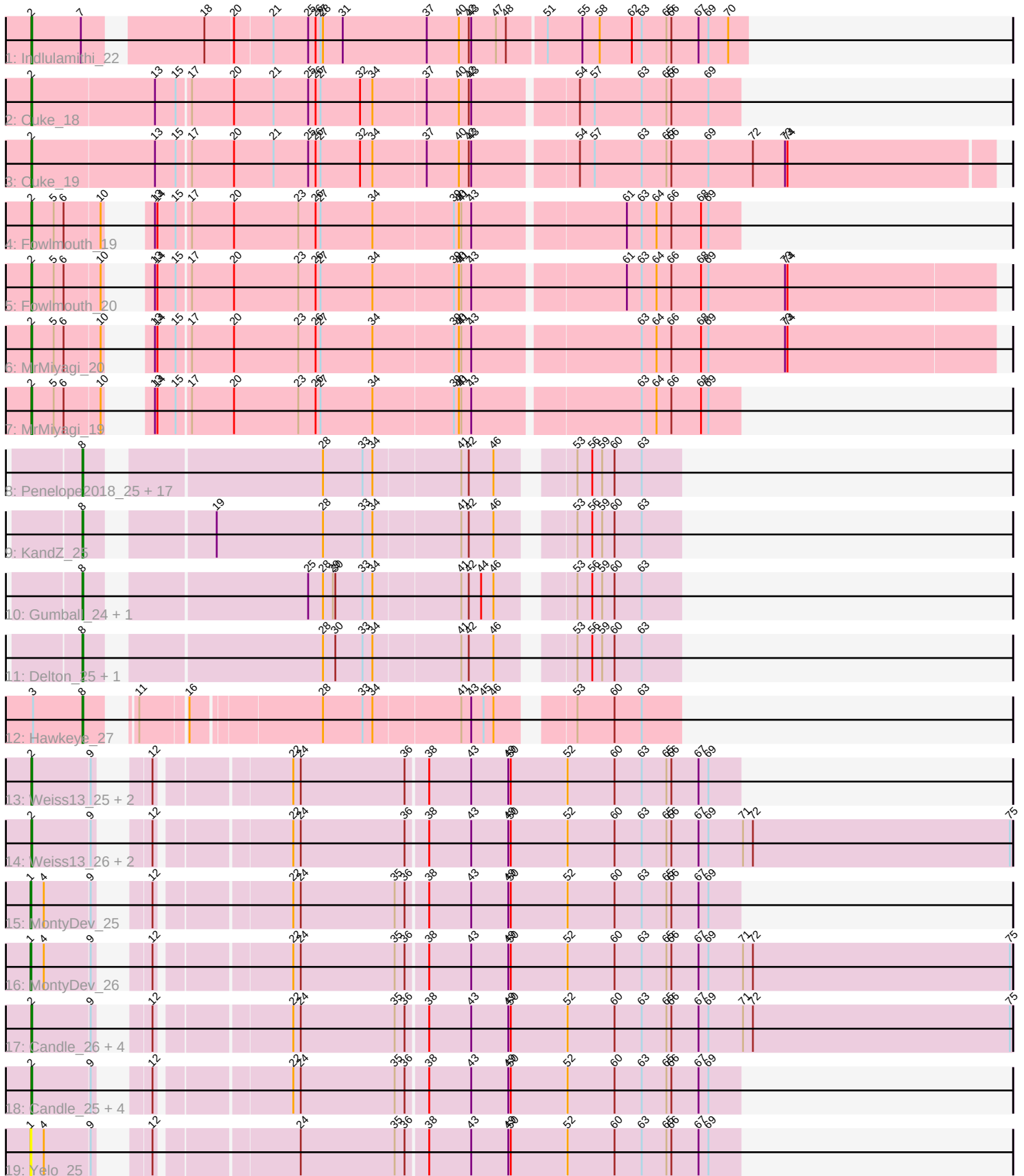


Pham 280538



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 280538 Report

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

Pham number 280538 has 50 members, 3 are drafts.

