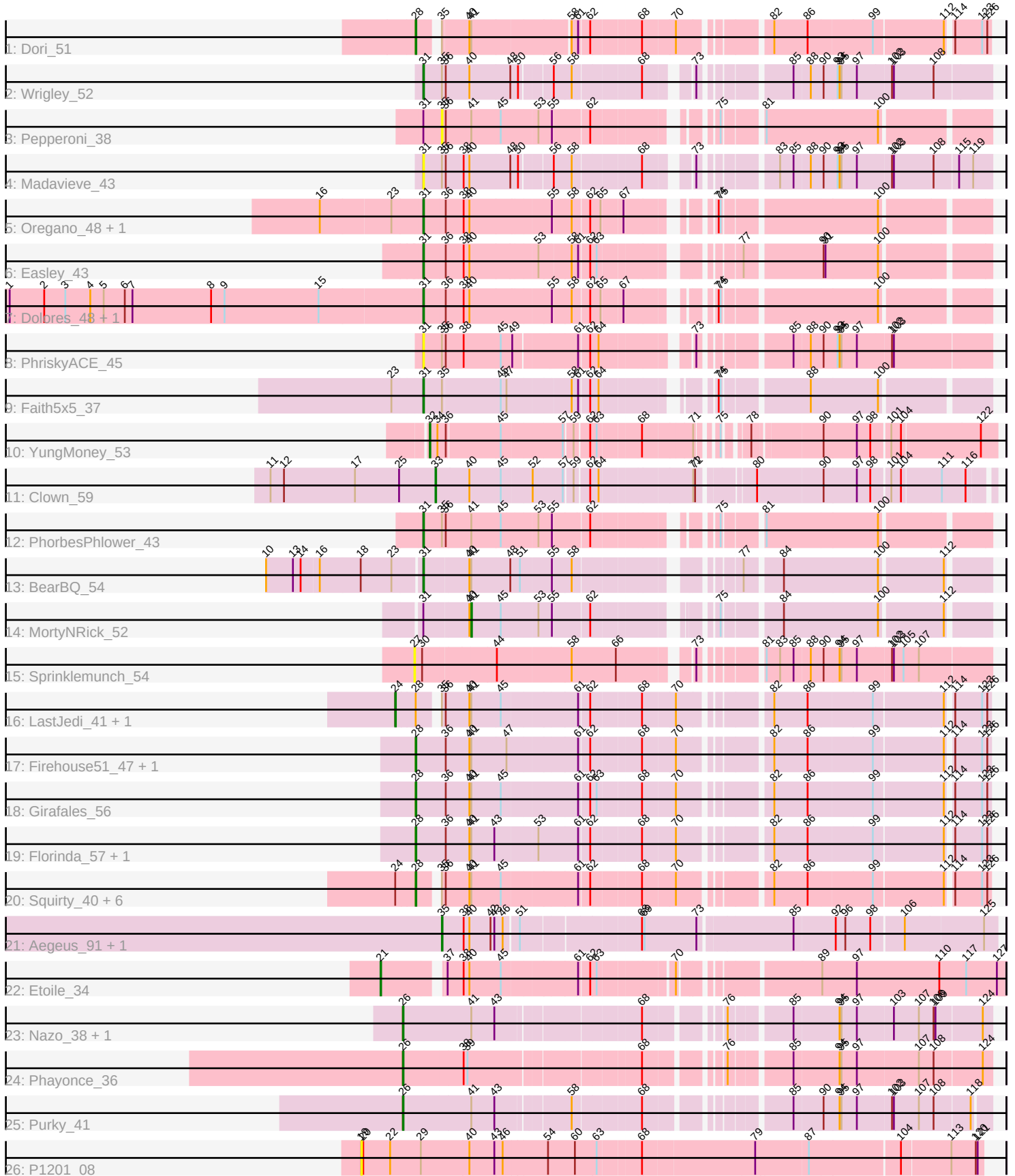


Pham 280625



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 280625 Report

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

Pham number 280625 has 39 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Dori_51
- Track 2 : Wrigley_52
- Track 3 : Pepperoni_38
- Track 4 : Madavieve_43
- Track 5 : Oregano_48, Annalisa_45
- Track 6 : Easley_43
- Track 7 : Dolores_48, WinkNick_49
- Track 8 : PhriskyACE_45
- Track 9 : Faith5x5_37
- Track 10 : YungMoney_53
- Track 11 : Clown_59
- Track 12 : PhorbesPhlower_43
- Track 13 : BearBQ_54
- Track 14 : MortyNRick_52
- Track 15 : Sprinklemunch_54
- Track 16 : LastJedi_41, LordVader_44
- Track 17 : Firehouse51_47, DosHalletts_47
- Track 18 : Girafales_56
- Track 19 : Florinda_57, Quico_55
- Track 20 : Squirty_40, Zizzle_51, Donkeykong_46, Jennelsea_44, Brocalys_43, Pippy_45, Clifton_42
- Track 21 : Aegeus_91, Baudelaire_91
- Track 22 : Etoile_34
- Track 23 : Nazo_38, BigNuz_37
- Track 24 : Phayonce_36
- Track 25 : Purky_41
- Track 26 : P1201_08

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

The start number called the most often in the published annotations is 28, it was called in 12 of the 32 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Brocalys_43, Clifton_42, Donkeykong_46, Dori_51, DosHalletts_47, Firehouse51_47, Florinda_57, Girafales_56, Jennelsea_44, Pippy_45, Quico_55, Squirty_40, Zizzle_51,

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

- LastJedi_41, LordVader_44,

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

- Aegeus_91, Annalisa_45, Baudelaire_91, BearBQ_54, BigNuz_37, Clown_59, Dolores_48, Easley_43, Etoile_34, Faith5x5_37, Madavieve_43, MortyNRick_52, Nazo_38, Oregano_48, P1201_08, Pepperoni_38, Phayonce_36, PhorbesPhlower_43, PhriskyACE_45, Purky_41, Sprinklemunch_54, WinkNick_49, Wrigley_52, YungMoney_53,

Summary by start number:

Start 19:

