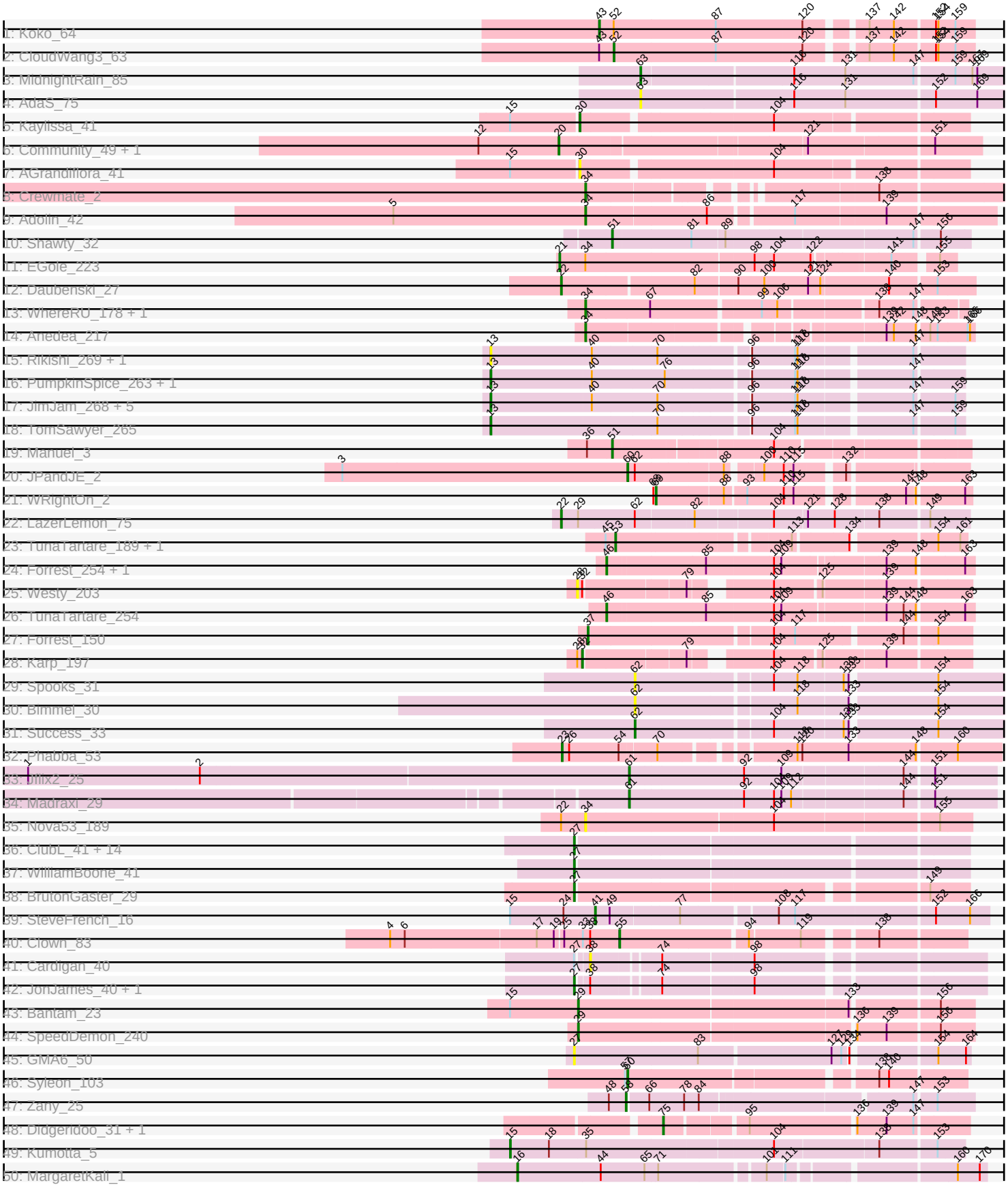
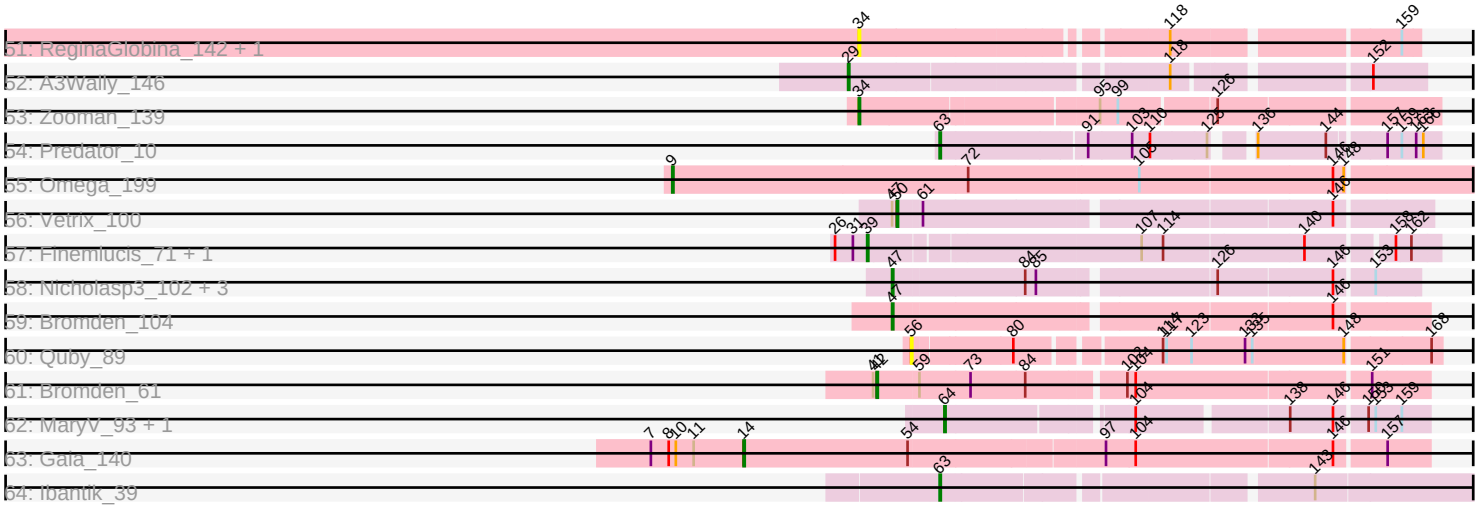
Pham 202831