Phages represented in each track:

- Track 1 : Indlulamithi_22
- Track 2 : Cuke_18
- Track 3 : Cuke_19
- Track 4 : Fowlmouth_19
- Track 5 : Fowlmouth_20
- Track 6 : MrMiyagi_20
- Track 7 : MrMiyagi_19
- Track 8 : Penelope2018_25, Visconti_25, Adjutor_26, Prager_25, WaldoWhy_26, Chill_26, SuperheroCarly_26, Nova_25, Butterscotch_25, Helpful_26, Troll4_25, Giuseppe_25, Erk16_25, BigMama_23, PLOT_26, Thoth_25, Mopey_25, PBI1_25
- Track 9 : KandZ_25
- Track 10 : Gumball_24, SirHarley_24
- Track 11 : Delton_25, Phalaborwa_25
- Track 12 : Hawkeye_27
- Track 13 : Weiss13_25, Rope_25, Papyrus_25
- Track 14 : Weiss13_26, Papyrus_26, Rope_26
- Track 15 : MontyDev_25
- Track 16 : MontyDev_26
- Track 17 : Candle_26, Send513_26, Nilo_27, Zenon_27, Riparian_26
- Track 18 : Candle_25, Riparian_25, Nilo_26, Zenon_26, Send513_25
- Track 19 : Yelo_25

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

The start number called the most often in the published annotations is 2, it was called in 23 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Candle_25, Candle_26, Cuke_18, Cuke_19, Fowlmouth_19, Fowlmouth_20, Indlulamithi_22, MrMiyagi_19, MrMiyagi_20, Nilo_26, Nilo_27, Papyrus_25, Papyrus_26, Riparian_25, Riparian_26, Rope_25, Rope_26, Send513_25, Send513_26, Weiss13_25, Weiss13_26, Zenon_26, Zenon_27,

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

-

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

- Adjutor_26, BigMama_23, Butterscotch_25, Chill_26, Delton_25, Erk16_25, Giuseppe_25, Gumball_24, Hawkeye_27, Helpful_26, KandZ_25, MontyDev_25, MontyDev_26, Mopey_25, Nova_25, PBI1_25, PLOT_26, Penelope2018_25, Phalaborwa_25, Prager_25, SirHarley_24, SuperheroCarly_26, Thoth_25, Troll4_25, Visconti_25, WaldoWhy_26, Yelo_25,

Summary by start number:

Start 1:

- Found in 3 of 50 (6.0%) of genes in pham
- Manual Annotations of this start: 2 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MontyDev_25 (R), MontyDev_26 (R), Yelo_25 (R),

Start 2:

- Found in 23 of 50 (46.0%) of genes in pham
- Manual Annotations of this start: 23 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Candle_25 (R), Candle_26 (R), Cuke_18 (AC), Cuke_19 (AC), Fowlmouth_19 (AC), Fowlmouth_20 (AC), Indulamithi_22 (AC), MrMiyagi_19 (AC), MrMiyagi_20 (AC), Nilo_26 (R), Nilo_27 (R), Papyrus_25 (R), Papyrus_26 (R), Riparian_25 (R), Riparian_26 (R), Rope_25 (R), Rope_26 (R), Send513_25 (R), Send513_26 (R), Weiss13_25 (R), Weiss13_26 (R), Zenon_26 (R), Zenon_27 (R),

Start 8:

- Found in 24 of 50 (48.0%) of genes in pham
- Manual Annotations of this start: 22 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Adjutor_26 (D1), BigMama_23 (D1), Butterscotch_25 (D1), Chill_26 (D1), Delton_25 (D1), Erk16_25 (D1), Giuseppe_25 (D1), Gumball_24 (D1), Hawkeye_27 (D2), Helpful_26 (D1), KandZ_25 (D1), Mopey_25 (D1), Nova_25 (D1), PBI1_25 (D1), PLOT_26 (D1), Penelope2018_25 (D1), Phalaborwa_25 (D1), Prager_25 (D1), SirHarley_24 (D1), SuperheroCarly_26 (D1), Thoth_25 (D1), Troll4_25 (D1), Visconti_25 (D1), WaldoWhy_26 (D1),

Summary by clusters:

There are 4 clusters represented in this pham: AC, R, D2, D1,

Info for manual annotations of cluster AC:

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

Info for manual annotations of cluster D1:

- Start number 8 was manually annotated 21 times for cluster D1.

