053), (79, 15272), (84, 15311), (90, 15386), (95, 15428), (118, 15656), (125, 15731), (130, 15761), (138, 15851), (139, 15860), (141, 15914), (144, 15956),

Gene: Johnathan_18 Start: 13999, Stop: 15969, Start Num: 3

Candidate Starts for Johnathan_18:

(Start: 3 @13999 has 49 MA's), (14, 14188), (19, 14245), (21, 14299), (23, 14320), (29, 14419), (31, 14431), (37, 14542), (45, 14731), (46, 14737), (48, 14770), (59, 14998), (64, 15040), (88, 15349), (91, 15394), (118, 15643), (125, 15718), (131, 15757), (132, 15763), (136, 15805), (139, 15847), (141, 15901), (144, 15943),

Gene: Jovita_18 Start: 14074, Stop: 16047, Start Num: 3

Candidate Starts for Jovita_18:

(Start: 3 @14074 has 49 MA's), (14, 14263), (15, 14278), (17, 14290), (19, 14320), (20, 14371), (29, 14494), (46, 14812), (48, 14845), (59, 15073), (64, 15115), (73, 15229), (74, 15250), (79, 15334), (97, 15499), (125, 15796), (132, 15841), (133, 15868), (138, 15916), (139, 15925), (141, 15979), (144, 16021),

Gene: Kate33_18 Start: 13943, Stop: 15916, Start Num: 3

Candidate Starts for Kate33_18:

(Start: 3 @13943 has 49 MA's), (10, 14036), (14, 14132), (16, 14156), (19, 14189), (20, 14240), (29, 14363), (31, 14375), (46, 14681), (48, 14714), (49, 14723), (57, 14906), (59, 14942), (64, 14984), (73, 15098), (74, 15119), (79, 15203), (88, 15296), (90, 15320), (91, 15341), (100, 15380), (113, 15506), (125, 15665), (128, 15689), (136, 15752), (138, 15785), (143, 15884), (144, 15890),

Gene: Lahqtemish_18 Start: 13989, Stop: 15962, Start Num: 3

Candidate Starts for Lahqtemish_18:

(Start: 3 @13989 has 49 MA's), (16, 14202), (19, 14235), (20, 14286), (29, 14409), (31, 14421), (46, 14727), (48, 14760), (49, 14769), (59, 14988), (64, 15030), (74, 15165), (79, 15249), (88, 15342), (90, 15366), (91, 15387), (100, 15426), (113, 15552), (125, 15711), (128, 15735), (137, 15828), (138, 15831), (144, 15936),

Gene: Lilo27_18 Start: 13946, Stop: 15919, Start Num: 3

Candidate Starts for Lilo27_18:

(Start: 3 @13946 has 49 MA's), (14, 14135), (15, 14150), (19, 14192), (20, 14243), (21, 14246), (28, 14363), (29, 14366), (46, 14684), (48, 14717), (59, 14945), (73, 15101), (74, 15122), (79, 15206), (97, 15371), (98, 15377), (118, 15593), (125, 15668), (133, 15740), (138, 15788), (139, 15797), (141, 15851), (144, 15893),

Gene: LimaBean_18 Start: 13998, Stop: 15968, Start Num: 3

Candidate Starts for LimaBean_18:

(Start: 3 @13998 has 49 MA's), (19, 14244), (21, 14298), (25, 14361), (29, 14418), (31, 14430), (46, 14736), (48, 14769), (54, 14931), (59, 14997), (64, 15039), (69, 15096), (79, 15258), (81, 15270), (89,

15357), (90, 15372), (118, 15642), (121, 15672), (125, 15717), (130, 15747), (136, 15804), (138, 15837), (143, 15936), (144, 15942),

Gene: MsUbiquitous_18 Start: 14012, Stop: 15982, Start Num: 3

Candidate Starts for MsUbiquitous_18:

(Start: 3 @14012 has 49 MA's), (14, 14201), (15, 14216), (19, 14258), (20, 14309), (21, 14312), (29, 14432), (46, 14750), (48, 14783), (64, 15053), (79, 15272), (84, 15311), (90, 15386), (95, 15428), (118, 15656), (125, 15731), (130, 15761), (138, 15851), (139, 15860), (141, 15914), (144, 15956),

Gene: Nicky22_19 Start: 14417, Stop: 16390, Start Num: 3

Candidate Starts for Nicky22_19:

(Start: 3 @14417 has 49 MA's), (14, 14606), (15, 14621), (19, 14663), (20, 14714), (21, 14717), (28, 14834), (29, 14837), (46, 15155), (48, 15188), (59, 15416), (64, 15458), (74, 15593), (79, 15677), (97, 15842), (98, 15848), (113, 15980), (125, 16139), (132, 16184), (133, 16211), (138, 16259), (139, 16268), (141, 16322), (144, 16364),