1: Koko_64
2: CloudWang3_63
3: MidnightRain_85
4: AdaS_75
5: Kayllssa_41
6: Community_49 + 1
7: AGrandiflora_41
8: Crewmate_2
9: Adolin_42
10: Shawty_32
11: EGole_223
12: Daubenski_27
13: WhereRU_178 + 1
14: Anedea_217
15: Rikishi_269 + 1
16: PumpkinSpice_263 + 1
17: JimJam_268 + 5
18: TomSawyer_265
19: Manuel_3
20: JPandJE_2
21: WRightOn_2
22: LazerLemon_75
23: TunaTartare_189 + 1
24: Forrest_254 + 1
25: Westy_203
26: TunaTartare_254
27: Forrest_150
28: Karp_197
29: Spooks_31
30: Bimmel_30
31: Success_33
32: Phabba_53
33: Dilix2_25
34: Madraxi_29
35: Nova53_189
36: ClubL_41 + 14
37: WilliamBoone_41
38: BrutonGaster_29
39: SteveFrench_16
40: Clown_83
41: Cardigan_40
42: JonJames_40 + 1
43: Bantam_23
44: SpeedDemon_240
45: GMA6_50
46: Syleon_103
47: Zany_25
48: Didgeridoo_31 + 1
49: Kumotta_5
50: MargaretKail_1

Pham 202831


51: ReginaGlobina_142 + 1
52: A3Wally_146
53: Zooman_139
54: Predator_10
55: Omega_199
56: Vetrix_100
57: Finemiucis_71 + 1
58: Nicholasp3_102 + 3
59: Bromden_104
60: Quby_89
61: Bromden_61
62: MaryV_93 + 1
63: Gaia_140
64: Ibantik_39

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 202831 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202831 has 97 members, 19 are drafts.

Phages represented in each track:
- Track 1 : Koko_64
- Track 2 : CloudWang3_63
- Track 3 : MidnightRain_85
- Track 4 : AdaS_75
- Track 5 : Kaylissa_41
- Track 6 : Community_49, Nitro_45
- Track 7 : AGrandiflora_41
- Track 8 : Crewmate_2
- Track 9 : Adolin_42
- Track 10 : Shawty_32
- Track 11 : EGole_223
- Track 12 : Daubenski_27
- Track 13 : WhereRU_178, Persimmon_179
- Track 14 : Anedea_217
- Track 15 : Rikishi_269, Gibbi_270
- Track 16 : PumpkinSpice_263, Wipeout_252
- Track 17 : JimJam_268, Starbow_257, KentuckyRacer_267, CeilingFan_274, Spelly_265, Spilled_268
- Track 18 : TomSawyer_265
- Track 19 : Manuel_3
- Track 20 : JPandJE_2
- Track 21 : WRightOn_2
- Track 22 : LazerLemon_75
- Track 23 : TunaTartare_189, Sham_181
- Track 24 : Forrest_254, Jada_255
- Track 25 : Westy_203
- Track 26 : TunaTartare_254
- Track 27 : Forrest_150
- Track 28 : Karp_197
- Track 29 : Spooks_31
- Track 30 : Bimmel_30
- Track 31 : Success_33
- Track 32 : Phabba_53
- Track 33 : Jflix2_25
- Track 34 : Madraxi_29
- Track 35 : Nova53_189

