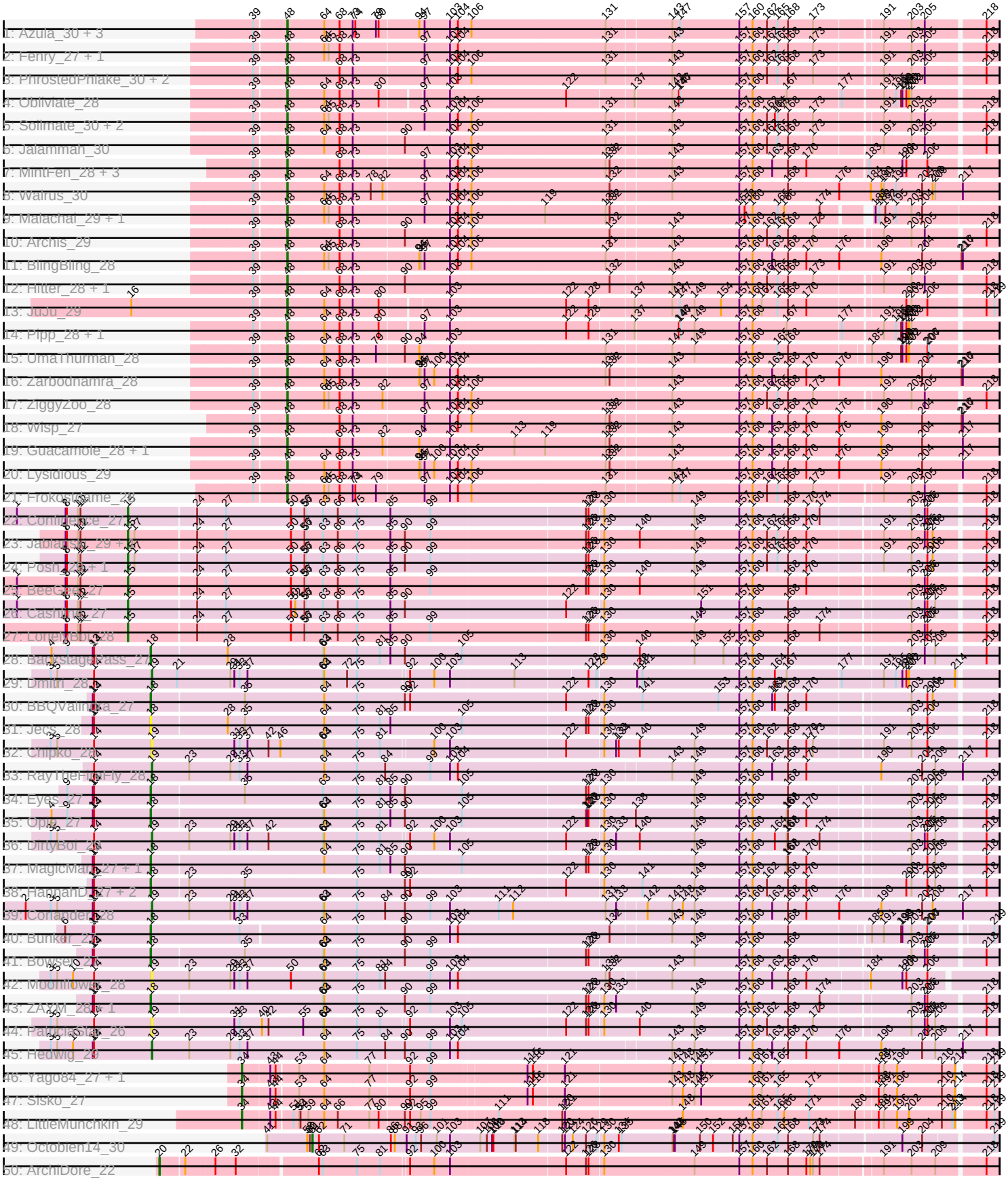
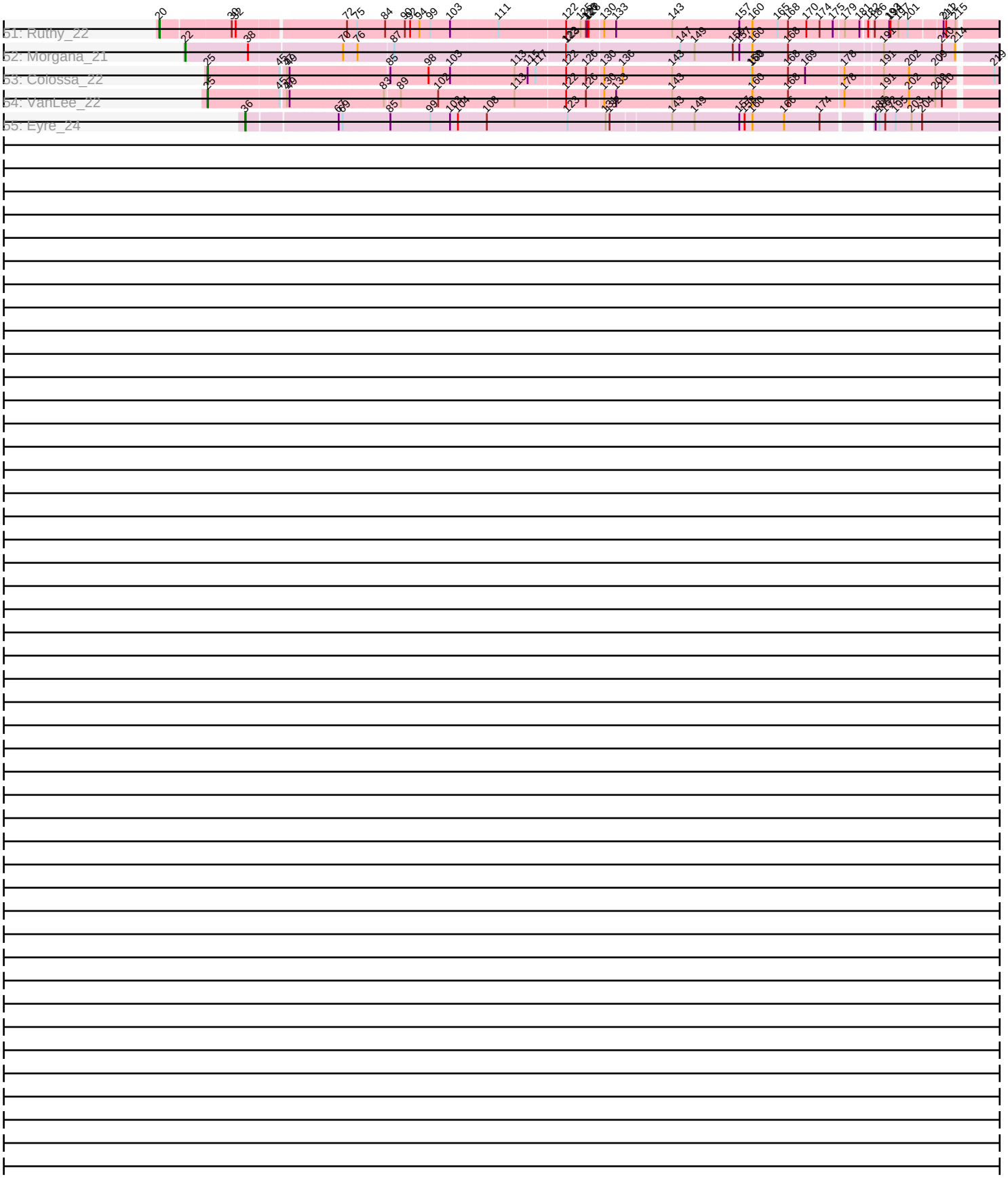
Pham 340983



Pham 340983



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 340983 Report

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

Pham number 340983 has 77 members, 7 are drafts.