- Found in 1 of 39 (2.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: P1201_08 (singleton),

Start 21:

- Found in 1 of 39 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Etoile_34 (P1),

Start 24:

- Found in 9 of 39 (23.1%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 22.2% of time when present
- Phage (with cluster) where this start called: LastJedi_41 (F1), LordVader_44 (F),

Start 26:

- Found in 4 of 39 (10.3%) of genes in pham
- Manual Annotations of this start: 4 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BigNuz_37 (P4), Nazo_38 (P4), Phayonce_36 (P5), Purky_41 (P6),

Start 27:

- Found in 1 of 39 (2.6%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sprinklemunch_54 (DW),

Start 28:

- Found in 15 of 39 (38.5%) of genes in pham
- Manual Annotations of this start: 12 of 32
- Called 86.7% of time when present
- Phage (with cluster) where this start called: Brocalys_43 (F1), Clifton_42 (F1), Donkeykong_46 (F1), Dori_51 (AD), DosHalletts_47 (F1), Firehouse51_47 (F1),

Florinda_57 (F1), Girafales_56 (F1), Jennelsea_44 (F1), Pippy_45 (F1), Quico_55 (F1), Squirty_40 (F3), Zizzle_51 (F1),

Start 31:

- Found in 13 of 39 (33.3%) of genes in pham
- Manual Annotations of this start: 9 of 32
- Called 84.6% of time when present
- Phage (with cluster) where this start called: Annalisa_45 (CZ4), BearBQ_54 (DN), Dolores_48 (CZ4), Easley_43 (CZ4), Faith5x5_37 (CZ6), Madavieve_43 (CZ1), Oregano_48 (CZ4), PhorbesPhlower_43 (DH), PhriskyACE_45 (CZ4), WinkNick_49 (CZ4), Wrigley_52 (CY4),

Start 32:

- Found in 1 of 39 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: YungMoney_53 (DC1),

Start 33:

- Found in 1 of 39 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Clown_59 (DC2),

Start 35:

- Found in 18 of 39 (46.2%) of genes in pham
- Manual Annotations of this start: 2 of 32
- Called 16.7% of time when present
- Phage (with cluster) where this start called: Aegeus_91 (L5), Baudelaire_91 (L5), Pepperoni_38 (CZ),