• Track 36 : ClubL_41, Geeche_40, Dusty_39, Miskis_43, Lozinak_41, Engineer_42, Abscondus_40, Toniann_41, Norvs_42, Cucurbita_43, Smoothie_42, Aphelion_41, Culver_41, PhinkBoden_41, Bachita_43
• Track 37 : WilliamBoone_41
• Track 38 : BrutonGaster_29
• Track 39 : SteveFrench_16
• Track 40 : Clown_83
• Track 41 : Cardigan_40
• Track 42 : JonJames_40, Yvonnetastic_38
• Track 43 : Bantam_23
• Track 44 : SpeedDemon_240
• Track 45 : GMA6_50
• Track 46 : Syleon_103
• Track 47 : Zany_25
• Track 48 : Didgeridoo_31, Finalfrontier_30
• Track 49 : Kumotta_5
• Track 50 : MargaretKali_1
• Track 51 : ReginaGlobina_142, LeoJr_143
• Track 52 : A3Wally_146
• Track 53 : Zooman_139
• Track 54 : Predator_10
• Track 55 : Omega_199
• Track 56 : Vetrix_100
• Track 57 : Finemlucis_71, Gabriela_68
• Track 58 : Nicholasp3_102, Gardann_101, Rumpelstiltskin_98, Kahlid_101
• Track 59 : Bromden_104
• Track 60 : Quby_89
• Track 61 : Bromden_61
• Track 62 : MaryV_93, Wildcat_93
• Track 63 : Gaia_140
• Track 64 : Ibantik_39

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

The start number called the most often in the published annotations is 27, it was called in 15 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Abscondus_40, Aphelion_41, Bachita_43, BrutonGaster_29, ClubL_41, Cucurbita_43, Culver_41, Dusty_39, Engineer_42, GMA6_50, Geeche_40, JonJames_40, Lozinak_41, Miskis_43, Norvs_42, PhinkBoden_41, Smoothie_42, Toniann_41, WilliamBoone_41, Yvonnetastic_38,

Genes that have the "Most Annotated" start but do not call it:
• Cardigan_40,

Genes that do not have the "Most Annotated" start:
• A3Wally_146, AGrandiflora_41, AdaS_75, Adolin_42, Anedea_217, Bantam_23, Bimmel_30, Bromden_104, Bromden_61, CeilingFan_274, CloudWang3_63, Clown_83, Community_49, Crewmate_2, Daubenski_27, Didgeridoo_31, EGole_223,

Finalfrontier_30, Finemlucis_71, Forrest_150, Forrest_254, Gabriela_68, Gaia_140, Gardann_101, Gibbi_270, Ibantik_39, JPandJE_2, Jada_255, Jflix2_25, JimJam_268, Kahlid_101, Karp_197, Kaylissa_41, KentuckyRacer_267, Koko_64, Kumotta_5, LazerLemon_75, LeoJr_143, Madraxi_29, Manuel_3, MargaretKali_1, MaryV_93, MidnightRain_85, Nicholasp3_102, Nitro_45, Nova53_189, Omega_199, Persimmon_179, Phabba_53, Predator_10, PumpkinSpice_263, Quby_89, ReginaGlobina_142, Rikishi_269, Rumpelstiltskin_98, Sham_181, Shawty_32, SpeedDemon_240, Spelly_265, Spilled_268, Spooks_31, Starbow_257, SteveFrench_16, Success_33, Syleon_103, TomSawyer_265, TunaTartare_189, TunaTartare_254, Vetrix_100, WRightOn_2, Westy_203, WhereRU_178, Wildcat_93, Wipeout_252, Zany_25, Zooman_139,

Summary by start number:

Start 9:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Omega_199 (J),

Start 13:
• Found in 11 of 97 (11.3%) of genes in pham
• Manual Annotations of this start: 8 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CeilingFan_274 (BE2), Gibbi_270 (BE2), JimJam_268 (BE2), KentuckyRacer_267 (BE2), PumpkinSpice_263 (BE2), Rikishi_269 (BE2), Spelly_265 (BE2), Spilled_268 (BE2), Starbow_257 (BE2), TomSawyer_265 (BE2), Wipeout_252 (BE2),