Phages represented in each track:
- Track 1 : Azula_30, Blueberry_30, Gambino_30, MissRona_30
- Track 2 : Fenry_27, Mellie_27
- Track 3 : PhrostedPhlake_30, Delian_29, CaptainKirk2_28
- Track 4 : Obliviate_28
- Track 5 : Soilmate_30, CarolAnn_29, Blino_29
- Track 6 : Jalammah_30
- Track 7 : MintFen_28, Zilla_28, Melba_28, Barco_28
- Track 8 : Walrus_30
- Track 9 : Malachai_29, Begonia_29
- Track 10 : Archis_29
- Track 11 : BlingBling_28
- Track 12 : Hitter_28, Samba_28
- Track 13 : JuJu_29
- Track 14 : Pipp_28, Utz_28
- Track 15 : UmaThurman_28
- Track 16 : Zarbodnamra_28
- Track 17 : ZiggyZoo_28
- Track 18 : Wisp_27
- Track 19 : Guacamole_28, JasperJr_28
- Track 20 : Lysidious_29
- Track 21 : Frokostdame_28
- Track 22 : Confidence_27
- Track 23 : Jablanski_29, Pytheas_29
- Track 24 : Posh_29, Wrigley_29
- Track 25 : BeeGee_27
- Track 26 : Cashline_27
- Track 27 : LonelyBoi_28
- Track 28 : BackstagePass_27
- Track 29 : Dmitri_28
- Track 30 : BBQValindra_27
- Track 31 : Jecs_28
- Track 32 : Chipko_28
- Track 33 : RayTheFireFly_28
- Track 34 : Eyes_27
- Track 35 : Opie_27
- Track 36 : DirtyBoi_29
- Track 37 : MagicMan_27, Schnabeltier_27

• Track 38 : HannahD_27, GEazy_27, NaLuna_27
• Track 39 : Coriander_28
• Track 40 : Bunker_27
• Track 41 : Bowser_27
• Track 42 : Moonflower_28
• Track 43 : ZAYM_28, TaronosaurasRx_27
• Track 44 : PatriciaStar_26
• Track 45 : Hedwig_29
• Track 46 : Yago84_27, AnClar_28
• Track 47 : Sisko_27
• Track 48 : LittleMunchkin_29
• Track 49 : Octobien14_30
• Track 50 : ArchiDore_22
• Track 51 : Ruthy_22
• Track 52 : Morgana_21
• Track 53 : Colossa_22
• Track 54 : VanLee_22
• Track 55 : Eyre_24

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

The start number called the most often in the published annotations is 48, it was called in 35 of the 70 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Archis_29, Azula_30, Barco_28, Begonia_29, BlingBling_28, Blino_29, Blueberry_30, CaptainKirk2_28, CarolAnn_29, Delian_29, Fenry_27, Frokostdame_28, Gambino_30, Guacamole_28, Hitter_28, Jalammah_30, JasperJr_28, JuJu_29, Lysidious_29, Malachai_29, Melba_28, Mellie_27, MintFen_28, MissRona_30, Obliviate_28, PhrostedPhlake_30, Pipp_28, Samba_28, Soilmate_30, UmaThurman_28, Utz_28, Walrus_30, Wisp_27, Zarbodnamra_28, ZiggyZoo_28, Zilla_28,

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

Genes that do not have the "Most Annotated" start:
• AnClar_28, ArchiDore_22, BBQValindra_27, BackstagePass_27, BeeGee_27, Bowser_27, Bunker_27, Cashline_27, Chipko_28, Colossa_22, Confidence_27, Coriander_28, DirtyBoi_29, Dmitri_28, Eyes_27, Eyre_24, GEazy_27, HannahD_27, Hedwig_29, Jablanski_29, Jecs_28, LittleMunchkin_29, LonelyBoi_28, MagicMan_27, Moonflower_28, Morgana_21, NaLuna_27, Octobien14_30, Opie_27, PatriciaStar_26, Posh_29, Pytheas_29, RayTheFireFly_28, Ruthy_22, Schnabeltier_27, Sisko_27, TaronosaurasRx_27, VanLee_22, Wrigley_29, Yago84_27, ZAYM_28,

Summary by start number:

Start 15:
• Found in 8 of 77 (10.4%) of genes in pham

• Manual Annotations of this start: 8 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BeeGee_27 (CY5), Cashline_27 (CY6), Confidence_27 (CY1), Jablanski_29 (CY3), LonelyBoi_28 (CY7), Posh_29 (CY4), Pytheas_29 (CY3), Wrigley_29 (CY4),

Start 18:
• Found in 14 of 77 (18.2%) of genes in pham
• Manual Annotations of this start: 11 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BBQValindra_27 (DB), BackstagePass_27 (DB), Bowser_27 (DB), Bunker_27 (DB), Eyes_27 (DB), GEazy_27 (DB), HannahD_27 (DB), Jecs_28 (DB), MagicMan_27 (DB), NaLuna_27 (DB), Opie_27 (DB), Schnabeltier_27 (DB), TaronosaurasRx_27 (DB), ZAYM_28 (DB),

Start 19:
• Found in 8 of 77 (10.4%) of genes in pham
• Manual Annotations of this start: 5 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Chipko_28 (DB), Coriander_28 (DB), DirtyBoi_29 (DB), Dmitri_28 (DB), Hedwig_29 (DB), Moonflower_28 (DB), PatriciaStar_26 (DB), RayTheFireFly_28 (DB),

Start 20:
• Found in 2 of 77 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ArchiDore_22 (DW), Ruthy_22 (DW),

Start 22:
• Found in 2 of 77 (2.6%) of genes in pham
• Manual Annotations of this start: 1 of 70
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Morgana_21 (DZ),

Start 25:
• Found in 2 of 77 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Colossa_22 (KA), VanLee_22 (KA),

Start 34:
• Found in 4 of 77 (5.2%) of genes in pham
• Manual Annotations of this start: 4 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AnClar_28 (DR), LittleMunchkin_29 (DR), Sisko_27 (DR), Yago84_27 (DR),

Start 36:
• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 70
• Called 100.0% of time when present

• Phage (with cluster) where this start called: Eyre_24 (singleton),

Start 48:
• Found in 36 of 77 (46.8%) of genes in pham
• Manual Annotations of this start: 35 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Archis_29 (CV), Azula_30 (CV), Barco_28 (CV), Begonia_29 (CV), BlingBling_28 (CV), Blino_29 (CV), Blueberry_30 (CV), CaptainKirk2_28 (CV), CarolAnn_29 (CV), Delian_29 (CV), Fenry_27 (CV), Frokostdame_28 (CV), Gambino_30 (CV), Guacamole_28 (CV), Hitter_28 (CV), Jalammah_30 (CV), JasperJr_28 (CV), JuJu_29 (CV), Lysidious_29 (CV), Malachai_29 (CV), Melba_28 (CV), Mellie_27 (CV), MintFen_28 (CV), MissRona_30 (CV), Obliviate_28 (CV), PhrostedPhlake_30 (CV), Pipp_28 (CV), Samba_28 (CV), Soilmate_30 (CV), UmaThurman_28 (CV), Utz_28 (CV), Walrus_30 (CV), Wisp_27 (CV), Zarbodnamra_28 (CV), ZiggyZoo_28 (CV), Zilla_28 (CV),

Start 61:
• Found in 1 of 77 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 70
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Octobien14_30 (DU1),

Summary by clusters:

There are 14 clusters represented in this pham: CY3, CY1, CY7, CY6, CY5, CY4, DB, KA, DZ, DW, DU1, singleton, DR, CV,

Info for manual annotations of cluster CV:
•Start number 48 was manually annotated 35 times for cluster CV.