Start 41:

- Found in 22 of 39 (56.4%) of genes in pham
- Manual Annotations of this start: 1 of 32
- Called 4.5% of time when present
- Phage (with cluster) where this start called: MortyNRick_52 (DN),

Summary by clusters:

There are 20 clusters represented in this pham: DN, F1, F, P1, P6, AD, DH, CY4, P4, F3, CZ6, singleton, CZ4, CZ, L5, CZ1, DW, DC2, P5, DC1,

Info for manual annotations of cluster AD:

- Start number 28 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster CY4:

- Start number 31 was manually annotated 1 time for cluster CY4.

Info for manual annotations of cluster CZ4:

- Start number 31 was manually annotated 5 times for cluster CZ4.

Info for manual annotations of cluster CZ6:

- Start number 31 was manually annotated 1 time for cluster CZ6.

Info for manual annotations of cluster DC1:

- Start number 32 was manually annotated 1 time for cluster DC1.

Info for manual annotations of cluster DC2:

- Start number 33 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DH:

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

Info for manual annotations of cluster DN:

- Start number 31 was manually annotated 1 time for cluster DN.
- Start number 41 was manually annotated 1 time for cluster DN.

Info for manual annotations of cluster F1:

- Start number 24 was manually annotated 1 time for cluster F1.
- Start number 28 was manually annotated 10 times for cluster F1.

Info for manual annotations of cluster F3:

- Start number 28 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster L5:

- Start number 35 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster P1:

- Start number 21 was manually annotated 1 time for cluster P1.

Info for manual annotations of cluster P4:

- Start number 26 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:

- Start number 26 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 26 was manually annotated 1 time for cluster P6.

Gene Information:

Gene: Aegeus_91 Start: 56094, Stop: 56897, Start Num: 35

Candidate Starts for Aegeus_91:

(Start: 35 @56094 has 2 MA's), (38, 56127), (40, 56136), (42, 56169), (43, 56175), (46, 56187), (51, 56208), (68, 56373), (69, 56376), (73, 56457), (85, 56595), (92, 56655), (96, 56670), (98, 56709), (106, 56757), (125, 56877),

Gene: Annalisa_45 Start: 33306, Stop: 34055, Start Num: 31

Candidate Starts for Annalisa_45:

(16, 33153), (23, 33261), (Start: 31 @33306 has 9 MA's), (36, 33336), (38, 33363), (40, 33372), (55, 33489), (58, 33516), (62, 33540), (65, 33555), (67, 33585), (74, 33675), (75, 33678), (100, 33900),

Gene: Baudelaire_91 Start: 56094, Stop: 56897, Start Num: 35

Candidate Starts for Baudelaire_91:

(Start: 35 @56094 has 2 MA's), (38, 56127), (40, 56136), (42, 56169), (43, 56175), (46, 56187), (51, 56208), (68, 56373), (69, 56376), (73, 56457), (85, 56595), (92, 56655), (96, 56670), (98, 56709), (106, 56757), (125, 56877),

Gene: BearBQ_54 Start: 38297, Stop: 39052, Start Num: 31

Candidate Starts for BearBQ_54:

(10, 38063), (13, 38105), (14, 38117), (16, 38144), (18, 38207), (23, 38255), (Start: 31 @38297 has 9 MA's), (40, 38363), (Start: 41 @38366 has 1 MA's), (48, 38426), (51, 38438), (55, 38480), (58, 38507), (77, 38702), (84, 38753), (100, 38897), (112, 38990),

Gene: BigNuz_37 Start: 30064, Stop: 30867, Start Num: 26

Candidate Starts for BigNuz_37:

(Start: 26 @30064 has 4 MA's), (Start: 41 @30166 has 1 MA's), (43, 30202), (68, 30394), (76, 30490), (85, 30574), (94, 30640), (95, 30643), (97, 30667), (103, 30721), (107, 30760), (108, 30781), (109, 30784), (124, 30853),

Gene: Brocalys_43 Start: 31207, Stop: 31986, Start Num: 28

Candidate Starts for Brocalys_43:

(Start: 24 @31177 has 1 MA's), (Start: 28 @31207 has 12 MA's), (Start: 35 @31231 has 2 MA's), (36, 31234), (40, 31270), (Start: 41 @31273 has 1 MA's), (45, 31318), (61, 31426), (62, 31441), (68, 31510), (70, 31558), (82, 31675), (86, 31726), (99, 31822), (112, 31927), (114, 31933), (123, 31975), (126, 31981),

Gene: Clifton_42 Start: 31558, Stop: 32337, Start Num: 28

Candidate Starts for Clifton_42:

(Start: 24 @31528 has 1 MA's), (Start: 28 @31558 has 12 MA's), (Start: 35 @31582 has 2 MA's), (36, 31585), (40, 31621), (Start: 41 @31624 has 1 MA's), (45, 31669), (61, 31777), (62, 31792), (68, 31861), (70, 31909), (82, 32026), (86, 32077), (99, 32173), (112, 32278), (114, 32284), (123, 32326), (126, 32332),

Gene: Clown_59 Start: 43467, Stop: 44249, Start Num: 33

Candidate Starts for Clown_59:

(11, 43209), (12, 43230), (17, 43341), (25, 43410), (Start: 33 @43467 has 1 MA's), (40, 43518), (45, 43566), (52, 43611), (57, 43656), (59, 43668), (62, 43689), (64, 43701), (71, 43833), (72, 43836), (80, 43908), (90, 44004), (97, 44055), (98, 44076), (101, 44103), (104, 44118), (111, 44178), (116, 44214),

Gene: Dolores_48 Start: 34386, Stop: 35135, Start Num: 31

Candidate Starts for Dolores_48:

(1, 33747), (2, 33801), (3, 33834), (4, 33873), (5, 33894), (6, 33927), (7, 33939), (8, 34062), (9, 34083), (15, 34230), (Start: 31 @34386 has 9 MA's), (36, 34416), (38, 34443), (40, 34452), (55, 34569), (58, 34596), (62, 34620), (65, 34635), (67, 34665), (74, 34755), (75, 34758), (100, 34980),

Gene: Donkeykong_46 Start: 35576, Stop: 36355, Start Num: 28

Candidate Starts for Donkeykong_46:

(Start: 24 @35546 has 1 MA's), (Start: 28 @35576 has 12 MA's), (Start: 35 @35600 has 2 MA's), (36, 35603), (40, 35639), (Start: 41 @35642 has 1 MA's), (45, 35687), (61, 35795), (62, 35810), (68, 35879), (70, 35927), (82, 36044), (86, 36095), (99, 36191), (112, 36296), (114, 36302), (123, 36344), (126, 36350),

Gene: Dori_51 Start: 44920, Stop: 45693, Start Num: 28

Candidate Starts for Dori_51:

(Start: 28 @44920 has 12 MA's), (Start: 35 @44941 has 2 MA's), (40, 44980), (Start: 41 @44983 has 1 MA's), (58, 45124), (61, 45133), (62, 45148), (68, 45217), (70, 45265), (82, 45382), (86, 45433), (99, 45529), (112, 45634), (114, 45640), (123, 45682), (126, 45688),

Gene: DosHalletts_47 Start: 34853, Stop: 35650, Start Num: 28

Candidate Starts for DosHalletts_47:

(Start: 28 @34853 has 12 MA's), (36, 34895), (40, 34931), (Start: 41 @34934 has 1 MA's), (47, 34988), (61, 35090), (62, 35105), (68, 35174), (70, 35222), (82, 35339), (86, 35390), (99, 35486), (112, 35591), (114, 35597), (123, 35639), (126, 35645),

Gene: Easley_43 Start: 32655, Stop: 33410, Start Num: 31

Candidate Starts for Easley_43:

(Start: 31 @32655 has 9 MA's), (36, 32685), (38, 32712), (40, 32721), (53, 32820), (58, 32865), (61, 32874), (62, 32889), (63, 32898), (77, 33060), (90, 33171), (91, 33174), (100, 33255),

Gene: Etoile_34 Start: 27939, Stop: 28805, Start Num: 21

Candidate Starts for Etoile_34:

(Start: 21 @27939 has 1 MA's), (37, 28020), (38, 28044), (40, 28053), (45, 28101), (61, 28209), (62, 28224), (63, 28233), (70, 28335), (89, 28518), (97, 28572), (110, 28701), (117, 28743), (127, 28791),

Gene: Faith5x5_37 Start: 28702, Stop: 29454, Start Num: 31

Candidate Starts for Faith5x5_37:

(23, 28657), (Start: 31 @28702 has 9 MA's), (Start: 35 @28729 has 2 MA's), (45, 28816), (47, 28825), (58, 28915), (61, 28924), (62, 28939), (64, 28951), (74, 29074), (75, 29077), (88, 29197), (100, 29299),

Gene: Firehouse51_47 Start: 36491, Stop: 37288, Start Num: 28

Candidate Starts for Firehouse51_47:

(Start: 28 @36491 has 12 MA's), (36, 36533), (40, 36569), (Start: 41 @36572 has 1 MA's), (47, 36626), (61, 36728), (62, 36743), (68, 36812), (70, 36860), (82, 36977), (86, 37028), (99, 37124), (112, 37229), (114, 37235), (123, 37277), (126, 37283),

Gene: Florinda_57 Start: 36157, Stop: 36951, Start Num: 28

Candidate Starts for Florinda_57:

(Start: 28 @36157 has 12 MA's), (36, 36199), (40, 36235), (Start: 41 @36238 has 1 MA's), (43, 36274), (53, 36334), (61, 36391), (62, 36406), (68, 36475), (70, 36523), (82, 36640), (86, 36691), (99, 36787), (112, 36892), (114, 36898), (123, 36940), (126, 36946),

Gene: Girafales_56 Start: 35966, Stop: 36760, Start Num: 28

Candidate Starts for Girafales_56:

(Start: 28 @35966 has 12 MA's), (36, 36008), (40, 36044), (Start: 41 @36047 has 1 MA's), (45, 36092), (61, 36200), (62, 36215), (63, 36224), (68, 36284), (70, 36332), (82, 36449), (86, 36500), (99, 36596), (112, 36701), (114, 36707), (123, 36749), (126, 36755),

Gene: Jennelsea_44 Start: 32861, Stop: 33640, Start Num: 28

Candidate Starts for Jennelsea_44:

(Start: 24 @32831 has 1 MA's), (Start: 28 @32861 has 12 MA's), (Start: 35 @32885 has 2 MA's), (36, 32888), (40, 32924), (Start: 41 @32927 has 1 MA's), (45, 32972), (61, 33080), (62, 33095), (68, 33164), (70, 33212), (82, 33329), (86, 33380), (99, 33476), (112, 33581), (114, 33587), (123, 33629), (126, 33635),

Gene: LastJedi_41 Start: 31571, Stop: 32380, Start Num: 24

Candidate Starts for LastJedi_41:

(Start: 24 @31571 has 1 MA's), (Start: 28 @31601 has 12 MA's), (Start: 35 @31625 has 2 MA's), (36, 31628), (40, 31664), (Start: 41 @31667 has 1 MA's), (45, 31712), (61, 31820), (62, 31835), (68, 31904), (70, 31952), (82, 32069), (86, 32120), (99, 32216), (112, 32321), (114, 32327), (123, 32369), (126, 32375),

Gene: LordVader_44 Start: 30174, Stop: 30983, Start Num: 24

Candidate Starts for LordVader_44:

(Start: 24 @30174 has 1 MA's), (Start: 28 @30204 has 12 MA's), (Start: 35 @30228 has 2 MA's), (36, 30231), (40, 30267), (Start: 41 @30270 has 1 MA's), (45, 30315), (61, 30423), (62, 30438), (68, 30507), (70, 30555), (82, 30672), (86, 30723), (99, 30819), (112, 30924), (114, 30930), (123, 30972), (126, 30978),

Gene: Madavieve_43 Start: 34739, Stop: 35503, Start Num: 31

Candidate Starts for Madavieve_43:

(Start: 31 @34739 has 9 MA's), (Start: 35 @34766 has 2 MA's), (36, 34769), (38, 34796), (40, 34805), (48, 34868), (50, 34880), (56, 34922), (58, 34949), (68, 35042), (73, 35096), (83, 35189), (85, 35210), (88, 35234), (90, 35252), (93, 35273), (94, 35276), (95, 35279), (97, 35303), (102, 35354), (103, 35357), (108, 35417), (115, 35453), (119, 35474),