Start 14:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Gaia_140 (X),

Start 15:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Kumotta_5 (FB),

Start 16:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MargaretKali_1 (FB),

Start 20:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Community_49 (AZ1), Nitro_45 (AZ1),

Start 21:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: EGole_223 (BE1),

Start 22:
• Found in 3 of 97 (3.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Daubenski_27 (BE1), LazerLemon_75 (BH),

Start 23:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Phabba_53 (C2),

Start 27:
• Found in 21 of 97 (21.6%) of genes in pham
• Manual Annotations of this start: 15 of 78
• Called 95.2% of time when present
• Phage (with cluster) where this start called: Abscondus_40 (CQ1), Aphelion_41 (CQ1), Bachita_43 (CQ1), BrutonGaster_29 (CQ2), ClubL_41 (CQ1), Cucurbita_43 (CQ1), Culver_41 (CQ1), Dusty_39 (CQ1), Engineer_42 (CQ1), GMA6_50 (DQ), Geeche_40 (CQ1), JonJames_40 (DD), Lozinak_41 (CQ1), Miskis_43 (CQ1), Norvs_42 (CQ1), PhinkBoden_41 (CQ1), Smoothie_42 (CQ1), Toniann_41 (CQ1), WilliamBoone_41 (CQ1), Yvonnetastic_38 (DD),

Start 28:
• Found in 2 of 97 (2.1%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Westy_203 (BK1),

Start 29:
• Found in 4 of 97 (4.1%) of genes in pham
• Manual Annotations of this start: 3 of 78
• Called 75.0% of time when present
• Phage (with cluster) where this start called: A3Wally_146 (GD1), Bantam_23 (DL), SpeedDemon_240 (DL),

Start 30:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AGrandiflora_41 (AZ1), Kaylissa_41 (AZ1),

Start 32:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 78

• Called 50.0% of time when present
• Phage (with cluster) where this start called: Karp_197 (BK1),

Start 34:
• Found in 10 of 97 (10.3%) of genes in pham
• Manual Annotations of this start: 6 of 78
• Called 90.0% of time when present
• Phage (with cluster) where this start called: Adolin_42 (AZ1), Anedea_217 (BE1), Crewmate_2 (AZ1), LeoJr_143 (FC), Nova53_189 (CG), Persimmon_179 (BE1), ReginaGlobina_142 (FC), WhereRU_178 (BE1), Zooman_139 (GD2),

Start 37:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Forrest_150 (BK1),

Start 38:
• Found in 4 of 97 (4.1%) of genes in pham
• No Manual Annotations of this start.
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Cardigan_40 (DD),

Start 39:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Finemlucis_71 (L2), Gabriela_68 (L2),

Start 41:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 50.0% of time when present
• Phage (with cluster) where this start called: SteveFrench_16 (CS2),

Start 42:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bromden_61 (L4),

Start 43:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Koko_64 (A6),

Start 46:
• Found in 3 of 97 (3.1%) of genes in pham
• Manual Annotations of this start: 3 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Forrest_254 (BK1), Jada_255 (BK1), TunaTartare_254 (BK1),

Start 47:
• Found in 6 of 97 (6.2%) of genes in pham
• Manual Annotations of this start: 5 of 78
• Called 83.3% of time when present
• Phage (with cluster) where this start called: Bromden_104 (L4), Gardann_101 (L2), Kahlid_101 (L2), Nicholasp3_102 (L2), Rumpelstiltskin_98 (L2),

Start 50:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Vetrix_100 (L2),

Start 51:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Manuel_3 (BF), Shawty_32 (BB1),

Start 52:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 50.0% of time when present
• Phage (with cluster) where this start called: CloudWang3_63 (A6),

Start 53:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sham_181 (BK1), TunaTartare_189 (BK1),

Start 55:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Clown_83 (DC2),

Start 56:
• Found in 1 of 97 (1.0%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Quby_89 (L4),

Start 58:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Zany_25 (DV),

Start 60:
• Found in 2 of 97 (2.1%) of genes in pham

• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JPandJE_2 (BF), Syleon_103 (DU1),

Start 61:
• Found in 3 of 97 (3.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Jflix2_25 (CF), Madraxi_29 (CF),

Start 62:
• Found in 5 of 97 (5.2%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 60.0% of time when present
• Phage (with cluster) where this start called: Bimmel_30 (BT), Spooks_31 (BT), Success_33 (BT),