Info for manual annotations of cluster CY1:
•Start number 15 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CY3:
•Start number 15 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:
•Start number 15 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:
•Start number 15 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:
•Start number 15 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CY7:
•Start number 15 was manually annotated 1 time for cluster CY7.

Info for manual annotations of cluster DB:
•Start number 18 was manually annotated 11 times for cluster DB.
•Start number 19 was manually annotated 5 times for cluster DB.

Info for manual annotations of cluster DR:

•Start number 34 was manually annotated 4 times for cluster DR.

Info for manual annotations of cluster DU1:
•Start number 61 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster DW:
•Start number 20 was manually annotated 2 times for cluster DW.

Info for manual annotations of cluster DZ:
•Start number 22 was manually annotated 1 time for cluster DZ.

Info for manual annotations of cluster KA:
•Start number 25 was manually annotated 2 times for cluster KA.

Gene Information:

Gene: AnClar_28 Start: 28557, Stop: 30143, Start Num: 34
Candidate Starts for AnClar_28:
(Start: 34 @28557 has 4 MA's), (43, 28614), (44, 28626), (53, 28671), (64, 28725), (77, 28812), (92, 28899), (99, 28941), (115, 29148), (116, 29160), (121, 29226), (143, 29454), (148, 29478), (149, 29505), (151, 29520), (160, 29637), (161, 29658), (165, 29694), (188, 29901), (191, 29913), (196, 29940), (210, 30039), (214, 30069), (218, 30117), (219, 30135),

Gene: ArchiDore_22 Start: 19498, Stop: 21270, Start Num: 20
Candidate Starts for ArchiDore_22:
(Start: 20 @19498 has 2 MA's), (Start: 22 @19549 has 1 MA's), (26, 19609), (32, 19654), (62, 19819), (63, 19828), (75, 19903), (81, 19954), (92, 20011), (100, 20062), (103, 20098), (122, 20347), (126, 20392), (128, 20398), (130, 20428), (149, 20629), (157, 20728), (160, 20758), (162, 20791), (168, 20839), (170, 20881), (172, 20887), (173, 20893), (174, 20908), (191, 21031), (203, 21091), (209, 21145), (218, 21241),

Gene: Archis_29 Start: 23597, Stop: 25114, Start Num: 48
Candidate Starts for Archis_29:
(39, 23537), (Start: 48 @23597 has 35 MA's), (68, 23711), (73, 23738), (90, 23849), (103, 23948), (104, 23966), (106, 23993), (132, 24299), (143, 24425), (157, 24575), (160, 24605), (162, 24638), (165, 24662), (168, 24686), (173, 24740), (191, 24878), (203, 24938), (205, 24968), (218, 25088),

Gene: Azula_30 Start: 23695, Stop: 25212, Start Num: 48
Candidate Starts for Azula_30:
(39, 23635), (Start: 48 @23695 has 35 MA's), (64, 23776), (68, 23809), (73, 23836), (74, 23842), (79, 23887), (80, 23893), (94, 23977), (97, 23989), (103, 24046), (104, 24064), (106, 24091), (131, 24388), (143, 24523), (147, 24541), (157, 24673), (160, 24703), (162, 24736), (165, 24760), (168, 24784), (173, 24838), (191, 24976), (203, 25036), (205, 25066), (218, 25186),

Gene: BBQValindra_27 Start: 22145, Stop: 23977, Start Num: 18
Candidate Starts for BBQValindra_27:
(13, 22013), (14, 22016), (Start: 18 @22145 has 11 MA's), (35, 22346), (64, 22526), (75, 22598), (90, 22706), (92, 22718), (122, 23054), (130, 23135), (141, 23222), (153, 23390), (157, 23435), (160, 23465), (163, 23510), (164, 23516), (168, 23546), (170, 23588), (203, 23798), (206, 23834), (208, 23846),

Gene: BackstagePass_27 Start: 22271, Stop: 24103, Start Num: 18
Candidate Starts for BackstagePass_27:
(4, 22046), (9, 22082), (13, 22139), (14, 22142), (Start: 18 @22271 has 11 MA's), (28, 22433), (63, 22649), (64, 22652), (75, 22724), (81, 22775), (85, 22799), (90, 22832), (105, 22958), (130, 23261), (140, 23342), (149, 23462), (155, 23525), (157, 23561), (160, 23591), (168, 23672), (203, 23924), (205, 23954), (209, 23978), (218, 24074),

Gene: Barco_28 Start: 23386, Stop: 24900, Start Num: 48
Candidate Starts for Barco_28:
(39, 23326), (Start: 48 @23386 has 35 MA's), (68, 23500), (73, 23527), (97, 23680), (103, 23737), (104, 23755), (106, 23782), (131, 24079), (132, 24088), (143, 24214), (157, 24364), (160, 24394), (163, 24439), (168, 24475), (170, 24517), (183, 24643), (199, 24712), (200, 24721), (206, 24769),

Gene: BeeGee_27 Start: 22408, Stop: 24279, Start Num: 15
Candidate Starts for BeeGee_27:
(1, 22162), (7, 22270), (8, 22273), (11, 22297), (12, 22303), (Start: 15 @22408 has 8 MA's), (24, 22549), (27, 22609), (50, 22753), (56, 22783), (57, 22786), (63, 22825), (66, 22858), (75, 22900), (85, 22975), (99, 23062), (126, 23401), (128, 23407), (130, 23437), (140, 23518), (149, 23638), (157, 23737), (160, 23767), (168, 23848), (170, 23890), (203, 24100), (205, 24130), (206, 24136), (218, 24250),

Gene: Begonia_29 Start: 23867, Stop: 25366, Start Num: 48
Candidate Starts for Begonia_29:
(39, 23807), (Start: 48 @23867 has 35 MA's), (64, 23948), (65, 23957), (68, 23981), (73, 24008), (97, 24161), (103, 24218), (104, 24236), (106, 24263), (119, 24425), (131, 24560), (132, 24569), (157, 24845), (158, 24857), (160, 24875), (165, 24932), (166, 24947), (174, 25028), (187, 25109), (189, 25118), (192, 25127), (195, 25148), (203, 25178), (204, 25202),

Gene: BlingBling_28 Start: 23386, Stop: 24945, Start Num: 48
Candidate Starts for BlingBling_28:
(39, 23326), (Start: 48 @23386 has 35 MA's), (64, 23467), (65, 23476), (68, 23500), (73, 23527), (94, 23668), (95, 23671), (97, 23680), (103, 23737), (104, 23755), (106, 23782), (131, 24079), (143, 24214), (157, 24364), (160, 24394), (163, 24439), (168, 24475), (170, 24517), (176, 24592), (190, 24685), (204, 24775), (216, 24865), (217, 24868),

Gene: Blino_29 Start: 23477, Stop: 24994, Start Num: 48
Candidate Starts for Blino_29:
(39, 23417), (Start: 48 @23477 has 35 MA's), (64, 23558), (65, 23567), (68, 23591), (73, 23618), (97, 23771), (103, 23828), (104, 23846), (106, 23873), (131, 24170), (143, 24305), (157, 24455), (160, 24485), (162, 24518), (164, 24536), (165, 24542), (168, 24566), (173, 24620), (191, 24758), (203, 24818), (205, 24848), (218, 24968),

Gene: Blueberry_30 Start: 23695, Stop: 25212, Start Num: 48
Candidate Starts for Blueberry_30:
(39, 23635), (Start: 48 @23695 has 35 MA's), (64, 23776), (68, 23809), (73, 23836), (74, 23842), (79, 23887), (80, 23893), (94, 23977), (97, 23989), (103, 24046), (104, 24064), (106, 24091), (131, 24388), (143, 24523), (147, 24541), (157, 24673), (160, 24703), (162, 24736), (165, 24760), (168, 24784), (173, 24838), (191, 24976), (203, 25036), (205, 25066), (218, 25186),