Gene: MortyNRick_52 Start: 37928, Stop: 38608, Start Num: 41

Candidate Starts for MortyNRick_52:

(Start: 31 @37859 has 9 MA's), (40, 37925), (Start: 41 @37928 has 1 MA's), (45, 37973), (53, 38024), (55, 38042), (62, 38093), (75, 38231), (84, 38309), (100, 38453), (112, 38546),

Gene: Nazo_38 Start: 30066, Stop: 30869, Start Num: 26

Candidate Starts for Nazo_38:

(Start: 26 @30066 has 4 MA's), (Start: 41 @30168 has 1 MA's), (43, 30204), (68, 30396), (76, 30492), (85, 30576), (94, 30642), (95, 30645), (97, 30669), (103, 30723), (107, 30762), (108, 30783), (109, 30786), (124, 30855),

Gene: Oregano_48 Start: 33939, Stop: 34688, Start Num: 31

Candidate Starts for Oregano_48:

(16, 33786), (23, 33894), (Start: 31 @33939 has 9 MA's), (36, 33969), (38, 33996), (40, 34005), (55, 34122), (58, 34149), (62, 34173), (65, 34188), (67, 34218), (74, 34308), (75, 34311), (100, 34533),

Gene: P1201_08 Start: 2597, Stop: 3520, Start Num: 19

Candidate Starts for P1201_08:

(19, 2597), (20, 2600), (22, 2642), (29, 2690), (40, 2765), (43, 2804), (46, 2816), (54, 2882), (60, 2924), (63, 2957), (68, 3017), (79, 3185), (87, 3263), (104, 3398), (113, 3473), (120, 3509), (121, 3512),

Gene: Pepperoni_38 Start: 29786, Stop: 30508, Start Num: 35

Candidate Starts for Pepperoni_38:

(Start: 31 @29759 has 9 MA's), (Start: 35 @29786 has 2 MA's), (36, 29789), (Start: 41 @29828 has 1 MA's), (45, 29873), (53, 29924), (55, 29942), (62, 29993), (75, 30131), (81, 30182), (100, 30353),

Gene: Phayonce_36 Start: 29962, Stop: 30771, Start Num: 26

Candidate Starts for Phayonce_36:

(Start: 26 @29962 has 4 MA's), (38, 30052), (39, 30058), (68, 30298), (76, 30394), (85, 30478), (94, 30544), (95, 30547), (97, 30571), (107, 30664), (108, 30685), (124, 30757),

Gene: PhorbesPhlower_43 Start: 29950, Stop: 30699, Start Num: 31

Candidate Starts for PhorbesPhlower_43:

(Start: 31 @29950 has 9 MA's), (Start: 35 @29977 has 2 MA's), (36, 29980), (Start: 41 @30019 has 1 MA's), (45, 30064), (53, 30115), (55, 30133), (62, 30184), (75, 30322), (81, 30373), (100, 30544),

Gene: PhriskyACE_45 Start: 34290, Stop: 35057, Start Num: 31

Candidate Starts for PhriskyACE_45:

(Start: 31 @34290 has 9 MA's), (Start: 35 @34317 has 2 MA's), (36, 34320), (38, 34347), (45, 34404), (49, 34422), (61, 34512), (62, 34527), (64, 34539), (73, 34650), (85, 34764), (88, 34788), (90, 34806), (93, 34827), (94, 34830), (95, 34833), (97, 34857), (102, 34908), (103, 34911),

Gene: Pippy_45 Start: 33164, Stop: 33943, Start Num: 28

Candidate Starts for Pippy_45:

(Start: 24 @33134 has 1 MA's), (Start: 28 @33164 has 12 MA's), (Start: 35 @33188 has 2 MA's), (36, 33191), (40, 33227), (Start: 41 @33230 has 1 MA's), (45, 33275), (61, 33383), (62, 33398), (68, 33467), (70, 33515), (82, 33632), (86, 33683), (99, 33779), (112, 33884), (114, 33890), (123, 33932), (126, 33938),