Start 63:
• Found in 4 of 97 (4.1%) of genes in pham
• Manual Annotations of this start: 3 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AdaS_75 (AY), Ibantik_39 (singleton), MidnightRain_85 (AY), Predator_10 (H1),

Start 64:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MaryV_93 (V), Wildcat_93 (V),

Start 69:
• Found in 1 of 97 (1.0%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: WRightOn_2 (BF),

Start 75:
• Found in 2 of 97 (2.1%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Didgeridoo_31 (EB), Finalfrontier_30 (EB),

Summary by clusters:

There are 34 clusters represented in this pham: GD1, BF, DD, BH, DL, BT, FB, FC, DV, DQ, A6, CQ2, CQ1, BB1, CS2, J, CG, CF, EB, L4, L2, BK1, V, AY, X, singleton, DC2, C2, H1, DU1, BE2, AZ1, GD2, BE1,

Info for manual annotations of cluster A6:
•Start number 43 was manually annotated 1 time for cluster A6.
•Start number 52 was manually annotated 1 time for cluster A6.

Info for manual annotations of cluster AY:
•Start number 63 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster AZ1:
•Start number 20 was manually annotated 1 time for cluster AZ1.
•Start number 30 was manually annotated 1 time for cluster AZ1.
•Start number 34 was manually annotated 2 times for cluster AZ1.

Info for manual annotations of cluster BB1:
•Start number 51 was manually annotated 1 time for cluster BB1.

Info for manual annotations of cluster BE1:
•Start number 21 was manually annotated 1 time for cluster BE1.
•Start number 22 was manually annotated 1 time for cluster BE1.
•Start number 34 was manually annotated 3 times for cluster BE1.

Info for manual annotations of cluster BE2:
•Start number 13 was manually annotated 8 times for cluster BE2.

Info for manual annotations of cluster BF:
•Start number 51 was manually annotated 1 time for cluster BF.
•Start number 60 was manually annotated 1 time for cluster BF.
•Start number 69 was manually annotated 1 time for cluster BF.

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

Info for manual annotations of cluster BK1:
•Start number 32 was manually annotated 1 time for cluster BK1.
•Start number 37 was manually annotated 1 time for cluster BK1.
•Start number 46 was manually annotated 3 times for cluster BK1.
•Start number 53 was manually annotated 2 times for cluster BK1.

Info for manual annotations of cluster BT:
•Start number 62 was manually annotated 1 time for cluster BT.

Info for manual annotations of cluster C2:
•Start number 23 was manually annotated 1 time for cluster C2.

Info for manual annotations of cluster CF:
•Start number 61 was manually annotated 2 times for cluster CF.

Info for manual annotations of cluster CQ1:
•Start number 27 was manually annotated 12 times for cluster CQ1.

Info for manual annotations of cluster CQ2:
•Start number 27 was manually annotated 1 time for cluster CQ2.

Info for manual annotations of cluster CS2:
•Start number 41 was manually annotated 1 time for cluster CS2.

Info for manual annotations of cluster DC2:

•Start number 55 was manually annotated 1 time for cluster DC2.

Info for manual annotations of cluster DD:
•Start number 27 was manually annotated 2 times for cluster DD.

Info for manual annotations of cluster DL:
•Start number 29 was manually annotated 2 times for cluster DL.

Info for manual annotations of cluster DU1:
•Start number 60 was manually annotated 1 time for cluster DU1.

Info for manual annotations of cluster DV:
•Start number 58 was manually annotated 1 time for cluster DV.

Info for manual annotations of cluster EB:
•Start number 75 was manually annotated 2 times for cluster EB.

Info for manual annotations of cluster FB:
•Start number 15 was manually annotated 1 time for cluster FB.
•Start number 16 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster GD1:
•Start number 29 was manually annotated 1 time for cluster GD1.

Info for manual annotations of cluster GD2:
•Start number 34 was manually annotated 1 time for cluster GD2.

Info for manual annotations of cluster H1:
•Start number 63 was manually annotated 1 time for cluster H1.

Info for manual annotations of cluster J:
•Start number 9 was manually annotated 1 time for cluster J.

Info for manual annotations of cluster L2:
•Start number 39 was manually annotated 2 times for cluster L2.
•Start number 47 was manually annotated 4 times for cluster L2.
•Start number 50 was manually annotated 1 time for cluster L2.

Info for manual annotations of cluster L4:
•Start number 42 was manually annotated 1 time for cluster L4.
•Start number 47 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster V:
•Start number 64 was manually annotated 2 times for cluster V.

Info for manual annotations of cluster X:
•Start number 14 was manually annotated 1 time for cluster X.