Gene: Bowser_27 Start: 22050, Stop: 23882, Start Num: 18
Candidate Starts for Bowser_27:
(13, 21918), (14, 21921), (Start: 18 @22050 has 11 MA's), (35, 22251), (63, 22428), (64, 22431), (75, 22503), (90, 22611), (99, 22665), (126, 23004), (128, 23010), (149, 23241), (157, 23340), (160,

23370), (168, 23451), (203, 23703), (205, 23733), (206, 23739), (218, 23853),

Gene: Bunker_27 Start: 22258, Stop: 24084, Start Num: 18
Candidate Starts for Bunker_27:
(6, 22063), (13, 22126), (14, 22129), (Start: 18 @22258 has 11 MA's), (33, 22459), (64, 22639), (75, 22711), (90, 22819), (103, 22918), (104, 22936), (132, 23272), (143, 23398), (149, 23449), (157, 23548), (160, 23578), (168, 23659), (185, 23827), (191, 23854), (198, 23890), (199, 23893), (203, 23914), (206, 23950), (207, 23953), (219, 24076),

Gene: CaptainKirk2_28 Start: 23407, Stop: 24924, Start Num: 48
Candidate Starts for CaptainKirk2_28:
(39, 23347), (Start: 48 @23407 has 35 MA's), (68, 23521), (73, 23548), (97, 23701), (103, 23758), (104, 23776), (106, 23803), (131, 24100), (143, 24235), (157, 24385), (160, 24415), (162, 24448), (165, 24472), (168, 24496), (173, 24550), (191, 24688), (203, 24748), (205, 24778), (218, 24898),

Gene: CarolAnn_29 Start: 23476, Stop: 24993, Start Num: 48
Candidate Starts for CarolAnn_29:
(39, 23416), (Start: 48 @23476 has 35 MA's), (64, 23557), (65, 23566), (68, 23590), (73, 23617), (97, 23770), (103, 23827), (104, 23845), (106, 23872), (131, 24169), (143, 24304), (157, 24454), (160, 24484), (162, 24517), (164, 24535), (165, 24541), (168, 24565), (173, 24619), (191, 24757), (203, 24817), (205, 24847), (218, 24967),

Gene: Cashline_27 Start: 22275, Stop: 24146, Start Num: 15
Candidate Starts for Cashline_27:
(1, 22029), (7, 22137), (8, 22140), (11, 22164), (12, 22170), (Start: 15 @22275 has 8 MA's), (24, 22416), (27, 22476), (50, 22620), (52, 22629), (56, 22650), (57, 22653), (63, 22692), (66, 22725), (75, 22767), (85, 22842), (90, 22875), (122, 23223), (130, 23304), (151, 23520), (157, 23604), (160, 23634), (168, 23715), (203, 23967), (205, 23997), (206, 24003), (209, 24021), (218, 24117),

Gene: Chipko_28 Start: 23248, Stop: 25077, Start Num: 19
Candidate Starts for Chipko_28:
(3, 23017), (5, 23032), (14, 23116), (Start: 19 @23248 has 5 MA's), (31, 23434), (33, 23446), (37, 23464), (42, 23512), (46, 23539), (63, 23635), (64, 23638), (75, 23710), (81, 23761), (100, 23869), (103, 23905), (122, 24154), (130, 24235), (133, 24262), (134, 24268), (140, 24316), (149, 24436), (157, 24535), (160, 24565), (162, 24598), (168, 24646), (170, 24688), (173, 24700), (191, 24838), (203, 24898), (206, 24934), (218, 25048),

Gene: Colossa_22 Start: 18676, Stop: 20364, Start Num: 25
Candidate Starts for Colossa_22:
(Start: 25 @18676 has 2 MA's), (45, 18829), (47, 18838), (49, 18844), (85, 19054), (98, 19138), (103, 19186), (113, 19327), (115, 19357), (117, 19375), (122, 19438), (126, 19480), (130, 19516), (136, 19558), (143, 19669), (159, 19849), (160, 19852), (168, 19933), (169, 19972), (178, 20056), (191, 20131), (202, 20185), (209, 20245), (219, 20356),

Gene: Confidence_27 Start: 22438, Stop: 24309, Start Num: 15
Candidate Starts for Confidence_27:
(1, 22192), (7, 22300), (8, 22303), (11, 22327), (12, 22333), (Start: 15 @22438 has 8 MA's), (24, 22579), (27, 22639), (50, 22783), (56, 22813), (57, 22816), (63, 22855), (66, 22888), (75, 22930), (85, 23005), (99, 23092), (126, 23431), (128, 23437), (130, 23467), (149, 23668), (157, 23767), (160, 23797), (168, 23878), (170, 23920), (174, 23947), (203, 24130), (205, 24160), (206, 24166), (218, 24280),

Gene: Coriander_28 Start: 23232, Stop: 25115, Start Num: 19

Candidate Starts for Coriander_28:
(2, 22944), (3, 23001), (5, 23016), (13, 23097), (14, 23100), (Start: 19 @23232 has 5 MA's), (23, 23316), (29, 23409), (31, 23418), (33, 23430), (37, 23448), (63, 23619), (64, 23622), (75, 23694), (84, 23757), (90, 23802), (99, 23856), (103, 23901), (111, 24006), (112, 24036), (131, 24246), (133, 24270), (142, 24330), (143, 24381), (148, 24405), (149, 24432), (157, 24531), (160, 24561), (163, 24606), (168, 24642), (170, 24684), (176, 24759), (190, 24855), (204, 24945), (208, 24969), (217, 25038),

Gene: Delian_29 Start: 23405, Stop: 24922, Start Num: 48
Candidate Starts for Delian_29:
(39, 23345), (Start: 48 @23405 has 35 MA's), (68, 23519), (73, 23546), (97, 23699), (103, 23756), (104, 23774), (106, 23801), (131, 24098), (143, 24233), (157, 24383), (160, 24413), (162, 24446), (165, 24470), (168, 24494), (173, 24548), (191, 24686), (203, 24746), (205, 24776), (218, 24896),

Gene: DirtyBoi_29 Start: 23139, Stop: 24968, Start Num: 19
Candidate Starts for DirtyBoi_29:
(3, 22908), (5, 22923), (14, 23007), (Start: 19 @23139 has 5 MA's), (23, 23223), (29, 23316), (31, 23325), (33, 23337), (37, 23355), (42, 23403), (63, 23526), (64, 23529), (75, 23601), (81, 23652), (92, 23709), (100, 23760), (103, 23796), (122, 24045), (130, 24126), (133, 24153), (140, 24207), (149, 24327), (157, 24426), (160, 24456), (164, 24507), (167, 24534), (168, 24537), (174, 24606), (203, 24789), (205, 24819), (206, 24825), (209, 24843), (218, 24939),

Gene: Dmitri_28 Start: 23288, Stop: 25117, Start Num: 19
Candidate Starts for Dmitri_28:
(3, 23057), (5, 23072), (14, 23156), (Start: 19 @23288 has 5 MA's), (21, 23345), (29, 23465), (31, 23474), (33, 23486), (37, 23504), (63, 23675), (64, 23678), (72, 23729), (75, 23750), (92, 23858), (100, 23909), (103, 23945), (113, 24086), (128, 24242), (129, 24260), (139, 24347), (141, 24359), (157, 24575), (160, 24605), (164, 24656), (167, 24683), (177, 24800), (191, 24884), (195, 24908), (199, 24923), (200, 24932), (202, 24938), (214, 25040),