Gene: Olliecat_17 Start: 13859, Stop: 15553, Start Num: 3

Candidate Starts for Olliecat_17:

(1, 13682), (Start: 3 @13859 has 49 MA's), (4, 13880), (6, 13889), (14, 14048), (19, 14087), (20, 14138), (22, 14150), (23, 14162), (24, 14165), (29, 14261), (30, 14270), (31, 14273), (36, 14372), (46, 14579), (50, 14678), (53, 14759), (54, 14774), (59, 14840), (68, 14927), (71, 14963), (82, 15110), (86, 15158), (90, 15215), (92, 15242), (101, 15281), (102, 15287), (104, 15290), (113, 15398), (116, 15458), (119, 15488), (120, 15500), (123, 15527),

Gene: PastaFagioli_18 Start: 13977, Stop: 15950, Start Num: 3

Candidate Starts for PastaFagioli_18:

(Start: 3 @13977 has 49 MA's), (10, 14070), (16, 14190), (19, 14223), (20, 14274), (29, 14397), (31, 14409), (46, 14715), (48, 14748), (49, 14757), (59, 14976), (64, 15018), (74, 15153), (79, 15237), (88, 15330), (91, 15375), (100, 15414), (118, 15624), (121, 15654), (125, 15699), (128, 15723), (138, 15819), (144, 15924),

Gene: Pecas_18 Start: 13973, Stop: 15943, Start Num: 3

Candidate Starts for Pecas_18:

(Start: 3 @13973 has 49 MA's), (14, 14162), (15, 14177), (17, 14189), (19, 14219), (20, 14270), (29, 14393), (46, 14711), (48, 14744), (59, 14972), (73, 15128), (74, 15149), (79, 15233), (84, 15272), (90, 15347), (95, 15389), (125, 15692), (132, 15737), (133, 15764), (138, 15812), (139, 15821), (141, 15875), (144, 15917),

Gene: PhigPhack_19 Start: 13972, Stop: 15942, Start Num: 3

Candidate Starts for PhigPhack_19:

(Start: 3 @13972 has 49 MA's), (14, 14161), (19, 14218), (21, 14272), (23, 14293), (29, 14392), (31, 14404), (46, 14710), (48, 14743), (64, 15013), (90, 15346), (95, 15388), (113, 15532), (118, 15616), (125, 15691), (128, 15715), (132, 15736), (135, 15775), (138, 15811), (140, 15850), (141, 15874), (144, 15916),

Gene: Phisb_18 Start: 13986, Stop: 15956, Start Num: 3

Candidate Starts for Phisb_18:

(Start: 3 @13986 has 49 MA's), (14, 14175), (15, 14190), (19, 14232), (20, 14283), (21, 14286), (28, 14403), (29, 14406), (46, 14724), (48, 14757), (59, 14985), (64, 15027), (74, 15162), (79, 15246), (84, 15285), (90, 15360), (95, 15402), (118, 15630), (125, 15705), (132, 15750), (138, 15825), (139, 15834), (141, 15888), (144, 15930),

Gene: QMacho_19 Start: 14456, Stop: 16426, Start Num: 3

Candidate Starts for QMacho_19:

(Start: 3 @14456 has 49 MA's), (14, 14645), (15, 14660), (17, 14672), (19, 14702), (20, 14753), (29, 14876), (46, 15194), (48, 15227), (59, 15455), (73, 15611), (74, 15632), (79, 15716), (84, 15755), (90, 15830), (95, 15872), (125, 16175), (132, 16220), (133, 16247), (138, 16295), (139, 16304), (141, 16358), (144, 16400),

Gene: Rollins_17 Start: 12526, Stop: 14229, Start Num: 3

Candidate Starts for Rollins_17:

(Start: 3 @12526 has 49 MA's), (8, 12574), (10, 12619), (17, 12742), (19, 12772), (29, 12946), (31, 12958), (46, 13264), (47, 13267), (51, 13393), (53, 13444), (56, 13483), (58, 13495), (59, 13525), (61, 13531), (64, 13567), (93, 13933), (107, 14023), (126, 14203), (127, 14206),

Gene: SansAfet_18 Start: 13906, Stop: 15876, Start Num: 3

Candidate Starts for SansAfet_18:

(Start: 3 @13906 has 49 MA's), (14, 14095), (19, 14152), (21, 14206), (23, 14227), (29, 14326), (35, 14404), (46, 14644), (59, 14905), (64, 14947), (69, 15004), (90, 15280), (95, 15322), (125, 15625), (128, 15649), (132, 15670), (135, 15709), (138, 15745), (140, 15784), (141, 15808), (144, 15850),

Gene: SarBear_18 Start: 13951, Stop: 15924, Start Num: 3

Candidate Starts for SarBear_18:

(Start: 3 @13951 has 49 MA's), (14, 14140), (15, 14155), (19, 14197), (20, 14248), (21, 14251), (29, 14371), (46, 14689), (48, 14722), (64, 14992), (74, 15127), (79, 15211), (83, 15241), (98, 15382), (118, 15598), (125, 15673), (130, 15703), (138, 15793), (139, 15802), (141, 15856), (144, 15898),

Gene: SirBeanington_18 Start: 13993, Stop: 15963, Start Num: 3

Candidate Starts for SirBeanington_18:

(Start: 3 @13993 has 49 MA's), (14, 14182), (15, 14197), (19, 14239), (20, 14290), (28, 14410), (29, 14413), (46, 14731), (48, 14764), (59, 14992), (64, 15034), (74, 15169), (79, 15253), (84, 15292), (90, 15367), (95, 15409), (118, 15637), (125, 15712), (132, 15757), (138, 15832), (139, 15841), (141, 15895), (144, 15937),

Gene: Skylord_17 Start: 12466, Stop: 14169, Start Num: 3

Candidate Starts for Skylord_17:

(Start: 3 @12466 has 49 MA's), (8, 12514), (10, 12559), (17, 12682), (19, 12712), (29, 12886), (46, 13204), (47, 13207), (51, 13333), (53, 13384), (56, 13423), (58, 13435), (59, 13465), (61, 13471), (62, 13489), (64, 13507), (75, 13654), (76, 13669), (77, 13678), (78, 13717), (93, 13873), (107, 13963), (126, 14143), (127, 14146),

Gene: Slay_18 Start: 14493, Stop: 16466, Start Num: 3

Candidate Starts for Slay_18:

(Start: 3 @14493 has 49 MA's), (14, 14682), (15, 14697), (19, 14739), (20, 14790), (21, 14793), (29, 14913), (46, 15231), (48, 15264), (59, 15492), (64, 15534), (66, 15561), (74, 15669), (79, 15753), (83, 15783), (98, 15924), (118, 16140), (125, 16215), (130, 16245), (138, 16335), (139, 16344), (141, 16398), (144, 16440),

Gene: Softsoap_17 Start: 13727, Stop: 15697, Start Num: 3

Candidate Starts for Softsoap_17:

(Start: 3 @13727 has 49 MA's), (14, 13916), (15, 13931), (19, 13973), (20, 14024), (28, 14144), (29, 14147), (46, 14465), (48, 14498), (59, 14726), (64, 14768), (74, 14903), (79, 14987), (84, 15026), (90, 15101), (95, 15143), (118, 15371), (125, 15446), (132, 15491), (138, 15566), (139, 15575), (141, 15629), (144, 15671),

Gene: Squiracle_17 Start: 13858, Stop: 15552, Start Num: 3

Candidate Starts for Squirrel_17:

(1, 13681), (Start: 3 @13858 has 49 MA's), (4, 13879), (6, 13888), (14, 14047), (19, 14086), (20, 14137), (22, 14149), (23, 14161), (24, 14164), (29, 14260), (30, 14269), (31, 14272), (36, 14371), (46, 14578), (50, 14677), (53, 14758), (54, 14773), (59, 14839), (68, 14926), (71, 14962), (82, 15109), (86, 15157), (90, 15214), (92, 15241), (101, 15280), (102, 15286), (104, 15289), (113, 15397), (116, 15457), (119, 15487), (120, 15499), (123, 15526),

Gene: Swervy_18 Start: 13951, Stop: 15924, Start Num: 3

Candidate Starts for Swervy_18:

(Start: 3 @13951 has 49 MA's), (14, 14140), (15, 14155), (19, 14197), (20, 14248), (21, 14251), (29, 14371), (46, 14689), (48, 14722), (64, 14992), (74, 15127), (79, 15211), (83, 15241), (98, 15382), (118, 15598), (125, 15673), (130, 15703), (138, 15793), (139, 15802), (141, 15856), (144, 15898),

Gene: TukTuk_18 Start: 14009, Stop: 15982, Start Num: 3

Candidate Starts for TukTuk_18:

(Start: 3 @14009 has 49 MA's), (14, 14198), (15, 14213), (17, 14225), (19, 14255), (20, 14306), (28, 14426), (29, 14429), (46, 14747), (48, 14780), (59, 15008), (64, 15050), (73, 15164), (74, 15185), (79, 15269), (83, 15299), (125, 15731), (132, 15776), (133, 15803), (138, 15851), (139, 15860), (141, 15914), (144, 15956),

Gene: Vitas_17 Start: 12466, Stop: 14169, Start Num: 3

Candidate Starts for Vitas_17:

(Start: 3 @12466 has 49 MA's), (8, 12514), (10, 12559), (17, 12682), (19, 12712), (29, 12886), (31, 12898), (46, 13204), (47, 13207), (51, 13333), (53, 13384), (56, 13423), (58, 13435), (59, 13465), (61, 13471), (64, 13507), (94, 13879), (107, 13963), (126, 14143), (127, 14146),