Gene Information:

Gene: A3Wally_146 Start: 90094, Stop: 90525, Start Num: 29
Candidate Starts for A3Wally_146:
(Start: 29 @90094 has 3 MA's), (118, 90337), (152, 90481),

Gene: AGrandiflora_41 Start: 29625, Stop: 30068, Start Num: 30
Candidate Starts for AGrandiflora_41:
(Start: 15 @29544 has 1 MA's), (Start: 30 @29625 has 1 MA's), (104, 29847),

Gene: Abscondus_40 Start: 17135, Stop: 17593, Start Num: 27
Candidate Starts for Abscondus_40:
(Start: 27 @17135 has 15 MA's),

Gene: AdaS_75 Start: 42758, Stop: 43237, Start Num: 63
Candidate Starts for AdaS_75:
(Start: 63 @42758 has 3 MA's), (116, 42941), (131, 43004), (152, 43109), (169, 43160),

Gene: Adolin_42 Start: 29874, Stop: 30347, Start Num: 34
Candidate Starts for Adolin_42:
(5, 29637), (Start: 34 @29874 has 6 MA's), (86, 30018), (117, 30111), (139, 30219),

Gene: Anedea_217 Start: 106294, Stop: 106719, Start Num: 34
Candidate Starts for Anedea_217:
(Start: 34 @106294 has 6 MA's), (139, 106618), (142, 106627), (148, 106654), (149, 106666), (153, 106675), (165, 106711), (166, 106714),

Gene: Aphelion_41 Start: 17404, Stop: 17862, Start Num: 27
Candidate Starts for Aphelion_41:
(Start: 27 @17404 has 15 MA's),

Gene: Bachita_43 Start: 17837, Stop: 18295, Start Num: 27
Candidate Starts for Bachita_43:
(Start: 27 @17837 has 15 MA's),

Gene: Bantam_23 Start: 14778, Stop: 15239, Start Num: 29
Candidate Starts for Bantam_23:
(Start: 15 @14694 has 1 MA's), (Start: 29 @14778 has 3 MA's), (133, 15099), (156, 15198),

Gene: Bimmel_30 Start: 19820, Stop: 19383, Start Num: 62
Candidate Starts for Bimmel_30:
(Start: 62 @19820 has 1 MA's), (118, 19634), (133, 19574), (154, 19475),

Gene: Bromden_104 Start: 63270, Stop: 63686, Start Num: 47
Candidate Starts for Bromden_104:
(Start: 47 @63270 has 5 MA's), (146, 63612),

Gene: Bromden_61 Start: 43963, Stop: 44400, Start Num: 42
Candidate Starts for Bromden_61:
(Start: 41 @43960 has 1 MA's), (Start: 42 @43963 has 1 MA's), (59, 43996), (73, 44038), (84, 44083), (102, 44158), (104, 44164), (151, 44353),

Gene: BrutonGaster_29 Start: 14029, Stop: 14475, Start Num: 27
Candidate Starts for BrutonGaster_29:
(Start: 27 @14029 has 15 MA's), (149, 14428),

Gene: Cardigan_40 Start: 19035, Stop: 19475, Start Num: 38
Candidate Starts for Cardigan_40:
(Start: 27 @19023 has 15 MA's), (38, 19035), (74, 19110), (98, 19218),

Gene: CeilingFan_274 Start: 120156, Stop: 119614, Start Num: 13
Candidate Starts for CeilingFan_274:
(Start: 13 @120156 has 8 MA's), (40, 120033), (70, 119955), (96, 119853), (117, 119802), (118, 119799), (147, 119670), (159, 119625),

Gene: CloudWang3_63 Start: 38546, Stop: 38136, Start Num: 52
Candidate Starts for CloudWang3_63:
(Start: 43 @38564 has 1 MA's), (Start: 52 @38546 has 1 MA's), (87, 38423), (120, 38318), (137, 38258), (142, 38228), (152, 38183), (154, 38180), (159, 38159),

Gene: Clown_83 Start: 53992, Stop: 54378, Start Num: 55
Candidate Starts for Clown_83:
(4, 53719), (6, 53737), (17, 53896), (19, 53917), (25, 53926), (33, 53947), (38, 53956), (Start: 55 @53992 has 1 MA's), (94, 54142), (119, 54202), (138, 54277),

Gene: ClubL_41 Start: 17326, Stop: 17784, Start Num: 27
Candidate Starts for ClubL_41:
(Start: 27 @17326 has 15 MA's),

Gene: Community_49 Start: 35475, Stop: 35966, Start Num: 20
Candidate Starts for Community_49:
(12, 35376), (Start: 20 @35475 has 1 MA's), (121, 35763), (151, 35910),