Gene: Eyes_27 Start: 22143, Stop: 23975, Start Num: 18
Candidate Starts for Eyes_27:
(9, 21954), (13, 22011), (14, 22014), (Start: 18 @22143 has 11 MA's), (35, 22344), (63, 22521), (75, 22596), (81, 22647), (85, 22671), (90, 22704), (105, 22830), (126, 23097), (128, 23103), (130, 23133), (149, 23334), (157, 23433), (160, 23463), (168, 23544), (203, 23796), (206, 23832), (209, 23850), (218, 23946),

Gene: Eyre_24 Start: 20262, Stop: 21836, Start Num: 36
Candidate Starts for Eyre_24:
(Start: 36 @20262 has 1 MA's), (67, 20442), (69, 20451), (85, 20553), (99, 20640), (103, 20685), (104, 20703), (108, 20763), (123, 20943), (131, 21030), (132, 21039), (143, 21165), (149, 21216), (157, 21315), (158, 21327), (160, 21345), (166, 21417), (174, 21498), (187, 21579), (189, 21588), (192, 21597), (195, 21618), (203, 21648), (204, 21672),

Gene: Fenry_27 Start: 23105, Stop: 24622, Start Num: 48
Candidate Starts for Fenry_27:
(39, 23045), (Start: 48 @23105 has 35 MA's), (64, 23186), (65, 23195), (68, 23219), (73, 23246), (97, 23399), (103, 23456), (104, 23474), (131, 23798), (143, 23933), (157, 24083), (160, 24113), (162, 24146), (165, 24170), (168, 24194), (173, 24248), (191, 24386), (203, 24446), (205, 24476), (218, 24596),

Gene: Frokostdame_28 Start: 23349, Stop: 24866, Start Num: 48
Candidate Starts for Frokostdame_28:

(39, 23289), (Start: 48 @23349 has 35 MA's), (64, 23430), (65, 23439), (68, 23463), (73, 23490), (74, 23496), (79, 23541), (97, 23643), (103, 23700), (104, 23718), (106, 23745), (131, 24042), (143, 24177), (147, 24195), (157, 24327), (160, 24357), (162, 24390), (165, 24414), (168, 24438), (173, 24492), (191, 24630), (203, 24690), (205, 24720), (218, 24840),

Gene: GEazy_27 Start: 22164, Stop: 23993, Start Num: 18
Candidate Starts for GEazy_27:
(13, 22032), (14, 22035), (Start: 18 @22164 has 11 MA's), (23, 22242), (35, 22365), (75, 22617), (90, 22725), (92, 22737), (122, 23073), (130, 23154), (141, 23241), (149, 23355), (157, 23451), (160, 23481), (162, 23514), (168, 23562), (170, 23604), (200, 23802), (203, 23814), (206, 23850), (209, 23868), (218, 23964),

Gene: Gambino_30 Start: 23695, Stop: 25212, Start Num: 48
Candidate Starts for Gambino_30:
(39, 23635), (Start: 48 @23695 has 35 MA's), (64, 23776), (68, 23809), (73, 23836), (74, 23842), (79, 23887), (80, 23893), (94, 23977), (97, 23989), (103, 24046), (104, 24064), (106, 24091), (131, 24388), (143, 24523), (147, 24541), (157, 24673), (160, 24703), (162, 24736), (165, 24760), (168, 24784), (173, 24838), (191, 24976), (203, 25036), (205, 25066), (218, 25186),

Gene: Guacamole_28 Start: 23390, Stop: 24949, Start Num: 48
Candidate Starts for Guacamole_28:
(39, 23330), (Start: 48 @23390 has 35 MA's), (68, 23504), (73, 23531), (82, 23597), (94, 23672), (103, 23741), (113, 23879), (119, 23948), (131, 24083), (132, 24092), (143, 24218), (157, 24368), (160, 24398), (163, 24443), (168, 24479), (170, 24521), (176, 24596), (190, 24689), (204, 24779), (217, 24872),

Gene: HannahD_27 Start: 22164, Stop: 23993, Start Num: 18
Candidate Starts for HannahD_27:
(13, 22032), (14, 22035), (Start: 18 @22164 has 11 MA's), (23, 22242), (35, 22365), (75, 22617), (90, 22725), (92, 22737), (122, 23073), (130, 23154), (141, 23241), (149, 23355), (157, 23451), (160, 23481), (162, 23514), (168, 23562), (170, 23604), (200, 23802), (203, 23814), (206, 23850), (209, 23868), (218, 23964),

Gene: Hedwig_29 Start: 23135, Stop: 25012, Start Num: 19
Candidate Starts for Hedwig_29:
(3, 22904), (5, 22919), (10, 22955), (13, 23000), (14, 23003), (Start: 19 @23135 has 5 MA's), (23, 23219), (29, 23312), (33, 23333), (37, 23351), (64, 23525), (75, 23597), (84, 23660), (90, 23705), (99, 23759), (103, 23804), (104, 23822), (143, 24281), (149, 24332), (157, 24431), (160, 24461), (163, 24506), (168, 24542), (170, 24584), (176, 24659), (190, 24752), (204, 24842), (209, 24872), (217, 24935),

Gene: Hitter_28 Start: 23386, Stop: 24903, Start Num: 48
Candidate Starts for Hitter_28:
(39, 23326), (Start: 48 @23386 has 35 MA's), (68, 23500), (73, 23527), (90, 23638), (103, 23737), (132, 24088), (143, 24214), (157, 24364), (160, 24394), (162, 24427), (165, 24451), (168, 24475), (173, 24529), (191, 24667), (203, 24727), (205, 24757), (218, 24877),

Gene: Jablanski_29 Start: 23520, Stop: 25391, Start Num: 15
Candidate Starts for Jablanski_29:
(7, 23382), (8, 23385), (11, 23409), (12, 23415), (Start: 15 @23520 has 8 MA's), (17, 23535), (24, 23661), (27, 23721), (50, 23865), (56, 23895), (57, 23898), (63, 23937), (66, 23970), (75, 24012), (85, 24087), (90, 24120), (99, 24174), (126, 24513), (128, 24519), (130, 24549), (140, 24630), (149, 24750), (157, 24849), (160, 24879), (162, 24912), (165, 24936), (168, 24960), (170, 25002), (191,

25152), (203, 25212), (205, 25242), (206, 25248), (208, 25260), (218, 25362),

Gene: Jalammah_30 Start: 24180, Stop: 25697, Start Num: 48
Candidate Starts for Jalammah_30:
(39, 24120), (Start: 48 @24180 has 35 MA's), (64, 24261), (68, 24294), (73, 24321), (90, 24432), (103, 24531), (106, 24576), (131, 24873), (143, 25008), (157, 25158), (160, 25188), (162, 25221), (165, 25245), (168, 25269), (173, 25323), (191, 25461), (203, 25521), (205, 25551), (218, 25671),

Gene: JasperJr_28 Start: 23390, Stop: 24949, Start Num: 48
Candidate Starts for JasperJr_28:
(39, 23330), (Start: 48 @23390 has 35 MA's), (68, 23504), (73, 23531), (82, 23597), (94, 23672), (103, 23741), (113, 23879), (119, 23948), (131, 24083), (132, 24092), (143, 24218), (157, 24368), (160, 24398), (163, 24443), (168, 24479), (170, 24521), (176, 24596), (190, 24689), (204, 24779), (217, 24872),

Gene: Jecs_28 Start: 22456, Stop: 24288, Start Num: 18
Candidate Starts for Jecs_28:
(13, 22324), (14, 22327), (Start: 18 @22456 has 11 MA's), (28, 22618), (35, 22657), (64, 22837), (75, 22909), (81, 22960), (85, 22984), (105, 23143), (126, 23410), (128, 23416), (130, 23446), (157, 23746), (160, 23776), (168, 23857), (203, 24109), (206, 24145), (218, 24259),