Info for manual annotations of cluster D2:

- Start number 8 was manually annotated 1 time for cluster D2.

Info for manual annotations of cluster R:

- Start number 1 was manually annotated 2 times for cluster R.
- Start number 2 was manually annotated 16 times for cluster R.

Gene Information:

Gene: Adjutor_26 Start: 15426, Stop: 16079, Start Num: 8

Candidate Starts for Adjutor_26:

(Start: 8 @15426 has 22 MA's), (28, 15681), (33, 15729), (34, 15741), (41, 15843), (42, 15852), (46, 15882), (53, 15954), (56, 15972), (59, 15984), (60, 15999), (63, 16032),

Gene: BigMama_23 Start: 15502, Stop: 16155, Start Num: 8

Candidate Starts for BigMama_23:

(Start: 8 @15502 has 22 MA's), (28, 15757), (33, 15805), (34, 15817), (41, 15919), (42, 15928), (46, 15958), (53, 16030), (56, 16048), (59, 16060), (60, 16075), (63, 16108),

Gene: Butterscotch_25 Start: 15486, Stop: 16139, Start Num: 8

Candidate Starts for Butterscotch_25:

(Start: 8 @15486 has 22 MA's), (28, 15741), (33, 15789), (34, 15801), (41, 15903), (42, 15912), (46, 15942), (53, 16014), (56, 16032), (59, 16044), (60, 16059), (63, 16092),

Gene: Candle_26 Start: 15923, Stop: 17030, Start Num: 2

Candidate Starts for Candle_26:

(Start: 2 @15923 has 23 MA's), (9, 15992), (12, 16022), (22, 16166), (24, 16175), (35, 16289), (36, 16301), (38, 16325), (43, 16376), (49, 16421), (50, 16424), (52, 16490), (60, 16547), (63, 16580), (65, 16610), (66, 16616), (67, 16649), (69, 16661), (71, 16703), (72, 16715), (75, 17027),

Gene: Candle_25 Start: 15923, Stop: 16699, Start Num: 2

Candidate Starts for Candle_25:

(Start: 2 @15923 has 23 MA's), (9, 15992), (12, 16022), (22, 16166), (24, 16175), (35, 16289), (36, 16301), (38, 16325), (43, 16376), (49, 16421), (50, 16424), (52, 16490), (60, 16547), (63, 16580), (65, 16610), (66, 16616), (67, 16649), (69, 16661),

Gene: Chill_26 Start: 15492, Stop: 16145, Start Num: 8

Candidate Starts for Chill_26:

(Start: 8 @15492 has 22 MA's), (28, 15747), (33, 15795), (34, 15807), (41, 15909), (42, 15918), (46, 15948), (53, 16020), (56, 16038), (59, 16050), (60, 16065), (63, 16098),

Gene: Cuke_18 Start: 11044, Stop: 11877, Start Num: 2

Candidate Starts for Cuke_18:

(Start: 2 @11044 has 23 MA's), (13, 11191), (15, 11215), (17, 11230), (20, 11281), (21, 11329), (25, 11371), (26, 11380), (27, 11386), (32, 11434), (34, 11449), (37, 11512), (40, 11551), (42, 11563), (43, 11566), (54, 11683), (57, 11701), (63, 11758), (65, 11788), (66, 11794), (69, 11839),

Gene: Cuke_19 Start: 11044, Stop: 12181, Start Num: 2

Candidate Starts for Cuke_19:

(Start: 2 @11044 has 23 MA's), (13, 11191), (15, 11215), (17, 11230), (20, 11281), (21, 11329), (25, 11371), (26, 11380), (27, 11386), (32, 11434), (34, 11449), (37, 11512), (40, 11551), (42, 11563), (43, 11566), (54, 11683), (57, 11701), (63, 11758), (65, 11788), (66, 11794), (69, 11839), (72, 11893), (73, 11932), (74, 11935),

Gene: Delton_25 Start: 15498, Stop: 16151, Start Num: 8

Candidate Starts for Delton_25:

(Start: 8 @15498 has 22 MA's), (28, 15753), (30, 15768), (33, 15801), (34, 15813), (41, 15915), (42, 15924), (46, 15954), (53, 16026), (56, 16044), (59, 16056), (60, 16071), (63, 16104),

Gene: Erk16_25 Start: 15489, Stop: 16142, Start Num: 8

Candidate Starts for Erk16_25:

(Start: 8 @15489 has 22 MA's), (28, 15744), (33, 15792), (34, 15804), (41, 15906), (42, 15915), (46, 15945), (53, 16017), (56, 16035), (59, 16047), (60, 16062), (63, 16095),

Gene: Fowlmouth_19 Start: 11198, Stop: 11980, Start Num: 2

Candidate Starts for Fowlmouth_19:

(Start: 2 @11198 has 23 MA's), (5, 11225), (6, 11237), (10, 11279), (13, 11294), (14, 11297), (15, 11318), (17, 11333), (20, 11384), (23, 11462), (26, 11483), (27, 11489), (34, 11552), (39, 11648), (40, 11654), (41, 11657), (43, 11669), (61, 11843), (63, 11861), (64, 11879), (66, 11897), (68, 11933), (69, 11942),

Gene: Fowlmouth_20 Start: 11198, Stop: 12287, Start Num: 2

Candidate Starts for Fowlmouth_20:

(Start: 2 @11198 has 23 MA's), (5, 11225), (6, 11237), (10, 11279), (13, 11294), (14, 11297), (15, 11318), (17, 11333), (20, 11384), (23, 11462), (26, 11483), (27, 11489), (34, 11552), (39, 11648), (40, 11654), (41, 11657), (43, 11669), (61, 11843), (63, 11861), (64, 11879), (66, 11897), (68, 11933), (69, 11942), (73, 12035), (74, 12038),

Gene: Giuseppe_25 Start: 15478, Stop: 16131, Start Num: 8

Candidate Starts for Giuseppe_25:

(Start: 8 @15478 has 22 MA's), (28, 15733), (33, 15781), (34, 15793), (41, 15895), (42, 15904), (46, 15934), (53, 16006), (56, 16024), (59, 16036), (60, 16051), (63, 16084),

Gene: Gumball_24 Start: 15436, Stop: 16089, Start Num: 8

Candidate Starts for Gumball_24:

(Start: 8 @15436 has 22 MA's), (25, 15673), (28, 15691), (29, 15703), (30, 15706), (33, 15739), (34, 15751), (41, 15853), (42, 15862), (44, 15877), (46, 15892), (53, 15964), (56, 15982), (59, 15994), (60, 16009), (63, 16042),

Gene: Hawkeye_27 Start: 15385, Stop: 16014, Start Num: 8

Candidate Starts for Hawkeye_27:

(3, 15328), (Start: 8 @15385 has 22 MA's), (11, 15418), (16, 15469), (28, 15616), (33, 15664), (34, 15676), (41, 15778), (43, 15790), (45, 15805), (46, 15817), (53, 15889), (60, 15934), (63, 15967),

Gene: Helpful_26 Start: 15486, Stop: 16139, Start Num: 8

Candidate Starts for Helpful_26:

(Start: 8 @15486 has 22 MA's), (28, 15741), (33, 15789), (34, 15801), (41, 15903), (42, 15912), (46, 15942), (53, 16014), (56, 16032), (59, 16044), (60, 16059), (63, 16092),

Gene: Indlulamithi_22 Start: 13331, Stop: 14158, Start Num: 2

Candidate Starts for Indlulamithi_22:

(Start: 2 @13331 has 23 MA's), (7, 13391), (18, 13511), (20, 13544), (21, 13589), (25, 13631), (26, 13640), (27, 13646), (28, 13649), (31, 13673), (37, 13775), (40, 13814), (42, 13826), (43, 13829), (47, 13859), (48, 13871), (51, 13916), (55, 13958), (58, 13979), (62, 14018), (63, 14030), (65, 14060), (66, 14066), (67, 14099), (69, 14111), (70, 14135),

Gene: KandZ_25 Start: 15586, Stop: 16239, Start Num: 8

Candidate Starts for KandZ_25:

(Start: 8 @15586 has 22 MA's), (19, 15712), (28, 15841), (33, 15889), (34, 15901), (41, 16003), (42, 16012), (46, 16042), (53, 16114), (56, 16132), (59, 16144), (60, 16159), (63, 16192),

Gene: MontyDev_25 Start: 15564, Stop: 16340, Start Num: 1

Candidate Starts for MontyDev_25:

(Start: 1 @15564 has 2 MA's), (4, 15579), (9, 15633), (12, 15663), (22, 15807), (24, 15816), (35, 15930), (36, 15942), (38, 15966), (43, 16017), (49, 16062), (50, 16065), (52, 16131), (60, 16188), (63, 16221), (65, 16251), (66, 16257), (67, 16290), (69, 16302),

Gene: MontyDev_26 Start: 15564, Stop: 16671, Start Num: 1

Candidate Starts for MontyDev_26:

(Start: 1 @15564 has 2 MA's), (4, 15579), (9, 15633), (12, 15663), (22, 15807), (24, 15816), (35, 15930), (36, 15942), (38, 15966), (43, 16017), (49, 16062), (50, 16065), (52, 16131), (60, 16188), (63, 16221), (65, 16251), (66, 16257), (67, 16290), (69, 16302), (71, 16344), (72, 16356), (75, 16668),

Gene: Mopey_25 Start: 15486, Stop: 16139, Start Num: 8

Candidate Starts for Mopey_25:

(Start: 8 @15486 has 22 MA's), (28, 15741), (33, 15789), (34, 15801), (41, 15903), (42, 15912), (46, 15942), (53, 16014), (56, 16032), (59, 16044), (60, 16059), (63, 16092),

Gene: MrMiyagi_20 Start: 11218, Stop: 12307, Start Num: 2

Candidate Starts for MrMiyagi_20:

(Start: 2 @11218 has 23 MA's), (5, 11245), (6, 11257), (10, 11299), (13, 11314), (14, 11317), (15, 11338), (17, 11353), (20, 11404), (23, 11482), (26, 11503), (27, 11509), (34, 11572), (39, 11668), (40, 11674), (41, 11677), (43, 11689), (63, 11881), (64, 11899), (66, 11917), (68, 11953), (69, 11962), (73, 12055), (74, 12058),

Gene: MrMiyagi_19 Start: 11218, Stop: 12000, Start Num: 2

Candidate Starts for MrMiyagi_19:

(Start: 2 @11218 has 23 MA's), (5, 11245), (6, 11257), (10, 11299), (13, 11314), (14, 11317), (15, 11338), (17, 11353), (20, 11404), (23, 11482), (26, 11503), (27, 11509), (34, 11572), (39, 11668), (40, 11674), (41, 11677), (43, 11689), (63, 11881), (64, 11899), (66, 11917), (68, 11953), (69, 11962),

Gene: Nilo_27 Start: 15920, Stop: 17027, Start Num: 2

Candidate Starts for Nilo_27:

(Start: 2 @15920 has 23 MA's), (9, 15989), (12, 16019), (22, 16163), (24, 16172), (35, 16286), (36, 16298), (38, 16322), (43, 16373), (49, 16418), (50, 16421), (52, 16487), (60, 16544), (63, 16577), (65, 16607), (66, 16613), (67, 16646), (69, 16658), (71, 16700), (72, 16712), (75, 17024),

Gene: Nilo_26 Start: 15920, Stop: 16696, Start Num: 2

Candidate Starts for Nilo_26:

(Start: 2 @15920 has 23 MA's), (9, 15989), (12, 16019), (22, 16163), (24, 16172), (35, 16286), (36, 16298), (38, 16322), (43, 16373), (49, 16418), (50, 16421), (52, 16487), (60, 16544), (63, 16577), (65, 16607), (66, 16613), (67, 16646), (69, 16658),

Gene: Nova_25 Start: 15913, Stop: 16566, Start Num: 8

Candidate Starts for Nova_25:

(Start: 8 @15913 has 22 MA's), (28, 16168), (33, 16216), (34, 16228), (41, 16330), (42, 16339), (46, 16369), (53, 16441), (56, 16459), (59, 16471), (60, 16486), (63, 16519),

Gene: PBI1_25 Start: 15417, Stop: 16070, Start Num: 8

Candidate Starts for PBI1_25:

(Start: 8 @15417 has 22 MA's), (28, 15672), (33, 15720), (34, 15732), (41, 15834), (42, 15843), (46, 15873), (53, 15945), (56, 15963), (59, 15975), (60, 15990), (63, 16023),

Gene: PLOT_26 Start: 15489, Stop: 16142, Start Num: 8

Candidate Starts for PLOT_26:

(Start: 8 @15489 has 22 MA's), (28, 15744), (33, 15792), (34, 15804), (41, 15906), (42, 15915), (46, 15945), (53, 16017), (56, 16035), (59, 16047), (60, 16062), (63, 16095),

Gene: Papyrus_26 Start: 15582, Stop: 16689, Start Num: 2

Candidate Starts for Papyrus_26:

(Start: 2 @15582 has 23 MA's), (9, 15651), (12, 15681), (22, 15825), (24, 15834), (36, 15960), (38, 15984), (43, 16035), (49, 16080), (50, 16083), (52, 16149), (60, 16206), (63, 16239), (65, 16269), (66, 16275), (67, 16308), (69, 16320), (71, 16362), (72, 16374), (75, 16686),

Gene: Papyrus_25 Start: 15582, Stop: 16358, Start Num: 2

Candidate Starts for Papyrus_25:

(Start: 2 @15582 has 23 MA's), (9, 15651), (12, 15681), (22, 15825), (24, 15834), (36, 15960), (38, 15984), (43, 16035), (49, 16080), (50, 16083), (52, 16149), (60, 16206), (63, 16239), (65, 16269), (66, 16275), (67, 16308), (69, 16320),

Gene: Penelope2018_25 Start: 15486, Stop: 16139, Start Num: 8

Candidate Starts for Penelope2018_25:

(Start: 8 @15486 has 22 MA's), (28, 15741), (33, 15789), (34, 15801), (41, 15903), (42, 15912), (46, 15942), (53, 16014), (56, 16032), (59, 16044), (60, 16059), (63, 16092),

Gene: Phalaborwa_25 Start: 15519, Stop: 16172, Start Num: 8

Candidate Starts for Phalaborwa_25:

(Start: 8 @15519 has 22 MA's), (28, 15774), (30, 15789), (33, 15822), (34, 15834), (41, 15936), (42, 15945), (46, 15975), (53, 16047), (56, 16065), (59, 16077), (60, 16092), (63, 16125),

Gene: Prager_25 Start: 15498, Stop: 16151, Start Num: 8

Candidate Starts for Prager_25:

(Start: 8 @15498 has 22 MA's), (28, 15753), (33, 15801), (34, 15813), (41, 15915), (42, 15924), (46, 15954), (53, 16026), (56, 16044), (59, 16056), (60, 16071), (63, 16104),