Gene: Purky_41 Start: 30689, Stop: 31480, Start Num: 26

Candidate Starts for Purky_41:

(Start: 26 @30689 has 4 MA's), (Start: 41 @30788 has 1 MA's), (43, 30824), (58, 30923), (68, 31016), (85, 31196), (90, 31238), (94, 31262), (95, 31265), (97, 31289), (102, 31340), (103, 31343), (107, 31382), (108, 31403), (118, 31454),

Gene: Quico_55 Start: 35977, Stop: 36771, Start Num: 28

Candidate Starts for Quico_55:

(Start: 28 @35977 has 12 MA's), (36, 36019), (40, 36055), (Start: 41 @36058 has 1 MA's), (43, 36094), (53, 36154), (61, 36211), (62, 36226), (68, 36295), (70, 36343), (82, 36460), (86, 36511), (99, 36607), (112, 36712), (114, 36718), (123, 36760), (126, 36766),

Gene: Sprinklemunch_54 Start: 39274, Stop: 40071, Start Num: 27

Candidate Starts for Sprinklemunch_54:

(27, 39274), (30, 39286), (44, 39388), (58, 39499), (66, 39568), (73, 39664), (81, 39736), (83, 39757), (85, 39778), (88, 39802), (90, 39820), (94, 39844), (95, 39847), (97, 39871), (102, 39922), (103, 39925), (105, 39940), (107, 39964),

Gene: Squirty_40 Start: 32337, Stop: 33116, Start Num: 28

Candidate Starts for Squirty_40:

(Start: 24 @32307 has 1 MA's), (Start: 28 @32337 has 12 MA's), (Start: 35 @32361 has 2 MA's), (36, 32364), (40, 32400), (Start: 41 @32403 has 1 MA's), (45, 32448), (61, 32556), (62, 32571), (68, 32640), (70, 32688), (82, 32805), (86, 32856), (99, 32952), (112, 33057), (114, 33063), (123, 33105), (126, 33111),

Gene: WinkNick_49 Start: 34309, Stop: 35058, Start Num: 31

Candidate Starts for WinkNick_49:

(1, 33670), (2, 33724), (3, 33757), (4, 33796), (5, 33817), (6, 33850), (7, 33862), (8, 33985), (9, 34006), (15, 34153), (Start: 31 @34309 has 9 MA's), (36, 34339), (38, 34366), (40, 34375), (55, 34492), (58, 34519), (62, 34543), (65, 34558), (67, 34588), (74, 34678), (75, 34681), (100, 34903),

Gene: Wrigley_52 Start: 36935, Stop: 37699, Start Num: 31

Candidate Starts for Wrigley_52:

(Start: 31 @36935 has 9 MA's), (Start: 35 @36962 has 2 MA's), (36, 36965), (40, 37001), (48, 37064), (50, 37076), (56, 37118), (58, 37145), (68, 37238), (73, 37292), (85, 37406), (88, 37430), (90, 37448), (93, 37469), (94, 37472), (95, 37475), (97, 37499), (102, 37550), (103, 37553), (108, 37613),

Gene: YungMoney_53 Start: 42952, Stop: 43722, Start Num: 32

Candidate Starts for YungMoney_53:

(Start: 32 @42952 has 1 MA's), (34, 42964), (36, 42976), (45, 43057), (57, 43147), (59, 43159), (62, 43180), (63, 43189), (68, 43249), (71, 43321), (75, 43342), (78, 43369), (90, 43465), (97, 43516), (98, 43537), (101, 43564), (104, 43579), (122, 43699),

Gene: Zizzle_51 Start: 36006, Stop: 36785, Start Num: 28

Candidate Starts for Zizzle_51:

(Start: 24 @35976 has 1 MA's), (Start: 28 @36006 has 12 MA's), (Start: 35 @36030 has 2 MA's), (36, 36033), (40, 36069), (Start: 41 @36072 has 1 MA's), (45, 36117), (61, 36225), (62, 36240), (68, 36309), (70, 36357), (82, 36474), (86, 36525), (99, 36621), (112, 36726), (114, 36732), (123, 36774), (126, 36780),