Gene: JuJu_29 Start: 23449, Stop: 24948, Start Num: 48
Candidate Starts for JuJu_29:
(16, 23119), (39, 23389), (Start: 48 @23449 has 35 MA's), (64, 23530), (68, 23563), (73, 23590), (80, 23647), (103, 23782), (122, 24037), (128, 24088), (137, 24181), (143, 24256), (147, 24274), (149, 24307), (154, 24367), (157, 24406), (160, 24436), (161, 24457), (165, 24493), (168, 24517), (170, 24559), (200, 24757), (203, 24769), (206, 24805), (218, 24919), (219, 24937),

Gene: LittleMunchkin_29 Start: 29134, Stop: 30714, Start Num: 34
Candidate Starts for LittleMunchkin_29:
(Start: 34 @29134 has 4 MA's), (43, 29191), (44, 29203), (51, 29236), (53, 29248), (54, 29251), (59, 29269), (64, 29302), (66, 29326), (77, 29386), (80, 29407), (90, 29461), (92, 29473), (95, 29494), (99, 29515), (111, 29656), (120, 29794), (121, 29800), (148, 30052), (160, 30211), (161, 30232), (165, 30268), (166, 30283), (171, 30340), (180, 30436), (188, 30475), (191, 30487), (196, 30514), (202, 30541), (210, 30613), (213, 30634), (214, 30640), (218, 30688), (219, 30706),

Gene: LonelyBoi_28 Start: 23140, Stop: 25011, Start Num: 15
Candidate Starts for LonelyBoi_28:
(7, 23002), (8, 23005), (11, 23029), (12, 23035), (Start: 15 @23140 has 8 MA's), (24, 23281), (27, 23341), (50, 23485), (56, 23515), (57, 23518), (63, 23557), (66, 23590), (75, 23632), (85, 23707), (99, 23794), (126, 24133), (128, 24139), (130, 24169), (149, 24370), (157, 24469), (160, 24499), (168, 24580), (174, 24649), (203, 24832), (205, 24862), (206, 24868), (218, 24982),

Gene: Lysidious_29 Start: 23907, Stop: 25466, Start Num: 48
Candidate Starts for Lysidious_29:
(39, 23847), (Start: 48 @23907 has 35 MA's), (64, 23988), (68, 24021), (73, 24048), (94, 24189), (95, 24192), (97, 24201), (100, 24222), (103, 24258), (104, 24276), (106, 24303), (131, 24600), (132, 24609), (143, 24735), (157, 24885), (160, 24915), (163, 24960), (168, 24996), (170, 25038), (176, 25113), (190, 25206), (204, 25296), (217, 25389),

Gene: MagicMan_27 Start: 22464, Stop: 24296, Start Num: 18
Candidate Starts for MagicMan_27:

(13, 22332), (14, 22335), (Start: 18 @22464 has 11 MA's), (64, 22845), (75, 22917), (81, 22968), (85, 22992), (90, 23025), (105, 23151), (126, 23418), (128, 23424), (130, 23454), (149, 23655), (157, 23754), (160, 23784), (167, 23862), (168, 23865), (170, 23907), (203, 24117), (206, 24153), (209, 24171), (218, 24267),

Gene: Malachai_29 Start: 23867, Stop: 25366, Start Num: 48
Candidate Starts for Malachai_29:
(39, 23807), (Start: 48 @23867 has 35 MA's), (64, 23948), (65, 23957), (68, 23981), (73, 24008), (97, 24161), (103, 24218), (104, 24236), (106, 24263), (119, 24425), (131, 24560), (132, 24569), (157, 24845), (158, 24857), (160, 24875), (165, 24932), (166, 24947), (174, 25028), (187, 25109), (189, 25118), (192, 25127), (195, 25148), (203, 25178), (204, 25202),

Gene: Melba_28 Start: 23386, Stop: 24900, Start Num: 48
Candidate Starts for Melba_28:
(39, 23326), (Start: 48 @23386 has 35 MA's), (68, 23500), (73, 23527), (97, 23680), (103, 23737), (104, 23755), (106, 23782), (131, 24079), (132, 24088), (143, 24214), (157, 24364), (160, 24394), (163, 24439), (168, 24475), (170, 24517), (183, 24643), (199, 24712), (200, 24721), (206, 24769),

Gene: Mellie_27 Start: 23147, Stop: 24664, Start Num: 48
Candidate Starts for Mellie_27:
(39, 23087), (Start: 48 @23147 has 35 MA's), (64, 23228), (65, 23237), (68, 23261), (73, 23288), (97, 23441), (103, 23498), (104, 23516), (131, 23840), (143, 23975), (157, 24125), (160, 24155), (162, 24188), (165, 24212), (168, 24236), (173, 24290), (191, 24428), (203, 24488), (205, 24518), (218, 24638),

Gene: MintFen_28 Start: 23386, Stop: 24900, Start Num: 48
Candidate Starts for MintFen_28:
(39, 23326), (Start: 48 @23386 has 35 MA's), (68, 23500), (73, 23527), (97, 23680), (103, 23737), (104, 23755), (106, 23782), (131, 24079), (132, 24088), (143, 24214), (157, 24364), (160, 24394), (163, 24439), (168, 24475), (170, 24517), (183, 24643), (199, 24712), (200, 24721), (206, 24769),

Gene: MissRona_30 Start: 23695, Stop: 25212, Start Num: 48
Candidate Starts for MissRona_30:
(39, 23635), (Start: 48 @23695 has 35 MA's), (64, 23776), (68, 23809), (73, 23836), (74, 23842), (79, 23887), (80, 23893), (94, 23977), (97, 23989), (103, 24046), (104, 24064), (106, 24091), (131, 24388), (143, 24523), (147, 24541), (157, 24673), (160, 24703), (162, 24736), (165, 24760), (168, 24784), (173, 24838), (191, 24976), (203, 25036), (205, 25066), (218, 25186),

Gene: Moonflower_28 Start: 23236, Stop: 25068, Start Num: 19
Candidate Starts for Moonflower_28:
(3, 23005), (5, 23020), (10, 23056), (14, 23104), (Start: 19 @23236 has 5 MA's), (23, 23320), (29, 23413), (31, 23422), (33, 23434), (37, 23452), (50, 23551), (63, 23623), (64, 23626), (75, 23698), (81, 23749), (84, 23761), (99, 23860), (103, 23905), (104, 23923), (131, 24247), (132, 24256), (143, 24382), (157, 24532), (160, 24562), (163, 24607), (168, 24643), (170, 24685), (184, 24811), (199, 24880), (200, 24889), (206, 24937),

Gene: Morgana_21 Start: 19123, Stop: 20847, Start Num: 22
Candidate Starts for Morgana_21:
(Start: 22 @19123 has 1 MA's), (38, 19264), (70, 19459), (76, 19486), (87, 19558), (122, 19936), (123, 19939), (147, 20176), (149, 20209), (156, 20296), (157, 20311), (160, 20341), (168, 20422), (191, 20617), (210, 20743), (214, 20773),

Gene: NaLuna_27 Start: 22164, Stop: 23993, Start Num: 18

Candidate Starts for NaLuna_27:
(13, 22032), (14, 22035), (Start: 18 @22164 has 11 MA's), (23, 22242), (35, 22365), (75, 22617), (90, 22725), (92, 22737), (122, 23073), (130, 23154), (141, 23241), (149, 23355), (157, 23451), (160, 23481), (162, 23514), (168, 23562), (170, 23604), (200, 23802), (203, 23814), (206, 23850), (209, 23868), (218, 23964),

Gene: Obliviate_28 Start: 23302, Stop: 24801, Start Num: 48
Candidate Starts for Obliviate_28:
(39, 23242), (Start: 48 @23302 has 35 MA's), (64, 23383), (68, 23416), (73, 23443), (80, 23500), (97, 23578), (103, 23635), (122, 23890), (137, 24034), (143, 24109), (146, 24124), (147, 24127), (157, 24259), (160, 24289), (167, 24367), (177, 24484), (191, 24568), (195, 24592), (198, 24604), (199, 24607), (200, 24616), (202, 24622), (203, 24628),