Gene: Riparian_25 Start: 15381, Stop: 16157, Start Num: 2

Candidate Starts for Riparian_25:

(Start: 2 @15381 has 23 MA's), (9, 15450), (12, 15480), (22, 15624), (24, 15633), (35, 15747), (36, 15759), (38, 15783), (43, 15834), (49, 15879), (50, 15882), (52, 15948), (60, 16005), (63, 16038), (65, 16068), (66, 16074), (67, 16107), (69, 16119),

Gene: Riparian_26 Start: 15381, Stop: 16488, Start Num: 2

Candidate Starts for Riparian_26:

(Start: 2 @15381 has 23 MA's), (9, 15450), (12, 15480), (22, 15624), (24, 15633), (35, 15747), (36, 15759), (38, 15783), (43, 15834), (49, 15879), (50, 15882), (52, 15948), (60, 16005), (63, 16038), (65, 16068), (66, 16074), (67, 16107), (69, 16119), (71, 16161), (72, 16173), (75, 16485),

Gene: Rope_25 Start: 15573, Stop: 16349, Start Num: 2

Candidate Starts for Rope_25:

(Start: 2 @15573 has 23 MA's), (9, 15642), (12, 15672), (22, 15816), (24, 15825), (36, 15951), (38, 15975), (43, 16026), (49, 16071), (50, 16074), (52, 16140), (60, 16197), (63, 16230), (65, 16260), (66, 16266), (67, 16299), (69, 16311),

Gene: Rope_26 Start: 15573, Stop: 16680, Start Num: 2

Candidate Starts for Rope_26:

(Start: 2 @15573 has 23 MA's), (9, 15642), (12, 15672), (22, 15816), (24, 15825), (36, 15951), (38, 15975), (43, 16026), (49, 16071), (50, 16074), (52, 16140), (60, 16197), (63, 16230), (65, 16260), (66, 16266), (67, 16299), (69, 16311), (71, 16353), (72, 16365), (75, 16677),

Gene: Send513_26 Start: 15923, Stop: 17030, Start Num: 2

Candidate Starts for Send513_26:

(Start: 2 @15923 has 23 MA's), (9, 15992), (12, 16022), (22, 16166), (24, 16175), (35, 16289), (36, 16301), (38, 16325), (43, 16376), (49, 16421), (50, 16424), (52, 16490), (60, 16547), (63, 16580), (65, 16610), (66, 16616), (67, 16649), (69, 16661), (71, 16703), (72, 16715), (75, 17027),

Gene: Send513_25 Start: 15923, Stop: 16699, Start Num: 2

Candidate Starts for Send513_25:

(Start: 2 @15923 has 23 MA's), (9, 15992), (12, 16022), (22, 16166), (24, 16175), (35, 16289), (36, 16301), (38, 16325), (43, 16376), (49, 16421), (50, 16424), (52, 16490), (60, 16547), (63, 16580), (65, 16610), (66, 16616), (67, 16649), (69, 16661),

Gene: SirHarley_24 Start: 15418, Stop: 16071, Start Num: 8

Candidate Starts for SirHarley_24:

(Start: 8 @15418 has 22 MA's), (25, 15655), (28, 15673), (29, 15685), (30, 15688), (33, 15721), (34, 15733), (41, 15835), (42, 15844), (44, 15859), (46, 15874), (53, 15946), (56, 15964), (59, 15976), (60, 15991), (63, 16024),

Gene: SuperheroCarly_26 Start: 15348, Stop: 16001, Start Num: 8

Candidate Starts for SuperheroCarly_26:

(Start: 8 @15348 has 22 MA's), (28, 15603), (33, 15651), (34, 15663), (41, 15765), (42, 15774), (46, 15804), (53, 15876), (56, 15894), (59, 15906), (60, 15921), (63, 15954),

