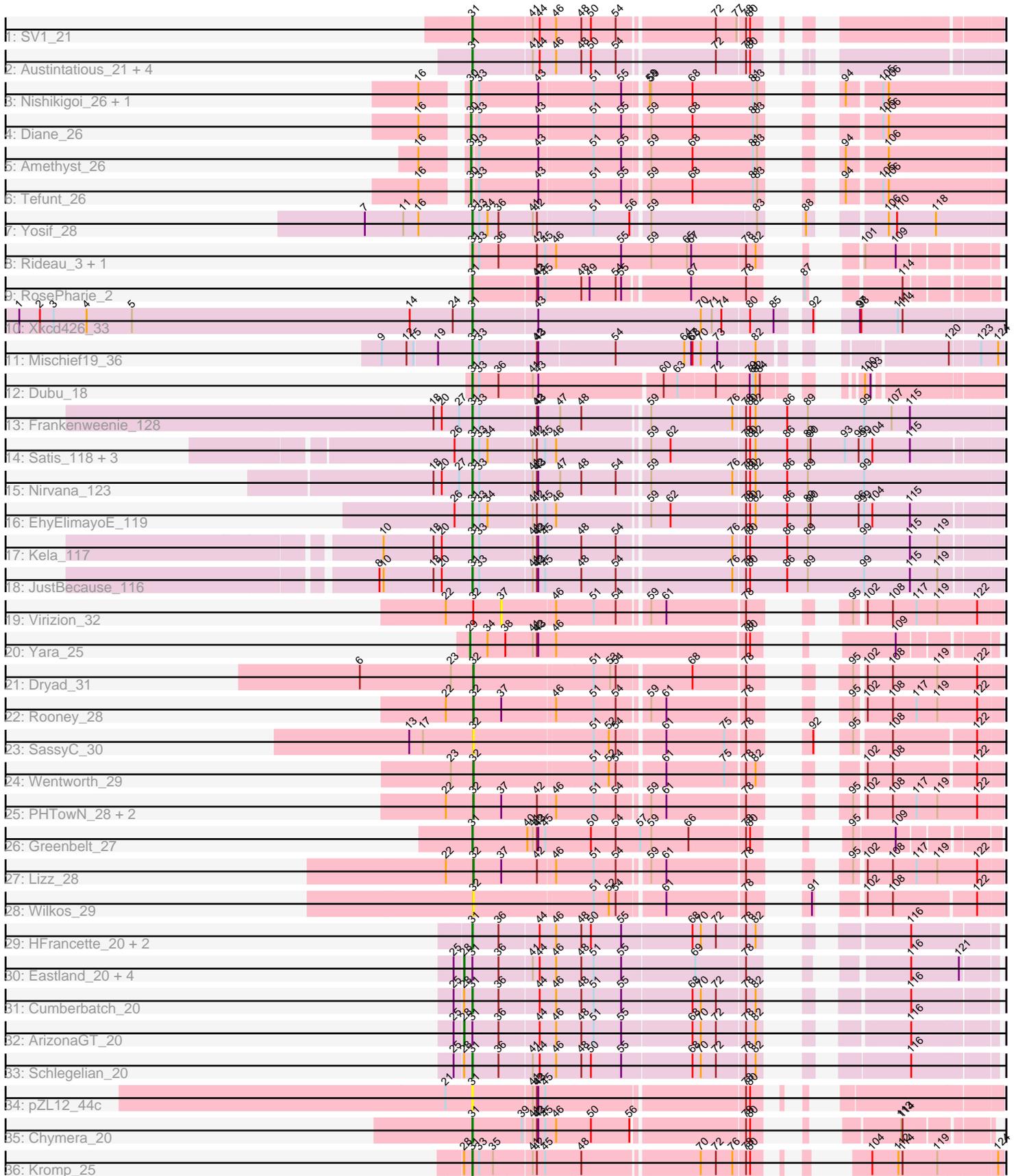


Pham 291226



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 291226 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291226 has 53 members, 6 are drafts.