Gene: Octobien14_30 Start: 24971, Stop: 26458, Start Num: 61
Candidate Starts for Octobien14_30:
(41, 24869), (58, 24959), (60, 24965), (Start: 61 @24971 has 1 MA's), (62, 24986), (71, 25043), (86, 25148), (88, 25157), (91, 25184), (93, 25205), (96, 25217), (101, 25253), (103, 25283), (107, 25352), (108, 25367), (109, 25379), (110, 25382), (113, 25430), (114, 25433), (118, 25484), (120, 25532), (121, 25538), (124, 25556), (126, 25586), (129, 25610), (130, 25622), (134, 25655), (135, 25661), (143, 25772), (144, 25775), (145, 25778), (150, 25835), (152, 25865), (156, 25907), (157, 25922), (160, 25952), (165, 26009), (168, 26033), (173, 26087), (174, 26102), (199, 26267), (204, 26312), (219, 26453),

Gene: Opie_27 Start: 22488, Stop: 24320, Start Num: 18
Candidate Starts for Opie_27:
(4, 22263), (9, 22299), (13, 22356), (14, 22359), (Start: 18 @22488 has 11 MA's), (63, 22866), (64, 22869), (75, 22941), (81, 22992), (85, 23016), (90, 23049), (105, 23175), (126, 23442), (127, 23445), (128, 23448), (130, 23478), (138, 23550), (149, 23679), (157, 23778), (160, 23808), (167, 23886), (168, 23889), (170, 23931), (203, 24141), (206, 24177), (209, 24195), (218, 24291),

Gene: PatriciaStar_26 Start: 22581, Stop: 24410, Start Num: 19
Candidate Starts for PatriciaStar_26:
(3, 22350), (5, 22365), (14, 22449), (Start: 19 @22581 has 5 MA's), (31, 22767), (33, 22779), (40, 22830), (42, 22845), (55, 22923), (63, 22968), (64, 22971), (75, 23043), (81, 23094), (92, 23151), (103, 23238), (105, 23265), (122, 23487), (126, 23532), (128, 23538), (130, 23568), (140, 23649), (149, 23769), (157, 23868), (160, 23898), (162, 23931), (168, 23979), (173, 24033), (203, 24231), (205, 24261), (206, 24267), (209, 24285), (218, 24381),

Gene: PhrostedPhlake_30 Start: 24079, Stop: 25596, Start Num: 48
Candidate Starts for PhrostedPhlake_30:
(39, 24019), (Start: 48 @24079 has 35 MA's), (68, 24193), (73, 24220), (97, 24373), (103, 24430), (104, 24448), (106, 24475), (131, 24772), (143, 24907), (157, 25057), (160, 25087), (162, 25120), (165, 25144), (168, 25168), (173, 25222), (191, 25360), (203, 25420), (205, 25450), (218, 25570),

Gene: Pipp_28 Start: 23377, Stop: 24876, Start Num: 48
Candidate Starts for Pipp_28:
(39, 23317), (Start: 48 @23377 has 35 MA's), (64, 23458), (68, 23491), (73, 23518), (80, 23575), (97, 23653), (103, 23710), (122, 23965), (128, 24016), (137, 24109), (146, 24199), (147, 24202), (149, 24235), (157, 24334), (160, 24364), (167, 24442), (177, 24559), (191, 24643), (195, 24667), (198, 24679), (199, 24682), (200, 24691), (202, 24697), (203, 24703),

Gene: Posh_29 Start: 23373, Stop: 25244, Start Num: 15
Candidate Starts for Posh_29:

(7, 23235), (8, 23238), (11, 23262), (12, 23268), (Start: 15 @23373 has 8 MA's), (17, 23388), (24, 23514), (27, 23574), (50, 23718), (56, 23748), (57, 23751), (63, 23790), (66, 23823), (75, 23865), (85, 23940), (90, 23973), (99, 24027), (126, 24366), (128, 24372), (130, 24402), (149, 24603), (157, 24702), (160, 24732), (162, 24765), (165, 24789), (168, 24813), (170, 24855), (191, 25005), (203, 25065), (206, 25101), (208, 25113), (218, 25215),

Gene: Pytheas_29 Start: 23519, Stop: 25390, Start Num: 15
Candidate Starts for Pytheas_29:
(7, 23381), (8, 23384), (11, 23408), (12, 23414), (Start: 15 @23519 has 8 MA's), (17, 23534), (24, 23660), (27, 23720), (50, 23864), (56, 23894), (57, 23897), (63, 23936), (66, 23969), (75, 24011), (85, 24086), (90, 24119), (99, 24173), (126, 24512), (128, 24518), (130, 24548), (140, 24629), (149, 24749), (157, 24848), (160, 24878), (162, 24911), (165, 24935), (168, 24959), (170, 25001), (191, 25151), (203, 25211), (205, 25241), (206, 25247), (208, 25259), (218, 25361),

Gene: RayTheFireFly_28 Start: 23264, Stop: 25141, Start Num: 19
Candidate Starts for RayTheFireFly_28:
(14, 23132), (Start: 19 @23264 has 5 MA's), (23, 23348), (29, 23441), (33, 23462), (37, 23480), (64, 23654), (75, 23726), (84, 23789), (99, 23888), (103, 23933), (104, 23951), (143, 24410), (149, 24461), (157, 24560), (160, 24590), (163, 24635), (168, 24671), (170, 24713), (190, 24881), (204, 24971), (209, 25001), (217, 25064),

Gene: Ruthy_22 Start: 19584, Stop: 21350, Start Num: 20
Candidate Starts for Ruthy_22:
(Start: 20 @19584 has 2 MA's), (30, 19731), (32, 19740), (72, 19968), (75, 19989), (84, 20052), (90, 20097), (92, 20109), (94, 20127), (99, 20151), (103, 20196), (111, 20301), (122, 20445), (125, 20478), (126, 20490), (127, 20493), (128, 20496), (130, 20526), (133, 20553), (143, 20676), (157, 20826), (160, 20856), (165, 20913), (168, 20937), (170, 20979), (174, 21009), (175, 21039), (179, 21060), (181, 21090), (182, 21099), (186, 21108), (193, 21141), (194, 21144), (197, 21162), (201, 21183), (211, 21252), (212, 21258), (215, 21276),

Gene: Samba_28 Start: 23464, Stop: 24981, Start Num: 48
Candidate Starts for Samba_28:
(39, 23404), (Start: 48 @23464 has 35 MA's), (68, 23578), (73, 23605), (90, 23716), (103, 23815), (132, 24166), (143, 24292), (157, 24442), (160, 24472), (162, 24505), (165, 24529), (168, 24553), (173, 24607), (191, 24745), (203, 24805), (205, 24835), (218, 24955),

Gene: Schnabeltier_27 Start: 22465, Stop: 24297, Start Num: 18
Candidate Starts for Schnabeltier_27:
(13, 22333), (14, 22336), (Start: 18 @22465 has 11 MA's), (64, 22846), (75, 22918), (81, 22969), (85, 22993), (90, 23026), (105, 23152), (126, 23419), (128, 23425), (130, 23455), (149, 23656), (157, 23755), (160, 23785), (167, 23863), (168, 23866), (170, 23908), (203, 24118), (206, 24154), (209, 24172), (218, 24268),