Gene: Thoth_25 Start: 15483, Stop: 16136, Start Num: 8

Candidate Starts for Thoth_25:

(Start: 8 @15483 has 22 MA's), (28, 15738), (33, 15786), (34, 15798), (41, 15900), (42, 15909), (46, 15939), (53, 16011), (56, 16029), (59, 16041), (60, 16056), (63, 16089),

Gene: Troll4_25 Start: 15487, Stop: 16140, Start Num: 8

Candidate Starts for Troll4_25:

(Start: 8 @15487 has 22 MA's), (28, 15742), (33, 15790), (34, 15802), (41, 15904), (42, 15913), (46, 15943), (53, 16015), (56, 16033), (59, 16045), (60, 16060), (63, 16093),

Gene: Visconti_25 Start: 15496, Stop: 16149, Start Num: 8

Candidate Starts for Visconti_25:

(Start: 8 @15496 has 22 MA's), (28, 15751), (33, 15799), (34, 15811), (41, 15913), (42, 15922), (46, 15952), (53, 16024), (56, 16042), (59, 16054), (60, 16069), (63, 16102),

Gene: WaldoWhy_26 Start: 15492, Stop: 16145, Start Num: 8

Candidate Starts for WaldoWhy_26:

(Start: 8 @15492 has 22 MA's), (28, 15747), (33, 15795), (34, 15807), (41, 15909), (42, 15918), (46, 15948), (53, 16020), (56, 16038), (59, 16050), (60, 16065), (63, 16098),

Gene: Weiss13_25 Start: 15613, Stop: 16389, Start Num: 2

Candidate Starts for Weiss13_25:

(Start: 2 @15613 has 23 MA's), (9, 15682), (12, 15712), (22, 15856), (24, 15865), (36, 15991), (38, 16015), (43, 16066), (49, 16111), (50, 16114), (52, 16180), (60, 16237), (63, 16270), (65, 16300), (66,

16306), (67, 16339), (69, 16351),

Gene: Weiss13_26 Start: 15613, Stop: 16720, Start Num: 2

Candidate Starts for Weiss13_26:

(Start: 2 @15613 has 23 MA's), (9, 15682), (12, 15712), (22, 15856), (24, 15865), (36, 15991), (38, 16015), (43, 16066), (49, 16111), (50, 16114), (52, 16180), (60, 16237), (63, 16270), (65, 16300), (66, 16306), (67, 16339), (69, 16351), (71, 16393), (72, 16405), (75, 16717),

Gene: Yelo_25 Start: 15906, Stop: 16682, Start Num: 1

Candidate Starts for Yelo_25:

(Start: 1 @15906 has 2 MA's), (4, 15921), (9, 15975), (12, 16005), (24, 16158), (35, 16272), (36, 16284), (38, 16308), (43, 16359), (49, 16404), (50, 16407), (52, 16473), (60, 16530), (63, 16563), (65, 16593), (66, 16599), (67, 16632), (69, 16644),

Gene: Zenon_26 Start: 15925, Stop: 16701, Start Num: 2

Candidate Starts for Zenon_26:

(Start: 2 @15925 has 23 MA's), (9, 15994), (12, 16024), (22, 16168), (24, 16177), (35, 16291), (36, 16303), (38, 16327), (43, 16378), (49, 16423), (50, 16426), (52, 16492), (60, 16549), (63, 16582), (65, 16612), (66, 16618), (67, 16651), (69, 16663),

Gene: Zenon_27 Start: 15925, Stop: 17032, Start Num: 2

Candidate Starts for Zenon_27:

(Start: 2 @15925 has 23 MA's), (9, 15994), (12, 16024), (22, 16168), (24, 16177), (35, 16291), (36, 16303), (38, 16327), (43, 16378), (49, 16423), (50, 16426), (52, 16492), (60, 16549), (63, 16582), (65, 16612), (66, 16618), (67, 16651), (69, 16663), (71, 16705), (72, 16717), (75, 17029),