Phages represented in each track:

- Track 1 : SV1_21
- Track 2 : Austintatious_21, Bioscum_21, Ididsumtinwong_21, PapayaSalad_21, Lishka_21
- Track 3 : Nishikigoi_26, Haizum_26
- Track 4 : Diane_26
- Track 5 : Amethyst_26
- Track 6 : Tefunt_26
- Track 7 : Yosif_28
- Track 8 : Rideau_3, Dennebes_2
- Track 9 : RosePharie_2
- Track 10 : Xkcd426_33
- Track 11 : Mischief19_36
- Track 12 : Dubu_18
- Track 13 : Frankenweenie_128
- Track 14 : Satis_118, Quantum_117, Sarkar_126, Kradal_118
- Track 15 : Nirvana_123
- Track 16 : EhyElimayoE_119
- Track 17 : Kela_117
- Track 18 : JustBecause_116
- Track 19 : Virizion_32
- Track 20 : Yara_25
- Track 21 : Dryad_31
- Track 22 : Rooney_28
- Track 23 : SassyC_30
- Track 24 : Wentworth_29
- Track 25 : PHTowN_28, Gibson_28, ShakeNBake_28
- Track 26 : Greenbelt_27
- Track 27 : Lizz_28
- Track 28 : Wilkos_29
- Track 29 : HFrancette_20, Ignacio_20, Vondra_20
- Track 30 : Eastland_20, Piccadilly_20, AxeJC_20, FrumpyGal_20, Eklok_20
- Track 31 : Cumberbatch_20
- Track 32 : ArizonaGT_20
- Track 33 : Schlegelian_20
- Track 34 : pZL12_44c
- Track 35 : Chymera_20
- Track 36 : Kromp_25

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

The start number called the most often in the published annotations is 31, it was called in 28 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Austintatious_21, Bioscum_21, Chymera_20, Cumberbatch_20, Dennebes_2, Dubu_18, EhyElimayoE_119, Frankenweenie_128, Greenbelt_27, HFrancette_20, Ididsumtinwong_21, Ignacio_20, JustBecause_116, Kela_117, Kradal_118, Kromp_25, Lishka_21, Mischief19_36, Nirvana_123, PapayaSalad_21, Quantum_117, Rideau_3, RosePharie_2, SV1_21, Sarkar_126, Satis_118, Schlegelian_20, Vondra_20, Xkcd426_33, Yosif_28, pZL12_44c,

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

- ArizonaGT_20, AxeJC_20, Eastland_20, Eklok_20, FrumpyGal_20, Piccadilly_20,

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

- Amethyst_26, Diane_26, Dryad_31, Gibson_28, Haizum_26, Lizz_28, Nishikigoi_26, PHTowN_28, Rooney_28, SassyC_30, ShakeNBake_28, Tefunt_26, Virizion_32, Wentworth_29, Wilkos_29, Yara_25,

Summary by start number:

Start 28:

- Found in 9 of 53 (17.0%) of genes in pham
- Manual Annotations of this start: 6 of 47
- Called 66.7% of time when present
- Phage (with cluster) where this start called: ArizonaGT_20 (BP), AxeJC_20 (BP), Eastland_20 (BP), Eklok_20 (BP), FrumpyGal_20 (BP), Piccadilly_20 (BP),

Start 29:

- Found in 1 of 53 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yara_25 (BN),

Start 30:

- Found in 5 of 53 (9.4%) of genes in pham
- Manual Annotations of this start: 5 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amethyst_26 (BD2), Diane_26 (BD2), Haizum_26 (BD2), Nishikigoi_26 (BD2), Tefunt_26 (BD2),

Start 31:

- Found in 37 of 53 (69.8%) of genes in pham
- Manual Annotations of this start: 28 of 47
- Called 83.8% of time when present
- Phage (with cluster) where this start called: Austintatious_21 (BC3), Bioscum_21 (BC3), Chymera_20 (singleton), Cumberbatch_20 (BP), Dennebes_2 (BF), Dubu_18