Gene: Crewmate_2 Start: 546, Stop: 995, Start Num: 34
Candidate Starts for Crewmate_2:
(Start: 34 @546 has 6 MA's), (138, 846),

Gene: Cucurbita_43 Start: 18696, Stop: 19154, Start Num: 27
Candidate Starts for Cucurbita_43:
(Start: 27 @18696 has 15 MA's),

Gene: Culver_41 Start: 17135, Stop: 17593, Start Num: 27
Candidate Starts for Culver_41:
(Start: 27 @17135 has 15 MA's),

Gene: Daubenski_27 Start: 12504, Stop: 12022, Start Num: 22
Candidate Starts for Daubenski_27:
(Start: 22 @12504 has 2 MA's), (82, 12348), (90, 12300), (100, 12270), (121, 12216), (124, 12201), (140, 12120), (153, 12066),

Gene: Didgeridoo_31 Start: 22465, Stop: 22809, Start Num: 75
Candidate Starts for Didgeridoo_31:
(Start: 75 @22465 has 2 MA's), (95, 22555), (136, 22678), (139, 22714), (147, 22747),

Gene: Dusty_39 Start: 17135, Stop: 17593, Start Num: 27
Candidate Starts for Dusty_39:
(Start: 27 @17135 has 15 MA's),

Gene: EGole_223 Start: 113552, Stop: 114001, Start Num: 21
Candidate Starts for EGole_223:
(Start: 21 @113552 has 1 MA's), (Start: 34 @113582 has 6 MA's), (98, 113783), (104, 113807), (122, 113852), (141, 113936), (155, 113981),

Gene: Engineer_42 Start: 17352, Stop: 17810, Start Num: 27
Candidate Starts for Engineer_42:
(Start: 27 @17352 has 15 MA's),

Gene: Finalfrontier_30 Start: 22829, Stop: 23173, Start Num: 75
Candidate Starts for Finalfrontier_30:
(Start: 75 @22829 has 2 MA's), (95, 22919), (136, 23042), (139, 23078), (147, 23111),

Gene: Finemlucis_71 Start: 49120, Stop: 49566, Start Num: 39
Candidate Starts for Finemlucis_71:
(26, 49093), (31, 49108), (Start: 39 @49120 has 2 MA's), (107, 49336), (114, 49354), (140, 49468), (158, 49531), (162, 49543),

Gene: Forrest_254 Start: 120939, Stop: 121364, Start Num: 46
Candidate Starts for Forrest_254:
(Start: 46 @120939 has 3 MA's), (85, 121056), (104, 121137), (109, 121146), (139, 121263), (148, 121299), (163, 121353),

Gene: Forrest_150 Start: 82816, Stop: 83256, Start Num: 37
Candidate Starts for Forrest_150:
(Start: 37 @82816 has 1 MA's), (104, 83032), (117, 83056), (144, 83179), (154, 83215),

Gene: GMA6_50 Start: 43670, Stop: 43215, Start Num: 27
Candidate Starts for GMA6_50:
(Start: 27 @43670 has 15 MA's), (83, 43520), (127, 43364), (129, 43352), (134, 43346), (154, 43253), (164, 43220),

Gene: Gabriela_68 Start: 47246, Stop: 47692, Start Num: 39
Candidate Starts for Gabriela_68:
(26, 47219), (31, 47234), (Start: 39 @47246 has 2 MA's), (107, 47462), (114, 47480), (140, 47594), (158, 47657), (162, 47669),

Gene: Gaia_140 Start: 75742, Stop: 76296, Start Num: 14
Candidate Starts for Gaia_140:
(7, 75664), (8, 75679), (10, 75685), (11, 75700), (Start: 14 @75742 has 1 MA's), (54, 75880), (97, 76036), (104, 76060), (146, 76222), (157, 76261),

Gene: Gardann_101 Start: 61924, Stop: 62331, Start Num: 47
Candidate Starts for Gardann_101:
(Start: 47 @61924 has 5 MA's), (84, 62029), (85, 62038), (126, 62173), (146, 62266), (153, 62296),

Gene: Geeche_40 Start: 17226, Stop: 17684, Start Num: 27
Candidate Starts for Geeche_40:
(Start: 27 @17226 has 15 MA's),

Gene: Gibbi_270 Start: 119649, Stop: 119107, Start Num: 13
Candidate Starts for Gibbi_270:

(Start: 13 @119649 has 8 MA's), (40, 119526), (70, 119448), (96, 119346), (117, 119295), (118, 119292), (147, 119163),