Gene: Sisko_27 Start: 26564, Stop: 28150, Start Num: 34
Candidate Starts for Sisko_27:
(Start: 34 @26564 has 4 MA's), (43, 26621), (44, 26633), (53, 26678), (64, 26732), (77, 26819), (92, 26906), (99, 26948), (115, 27155), (116, 27167), (121, 27233), (143, 27461), (148, 27485), (149, 27512), (151, 27527), (160, 27644), (161, 27665), (165, 27701), (171, 27773), (188, 27908), (191, 27920), (196, 27947), (210, 28046), (214, 28076), (218, 28124), (219, 28142),

Gene: Soilmate_30 Start: 23476, Stop: 24993, Start Num: 48
Candidate Starts for Soilmate_30:

(39, 23416), (Start: 48 @23476 has 35 MA's), (64, 23557), (65, 23566), (68, 23590), (73, 23617), (97, 23770), (103, 23827), (104, 23845), (106, 23872), (131, 24169), (143, 24304), (157, 24454), (160, 24484), (162, 24517), (164, 24535), (165, 24541), (168, 24565), (173, 24619), (191, 24757), (203, 24817), (205, 24847), (218, 24967),

Gene: TaronosaurasRx_27 Start: 22496, Stop: 24328, Start Num: 18
Candidate Starts for TaronosaurasRx_27:
(13, 22364), (14, 22367), (Start: 18 @22496 has 11 MA's), (63, 22874), (64, 22877), (75, 22949), (90, 23057), (99, 23111), (126, 23450), (128, 23456), (130, 23486), (133, 23513), (149, 23687), (157, 23786), (160, 23816), (168, 23897), (174, 23966), (203, 24149), (205, 24179), (206, 24185), (218, 24299),

Gene: UmaThurman_28 Start: 23511, Stop: 25025, Start Num: 48
Candidate Starts for UmaThurman_28:
(39, 23451), (Start: 48 @23511 has 35 MA's), (64, 23592), (68, 23625), (73, 23652), (79, 23703), (90, 23763), (94, 23793), (103, 23862), (131, 24207), (143, 24342), (149, 24393), (157, 24492), (160, 24522), (165, 24579), (168, 24603), (185, 24771), (198, 24834), (199, 24837), (200, 24846), (202, 24852), (206, 24894), (207, 24897),

Gene: Utz_28 Start: 23378, Stop: 24877, Start Num: 48
Candidate Starts for Utz_28:
(39, 23318), (Start: 48 @23378 has 35 MA's), (64, 23459), (68, 23492), (73, 23519), (80, 23576), (97, 23654), (103, 23711), (122, 23966), (128, 24017), (137, 24110), (146, 24200), (147, 24203), (149, 24236), (157, 24335), (160, 24365), (167, 24443), (177, 24560), (191, 24644), (195, 24668), (198, 24680), (199, 24683), (200, 24692), (202, 24698), (203, 24704),

Gene: VanLee_22 Start: 18690, Stop: 20378, Start Num: 25
Candidate Starts for VanLee_22:
(Start: 25 @18690 has 2 MA's), (45, 18843), (47, 18852), (49, 18858), (83, 19059), (89, 19092), (102, 19173), (113, 19341), (122, 19452), (126, 19494), (130, 19530), (133, 19557), (143, 19683), (160, 19866), (168, 19947), (178, 20070), (191, 20145), (202, 20199), (209, 20259), (210, 20271),

Gene: Walrus_30 Start: 23926, Stop: 25488, Start Num: 48
Candidate Starts for Walrus_30:
(39, 23866), (Start: 48 @23926 has 35 MA's), (64, 24007), (68, 24040), (73, 24067), (78, 24106), (82, 24133), (97, 24220), (103, 24277), (104, 24295), (106, 24322), (132, 24628), (143, 24754), (157, 24904), (160, 24934), (168, 25015), (176, 25132), (184, 25204), (190, 25228), (191, 25234), (195, 25258), (204, 25318), (208, 25342), (209, 25348), (217, 25411),

Gene: Wisp_27 Start: 23096, Stop: 24655, Start Num: 48
Candidate Starts for Wisp_27:
(39, 23036), (Start: 48 @23096 has 35 MA's), (68, 23210), (73, 23237), (97, 23390), (103, 23447), (104, 23465), (106, 23492), (131, 23789), (132, 23798), (143, 23924), (157, 24074), (160, 24104), (163, 24149), (168, 24185), (170, 24227), (176, 24302), (190, 24395), (204, 24485), (216, 24575), (217, 24578),

Gene: Wrigley_29 Start: 23270, Stop: 25141, Start Num: 15
Candidate Starts for Wrigley_29:
(7, 23132), (8, 23135), (11, 23159), (12, 23165), (Start: 15 @23270 has 8 MA's), (17, 23285), (24, 23411), (27, 23471), (50, 23615), (56, 23645), (57, 23648), (63, 23687), (66, 23720), (75, 23762), (85, 23837), (90, 23870), (99, 23924), (126, 24263), (128, 24269), (130, 24299), (149, 24500), (157, 24599), (160, 24629), (162, 24662), (165, 24686), (168, 24710), (170, 24752), (191, 24902), (203, 24962), (206, 24998), (208, 25010), (218, 25112),

Gene: Yago84_27 Start: 26638, Stop: 28224, Start Num: 34
Candidate Starts for Yago84_27:
(Start: 34 @26638 has 4 MA's), (43, 26695), (44, 26707), (53, 26752), (64, 26806), (77, 26893), (92, 26980), (99, 27022), (115, 27229), (116, 27241), (121, 27307), (143, 27535), (148, 27559), (149, 27586), (151, 27601), (160, 27718), (161, 27739), (165, 27775), (188, 27982), (191, 27994), (196, 28021), (210, 28120), (214, 28150), (218, 28198), (219, 28216),

Gene: ZAYM_28 Start: 22965, Stop: 24797, Start Num: 18
Candidate Starts for ZAYM_28:
(13, 22833), (14, 22836), (Start: 18 @22965 has 11 MA's), (63, 23343), (64, 23346), (75, 23418), (90, 23526), (99, 23580), (126, 23919), (128, 23925), (130, 23955), (133, 23982), (149, 24156), (157, 24255), (160, 24285), (168, 24366), (174, 24435), (203, 24618), (205, 24648), (206, 24654), (218, 24768),

Gene: Zarbodnamra_28 Start: 23385, Stop: 24944, Start Num: 48
Candidate Starts for Zarbodnamra_28:
(39, 23325), (Start: 48 @23385 has 35 MA's), (64, 23466), (68, 23499), (73, 23526), (94, 23667), (95, 23670), (97, 23679), (100, 23700), (103, 23736), (104, 23754), (131, 24078), (132, 24087), (143, 24213), (157, 24363), (160, 24393), (163, 24438), (168, 24474), (170, 24516), (176, 24591), (190, 24684), (204, 24774), (216, 24864), (217, 24867),

Gene: ZiggyZoo_28 Start: 23302, Stop: 24819, Start Num: 48
Candidate Starts for ZiggyZoo_28:
(39, 23242), (Start: 48 @23302 has 35 MA's), (64, 23383), (65, 23392), (68, 23416), (73, 23443), (82, 23509), (97, 23596), (103, 23653), (104, 23671), (106, 23698), (143, 24130), (157, 24280), (160, 24310), (162, 24343), (165, 24367), (168, 24391), (173, 24445), (191, 24583), (203, 24643), (205, 24673), (218, 24793),

Gene: Zilla_28 Start: 23403, Stop: 24917, Start Num: 48
Candidate Starts for Zilla_28:
(39, 23343), (Start: 48 @23403 has 35 MA's), (68, 23517), (73, 23544), (97, 23697), (103, 23754), (104, 23772), (106, 23799), (131, 24096), (132, 24105), (143, 24231), (157, 24381), (160, 24411), (163, 24456), (168, 24492), (170, 24534), (183, 24660), (199, 24729), (200, 24738), (206, 24786),