(BJ), EhyElimayoE_119 (BM), Frankenweenie_128 (BM), Greenbelt_27 (BN), HFrancette_20 (BP), Ididsumtinwong_21 (BC3), Ignacio_20 (BP), JustBecause_116 (BM), Kela_117 (BM), Kradal_118 (BM), Kromp_25 (singleton), Lishka_21 (BC3), Mischief19_36 (BG), Nirvana_123 (BM), PapayaSalad_21 (BC3), Quantum_117 (BM), Rideau_3 (BF), RosePharie_2 (BF), SV1_21 (BC1), Sarkar_126 (BM), Satis_118 (BM), Schlegelian_20 (BP), Vondra_20 (BP), Xkcd426_33 (BG), Yosif_28 (BD3), pZL12_44c (singleton),

Start 32:

- Found in 10 of 53 (18.9%) of genes in pham
- Manual Annotations of this start: 7 of 47
- Called 90.0% of time when present
- Phage (with cluster) where this start called: Dryad_31 (BN), Gibson_28 (BN), Lizz_28 (BN), PHTowN_28 (BN), Rooney_28 (BN), SassyC_30 (BN), ShakeNBake_28 (BN), Wentworth_29 (BN), Wilkos_29 (BN),

Start 37:

- Found in 6 of 53 (11.3%) of genes in pham
- No Manual Annotations of this start.
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Virizion_32 (BN),

Summary by clusters:

There are 11 clusters represented in this pham: BF, BG, BM, BN, singleton, BJ, BP, BD3, BD2, BC1, BC3,

Info for manual annotations of cluster BC1:

- Start number 31 was manually annotated 1 time for cluster BC1.

Info for manual annotations of cluster BC3:

- Start number 31 was manually annotated 5 times for cluster BC3.

Info for manual annotations of cluster BD2:

- Start number 30 was manually annotated 5 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 31 was manually annotated 1 time for cluster BD3.

Info for manual annotations of cluster BF:

- Start number 31 was manually annotated 2 times for cluster BF.

Info for manual annotations of cluster BG:

- Start number 31 was manually annotated 2 times for cluster BG.

Info for manual annotations of cluster BJ:

- Start number 31 was manually annotated 1 time for cluster BJ.

Info for manual annotations of cluster BM:

- Start number 31 was manually annotated 8 times for cluster BM.

Info for manual annotations of cluster BN:

- Start number 29 was manually annotated 1 time for cluster BN.

- Start number 31 was manually annotated 1 time for cluster BN.
- Start number 32 was manually annotated 7 times for cluster BN.

Info for manual annotations of cluster BP:

- Start number 28 was manually annotated 6 times for cluster BP.
- Start number 31 was manually annotated 5 times for cluster BP.

Gene Information:

Gene: Amethyst_26 Start: 21581, Stop: 22531, Start Num: 30

Candidate Starts for Amethyst_26:

(16, 21512), (Start: 30 @21581 has 5 MA's), (33, 21593), (43, 21722), (51, 21833), (55, 21893), (59, 21941), (68, 22031), (81, 22154), (83, 22163), (94, 22208), (106, 22280),

Gene: ArizonaGT_20 Start: 16980, Stop: 17939, Start Num: 28

Candidate Starts for ArizonaGT_20:

(25, 16962), (Start: 28 @16980 has 6 MA's), (Start: 31 @16995 has 28 MA's), (36, 17049), (44, 17130), (46, 17166), (48, 17220), (51, 17247), (55, 17307), (68, 17457), (70, 17475), (72, 17508), (78, 17562), (82, 17583), (116, 17766),

Gene: Austintatious_21 Start: 16123, Stop: 17064, Start Num: 31

Candidate Starts for Austintatious_21:

(Start: 31 @16123 has 28 MA's), (41, 16243), (44, 16258), (46, 16294), (48, 16348), (50, 16369), (54, 16423), (72, 16618), (78, 16672), (80, 16681),

Gene: AxeJC_20 Start: 16979, Stop: 17923, Start Num: 28

Candidate Starts for AxeJC_20:

(25, 16961), (Start: 28 @16979 has 6 MA's), (Start: 31 @16994 has 28 MA's), (36, 17048), (41, 17114), (44, 17129), (46, 17165), (48, 17219), (51, 17246), (55, 17306), (69, 17462), (78, 17561), (116, 17750), (121, 17849),

Gene: Bioscum_21 Start: 16159, Stop: 17100, Start Num: 31

Candidate Starts for Bioscum_21:

(Start: 31 @16159 has 28 MA's), (41, 16279), (44, 16294), (46, 16330), (48, 16384), (50, 16405), (54, 16459), (72, 16654), (78, 16708), (80, 16717),

Gene: Chymera_20 Start: 16278, Stop: 17153, Start Num: 31

Candidate Starts for Chymera_20:

(Start: 31 @16278 has 28 MA's), (39, 16380), (41, 16398), (42, 16407), (43, 16410), (45, 16425), (46, 16449), (50, 16524), (56, 16608), (78, 16827), (80, 16836), (113, 16989), (114, 16992),

Gene: Cumberbatch_20 Start: 16995, Stop: 17939, Start Num: 31

Candidate Starts for Cumberbatch_20:

(25, 16962), (Start: 28 @16980 has 6 MA's), (Start: 31 @16995 has 28 MA's), (36, 17049), (44, 17130), (46, 17166), (48, 17220), (51, 17247), (55, 17307), (68, 17457), (70, 17475), (72, 17508), (78, 17562), (82, 17583), (116, 17766),

Gene: Dennebes_2 Start: 2618, Stop: 3529, Start Num: 31

Candidate Starts for Dennebes_2:

(Start: 31 @2618 has 28 MA's), (33, 2630), (36, 2672), (42, 2753), (45, 2771), (46, 2795), (55, 2936), (59, 3002), (65, 3080), (67, 3089), (78, 3197), (82, 3218), (101, 3278), (109, 3344),

Gene: Diane_26 Start: 21914, Stop: 22867, Start Num: 30

Candidate Starts for Diane_26:

(16, 21845), (Start: 30 @21914 has 5 MA's), (33, 21926), (43, 22055), (51, 22166), (55, 22226), (59, 22274), (68, 22364), (81, 22487), (83, 22496), (105, 22604), (106, 22616),

Gene: Dryad_31 Start: 20705, Stop: 21643, Start Num: 32

Candidate Starts for Dryad_31:

(6, 20459), (23, 20657), (Start: 32 @20705 has 7 MA's), (51, 20954), (53, 20990), (54, 21002), (68, 21149), (78, 21251), (95, 21344), (102, 21362), (108, 21413), (119, 21506), (122, 21590),

Gene: Dubu_18 Start: 16543, Stop: 17481, Start Num: 31

Candidate Starts for Dubu_18:

(Start: 31 @16543 has 28 MA's), (33, 16555), (36, 16597), (41, 16663), (43, 16675), (60, 16930), (63, 16960), (72, 17038), (79, 17101), (81, 17104), (82, 17110), (84, 17119), (100, 17227), (103, 17239),

Gene: Eastland_20 Start: 16964, Stop: 17908, Start Num: 28

Candidate Starts for Eastland_20:

(25, 16946), (Start: 28 @16964 has 6 MA's), (Start: 31 @16979 has 28 MA's), (36, 17033), (41, 17099), (44, 17114), (46, 17150), (48, 17204), (51, 17231), (55, 17291), (69, 17447), (78, 17546), (116, 17735), (121, 17834),

Gene: EhyElimayoE_119 Start: 77532, Stop: 78617, Start Num: 31

Candidate Starts for EhyElimayoE_119:

(26, 77493), (Start: 31 @77532 has 28 MA's), (33, 77544), (34, 77562), (41, 77652), (42, 77661), (45, 77679), (46, 77703), (59, 77886), (62, 77928), (78, 78081), (80, 78090), (82, 78102), (86, 78171), (89, 78216), (90, 78222), (96, 78327), (99, 78339), (104, 78357), (115, 78438),

Gene: Eklok_20 Start: 16979, Stop: 17923, Start Num: 28

Candidate Starts for Eklok_20:

(25, 16961), (Start: 28 @16979 has 6 MA's), (Start: 31 @16994 has 28 MA's), (36, 17048), (41, 17114), (44, 17129), (46, 17165), (48, 17219), (51, 17246), (55, 17306), (69, 17462), (78, 17561), (116, 17750), (121, 17849),

Gene: Frankenweenie_128 Start: 82432, Stop: 83532, Start Num: 31

Candidate Starts for Frankenweenie_128:

(18, 82351), (20, 82369), (27, 82405), (Start: 31 @82432 has 28 MA's), (33, 82444), (42, 82561), (43, 82564), (47, 82612), (48, 82657), (59, 82786), (76, 82960), (78, 82981), (80, 82990), (82, 83002), (86, 83071), (89, 83116), (99, 83239), (107, 83299), (115, 83338),

Gene: FrumpyGal_20 Start: 16964, Stop: 17908, Start Num: 28

Candidate Starts for FrumpyGal_20:

(25, 16946), (Start: 28 @16964 has 6 MA's), (Start: 31 @16979 has 28 MA's), (36, 17033), (41, 17099), (44, 17114), (46, 17150), (48, 17204), (51, 17231), (55, 17291), (69, 17447), (78, 17546), (116, 17735), (121, 17834),

Gene: Gibson_28 Start: 19877, Stop: 20806, Start Num: 32

Candidate Starts for Gibson_28:

(22, 19820), (Start: 32 @19877 has 7 MA's), (37, 19937), (42, 20012), (46, 20045), (51, 20126), (54, 20174), (59, 20228), (61, 20261), (78, 20420), (95, 20507), (102, 20525), (108, 20576), (117, 20624), (119, 20669), (122, 20753),

Gene: Greenbelt_27 Start: 19143, Stop: 20069, Start Num: 31

Candidate Starts for Greenbelt_27:

(Start: 31 @19143 has 28 MA's), (40, 19257), (41, 19269), (42, 19278), (43, 19281), (45, 19296), (50, 19395), (54, 19449), (57, 19503), (59, 19527), (66, 19608), (78, 19722), (80, 19731), (95, 19791), (109, 19878),

Gene: HFrancette_20 Start: 17010, Stop: 17954, Start Num: 31

Candidate Starts for HFrancette_20:

(Start: 31 @17010 has 28 MA's), (36, 17064), (44, 17145), (46, 17181), (48, 17235), (50, 17256), (55, 17322), (68, 17472), (70, 17490), (72, 17523), (78, 17577), (82, 17598), (116, 17781),

Gene: Haizum_26 Start: 21588, Stop: 22541, Start Num: 30

Candidate Starts for Haizum_26:

(16, 21519), (Start: 30 @21588 has 5 MA's), (33, 21600), (43, 21729), (51, 21840), (55, 21900), (58, 21945), (59, 21948), (68, 22038), (81, 22161), (83, 22170), (94, 22215), (105, 22278), (106, 22290),

Gene: Ididsumtinwong_21 Start: 16159, Stop: 17100, Start Num: 31

Candidate Starts for Ididsumtinwong_21:

(Start: 31 @16159 has 28 MA's), (41, 16279), (44, 16294), (46, 16330), (48, 16384), (50, 16405), (54, 16459), (72, 16654), (78, 16708), (80, 16717),

Gene: Ignacio_20 Start: 17010, Stop: 17954, Start Num: 31

Candidate Starts for Ignacio_20:

(Start: 31 @17010 has 28 MA's), (36, 17064), (44, 17145), (46, 17181), (48, 17235), (50, 17256), (55, 17322), (68, 17472), (70, 17490), (72, 17523), (78, 17577), (82, 17598), (116, 17781),

Gene: JustBecause_116 Start: 76599, Stop: 77684, Start Num: 31

Candidate Starts for JustBecause_116:

(8, 76401), (10, 76410), (18, 76518), (20, 76536), (Start: 31 @76599 has 28 MA's), (33, 76611), (41, 76719), (42, 76728), (43, 76731), (45, 76746), (48, 76824), (54, 76899), (76, 77127), (78, 77148), (80, 77157), (86, 77238), (89, 77283), (99, 77406), (115, 77505), (119, 77562),

Gene: Kela_117 Start: 76479, Stop: 77564, Start Num: 31

Candidate Starts for Kela_117:

(10, 76290), (18, 76398), (20, 76416), (Start: 31 @76479 has 28 MA's), (33, 76491), (41, 76599), (42, 76608), (43, 76611), (45, 76626), (48, 76704), (54, 76779), (76, 77007), (78, 77028), (80, 77037), (86, 77118), (89, 77163), (99, 77286), (115, 77385), (119, 77442),

Gene: Kradal_118 Start: 77529, Stop: 78614, Start Num: 31

Candidate Starts for Kradal_118:

(26, 77490), (Start: 31 @77529 has 28 MA's), (33, 77541), (34, 77559), (41, 77649), (42, 77658), (45, 77676), (46, 77700), (59, 77883), (62, 77925), (78, 78078), (80, 78087), (82, 78099), (86, 78168), (89, 78213), (90, 78219), (93, 78294), (96, 78324), (99, 78336), (104, 78354), (115, 78435),

Gene: Kromp_25 Start: 22282, Stop: 23208, Start Num: 31

Candidate Starts for Kromp_25:

(Start: 28 @22267 has 6 MA's), (Start: 31 @22282 has 28 MA's), (33, 22294), (35, 22324), (41, 22402), (42, 22411), (45, 22429), (48, 22507), (70, 22744), (72, 22777), (76, 22810), (78, 22831), (80, 22840), (104, 22933), (112, 22990), (114, 22999), (119, 23071), (124, 23197),

Gene: Lishka_21 Start: 16123, Stop: 17064, Start Num: 31

Candidate Starts for Lishka_21:

(Start: 31 @16123 has 28 MA's), (41, 16243), (44, 16258), (46, 16294), (48, 16348), (50, 16369), (54, 16423), (72, 16618), (78, 16672), (80, 16681),

Gene: Lizz_28 Start: 19686, Stop: 20615, Start Num: 32

Candidate Starts for Lizz_28:

(22, 19629), (Start: 32 @19686 has 7 MA's), (37, 19746), (42, 19821), (46, 19854), (51, 19935), (54, 19983), (59, 20037), (61, 20070), (78, 20229), (95, 20316), (102, 20334), (108, 20385), (117, 20433), (119, 20478), (122, 20562),

Gene: Mischief19_36 Start: 37234, Stop: 38199, Start Num: 31

Candidate Starts for Mischief19_36:

(9, 37042), (12, 37096), (15, 37111), (19, 37159), (Start: 31 @37234 has 28 MA's), (33, 37246), (42, 37363), (43, 37366), (54, 37525), (64, 37669), (67, 37684), (68, 37687), (70, 37705), (73, 37741), (82, 37813), (120, 38092), (123, 38152), (124, 38188),

Gene: Nirvana_123 Start: 80829, Stop: 81929, Start Num: 31

Candidate Starts for Nirvana_123:

(18, 80748), (20, 80766), (27, 80802), (Start: 31 @80829 has 28 MA's), (33, 80841), (41, 80949), (42, 80958), (43, 80961), (47, 81009), (48, 81054), (54, 81129), (59, 81183), (76, 81357), (78, 81378), (80, 81387), (82, 81399), (86, 81468), (89, 81513), (99, 81636),

Gene: Nishikigoi_26 Start: 21588, Stop: 22541, Start Num: 30

Candidate Starts for Nishikigoi_26:

(16, 21519), (Start: 30 @21588 has 5 MA's), (33, 21600), (43, 21729), (51, 21840), (55, 21900), (58, 21945), (59, 21948), (68, 22038), (81, 22161), (83, 22170), (94, 22215), (105, 22278), (106, 22290),

Gene: PHTowN_28 Start: 19684, Stop: 20613, Start Num: 32

Candidate Starts for PHTowN_28:

(22, 19627), (Start: 32 @19684 has 7 MA's), (37, 19744), (42, 19819), (46, 19852), (51, 19933), (54, 19981), (59, 20035), (61, 20068), (78, 20227), (95, 20314), (102, 20332), (108, 20383), (117, 20431), (119, 20476), (122, 20560),

Gene: PapayaSalad_21 Start: 16134, Stop: 17075, Start Num: 31

Candidate Starts for PapayaSalad_21:

(Start: 31 @16134 has 28 MA's), (41, 16254), (44, 16269), (46, 16305), (48, 16359), (50, 16380), (54, 16434), (72, 16629), (78, 16683), (80, 16692),

Gene: Piccadilly_20 Start: 16963, Stop: 17907, Start Num: 28

Candidate Starts for Piccadilly_20:

(25, 16945), (Start: 28 @16963 has 6 MA's), (Start: 31 @16978 has 28 MA's), (36, 17032), (41, 17098), (44, 17113), (46, 17149), (48, 17203), (51, 17230), (55, 17290), (69, 17446), (78, 17545), (116, 17734), (121, 17833),

Gene: Quantum_117 Start: 77529, Stop: 78614, Start Num: 31

Candidate Starts for Quantum_117:

(26, 77490), (Start: 31 @77529 has 28 MA's), (33, 77541), (34, 77559), (41, 77649), (42, 77658), (45, 77676), (46, 77700), (59, 77883), (62, 77925), (78, 78078), (80, 78087), (82, 78099), (86, 78168), (89, 78213), (90, 78219), (93, 78294), (96, 78324), (99, 78336), (104, 78354), (115, 78435),

Gene: Rideau_3 Start: 2618, Stop: 3529, Start Num: 31

Candidate Starts for Rideau_3:

(Start: 31 @2618 has 28 MA's), (33, 2630), (36, 2672), (42, 2753), (45, 2771), (46, 2795), (55, 2936), (59, 3002), (65, 3080), (67, 3089), (78, 3197), (82, 3218), (101, 3278), (109, 3344),

Gene: Rooney_28 Start: 19874, Stop: 20803, Start Num: 32

Candidate Starts for Rooney_28:

(22, 19817), (Start: 32 @19874 has 7 MA's), (37, 19934), (46, 20042), (51, 20123), (54, 20171), (59, 20225), (61, 20258), (78, 20417), (95, 20504), (102, 20522), (108, 20573), (117, 20621), (119, 20666), (122, 20750),

Gene: RosePharie_2 Start: 2633, Stop: 3526, Start Num: 31

Candidate Starts for RosePharie_2:

(Start: 31 @2633 has 28 MA's), (42, 2762), (43, 2765), (45, 2780), (48, 2858), (49, 2876), (54, 2933), (55, 2945), (67, 3074), (78, 3191), (87, 3230), (114, 3353),

Gene: SV1_21 Start: 16368, Stop: 17315, Start Num: 31

Candidate Starts for SV1_21:

(Start: 31 @16368 has 28 MA's), (41, 16488), (44, 16503), (46, 16539), (48, 16593), (50, 16614), (54, 16668), (72, 16863), (77, 16905), (78, 16917), (80, 16926),

Gene: Sarkar_126 Start: 77529, Stop: 78614, Start Num: 31

Candidate Starts for Sarkar_126:

(26, 77490), (Start: 31 @77529 has 28 MA's), (33, 77541), (34, 77559), (41, 77649), (42, 77658), (45, 77676), (46, 77700), (59, 77883), (62, 77925), (78, 78078), (80, 78087), (82, 78099), (86, 78168), (89, 78213), (90, 78219), (93, 78294), (96, 78324), (99, 78336), (104, 78354), (115, 78435),

Gene: SassyC_30 Start: 20015, Stop: 20932, Start Num: 32

Candidate Starts for SassyC_30:

(13, 19877), (17, 19907), (Start: 32 @20015 has 7 MA's), (51, 20264), (52, 20297), (54, 20312), (61, 20402), (75, 20528), (78, 20561), (92, 20621), (95, 20648), (108, 20717), (122, 20879),

Gene: Satis_118 Start: 77525, Stop: 78610, Start Num: 31

Candidate Starts for Satis_118:

(26, 77486), (Start: 31 @77525 has 28 MA's), (33, 77537), (34, 77555), (41, 77645), (42, 77654), (45, 77672), (46, 77696), (59, 77879), (62, 77921), (78, 78074), (80, 78083), (82, 78095), (86, 78164), (89, 78209), (90, 78215), (93, 78290), (96, 78320), (99, 78332), (104, 78350), (115, 78431),

Gene: Schlegelian_20 Start: 16993, Stop: 17943, Start Num: 31

Candidate Starts for Schlegelian_20:

(25, 16960), (Start: 28 @16978 has 6 MA's), (Start: 31 @16993 has 28 MA's), (36, 17047), (41, 17113), (44, 17128), (46, 17164), (48, 17218), (50, 17239), (55, 17305), (68, 17455), (70, 17473), (72, 17506), (78, 17560), (82, 17581), (116, 17770),

Gene: ShakeNBake_28 Start: 19702, Stop: 20631, Start Num: 32

Candidate Starts for ShakeNBake_28:

(22, 19645), (Start: 32 @19702 has 7 MA's), (37, 19762), (42, 19837), (46, 19870), (51, 19951), (54, 19999), (59, 20053), (61, 20086), (78, 20245), (95, 20332), (102, 20350), (108, 20401), (117, 20449), (119, 20494), (122, 20578),

Gene: Tefunt_26 Start: 21591, Stop: 22544, Start Num: 30

Candidate Starts for Tefunt_26:

(16, 21522), (Start: 30 @21591 has 5 MA's), (33, 21603), (43, 21732), (51, 21843), (55, 21903), (59, 21951), (68, 22041), (81, 22164), (83, 22173), (94, 22218), (105, 22281), (106, 22293),

Gene: Virizion_32 Start: 20133, Stop: 21002, Start Num: 37

Candidate Starts for Virizion_32:

(22, 20016), (Start: 32 @20073 has 7 MA's), (37, 20133), (46, 20241), (51, 20322), (54, 20370), (59, 20424), (61, 20457), (78, 20616), (95, 20703), (102, 20721), (108, 20772), (117, 20820), (119, 20865),

(122, 20949),

Gene: Vondra_20 Start: 17009, Stop: 17959, Start Num: 31

Candidate Starts for Vondra_20:

(Start: 31 @17009 has 28 MA's), (36, 17063), (44, 17144), (46, 17180), (48, 17234), (50, 17255), (55, 17321), (68, 17471), (70, 17489), (72, 17522), (78, 17576), (82, 17597), (116, 17786),

Gene: Wentworth_29 Start: 20065, Stop: 20982, Start Num: 32

Candidate Starts for Wentworth_29:

(23, 20017), (Start: 32 @20065 has 7 MA's), (51, 20314), (52, 20347), (54, 20362), (61, 20452), (75, 20578), (78, 20611), (82, 20632), (102, 20716), (108, 20767), (122, 20929),

Gene: Wilkos_29 Start: 19977, Stop: 20894, Start Num: 32

Candidate Starts for Wilkos_29:

(Start: 32 @19977 has 7 MA's), (51, 20226), (52, 20259), (54, 20274), (61, 20364), (78, 20523), (91, 20580), (102, 20628), (108, 20679), (122, 20841),

Gene: Xkcd426_33 Start: 33252, Stop: 34259, Start Num: 31

Candidate Starts for Xkcd426_33:

(1, 32271), (2, 32316), (3, 32346), (4, 32418), (5, 32517), (14, 33123), (24, 33213), (Start: 31 @33252 has 28 MA's), (43, 33384), (70, 33729), (71, 33753), (74, 33774), (80, 33825), (85, 33876), (92, 33930), (97, 33972), (98, 33975), (111, 34053), (114, 34062),

Gene: Yara_25 Start: 19303, Stop: 20226, Start Num: 29

Candidate Starts for Yara_25:

(Start: 29 @19303 has 1 MA's), (34, 19333), (38, 19372), (41, 19429), (42, 19438), (43, 19441), (46, 19480), (78, 19879), (80, 19888), (109, 20041),

Gene: Yosif_28 Start: 22917, Stop: 23870, Start Num: 31

Candidate Starts for Yosif_28:

(7, 22689), (11, 22770), (16, 22803), (Start: 31 @22917 has 28 MA's), (33, 22932), (34, 22950), (36, 22974), (41, 23049), (42, 23058), (51, 23172), (56, 23250), (59, 23280), (83, 23496), (88, 23517), (106, 23619), (110, 23637), (118, 23721),

Gene: pZL12_44c Start: 32427, Stop: 31489, Start Num: 31

Candidate Starts for pZL12_44c:

(21, 32484), (Start: 31 @32427 has 28 MA's), (41, 32307), (42, 32298), (43, 32295), (45, 32280), (78, 31875), (80, 31866),