Gene: Ibantik_39 Start: 18281, Stop: 17859, Start Num: 63
Candidate Starts for Ibantik_39:
(Start: 63 @18281 has 3 MA's), (143, 17999),

Gene: JPandJE_2 Start: 2649, Stop: 3017, Start Num: 60
Candidate Starts for JPandJE_2:
(3, 2298), (Start: 60 @2649 has 2 MA's), (Start: 62 @2658 has 1 MA's), (88, 2760), (100, 2796), (110, 2820), (115, 2832), (132, 2883),

Gene: Jada_255 Start: 120179, Stop: 120604, Start Num: 46
Candidate Starts for Jada_255:
(Start: 46 @120179 has 3 MA's), (85, 120296), (104, 120377), (109, 120386), (139, 120503), (148, 120539), (163, 120593),

Gene: Jflix2_25 Start: 25439, Stop: 25867, Start Num: 61
Candidate Starts for Jflix2_25:
(1, 24707), (2, 24917), (Start: 61 @25439 has 2 MA's), (92, 25574), (109, 25619), (144, 25760), (151, 25793),

Gene: JimJam_268 Start: 121085, Stop: 120543, Start Num: 13
Candidate Starts for JimJam_268:
(Start: 13 @121085 has 8 MA's), (40, 120962), (70, 120884), (96, 120782), (117, 120731), (118, 120728), (147, 120599), (159, 120554),

Gene: JonJames_40 Start: 21238, Stop: 21690, Start Num: 27
Candidate Starts for JonJames_40:
(Start: 27 @21238 has 15 MA's), (38, 21250), (74, 21325), (98, 21433),

Gene: Kahlid_101 Start: 61842, Stop: 62249, Start Num: 47
Candidate Starts for Kahlid_101:
(Start: 47 @61842 has 5 MA's), (84, 61947), (85, 61956), (126, 62091), (146, 62184), (153, 62214),

Gene: Karp_197 Start: 102737, Stop: 102318, Start Num: 32
Candidate Starts for Karp_197:
(28, 102743), (Start: 32 @102737 has 1 MA's), (79, 102620), (104, 102542), (125, 102488), (139, 102416),

Gene: Kaylissa_41 Start: 29646, Stop: 30089, Start Num: 30
Candidate Starts for Kaylissa_41:
(Start: 15 @29565 has 1 MA's), (Start: 30 @29646 has 1 MA's), (104, 29868),

Gene: KentuckyRacer_267 Start: 121000, Stop: 120458, Start Num: 13
Candidate Starts for KentuckyRacer_267:
(Start: 13 @121000 has 8 MA's), (40, 120877), (70, 120799), (96, 120697), (117, 120646), (118, 120643), (147, 120514), (159, 120469),

Gene: Koko_64 Start: 38904, Stop: 38476, Start Num: 43
Candidate Starts for Koko_64:
(Start: 43 @38904 has 1 MA's), (Start: 52 @38886 has 1 MA's), (87, 38763), (120, 38658), (137, 38598), (142, 38568), (152, 38523), (154, 38520), (159, 38499),

Gene: Kumotta_5 Start: 4506, Stop: 5042, Start Num: 15
Candidate Starts for Kumotta_5:
(Start: 15 @4506 has 1 MA's), (18, 4554), (35, 4599), (104, 4821), (138, 4944), (153, 5010),

Gene: LazerLemon_75 Start: 51475, Stop: 51948, Start Num: 22
Candidate Starts for LazerLemon_75:
(Start: 22 @51475 has 2 MA's), (Start: 29 @51496 has 3 MA's), (Start: 62 @51565 has 1 MA's), (82, 51634), (104, 51721), (121, 51760), (128, 51793), (138, 51844), (149, 51901),

Gene: LeoJr_143 Start: 97416, Stop: 97838, Start Num: 34
Candidate Starts for LeoJr_143:
(Start: 34 @97416 has 6 MA's), (118, 97650), (159, 97824),

Gene: Lozinak_41 Start: 17407, Stop: 17865, Start Num: 27
Candidate Starts for Lozinak_41:
(Start: 27 @17407 has 15 MA's),

Gene: Madraxi_29 Start: 27630, Stop: 28058, Start Num: 61
Candidate Starts for Madraxi_29:
(Start: 61 @27630 has 2 MA's), (92, 27765), (104, 27801), (109, 27810), (112, 27822), (144, 27951), (151, 27984),

Gene: Manuel_3 Start: 3413, Stop: 3811, Start Num: 51
Candidate Starts for Manuel_3:
(36, 3383), (Start: 51 @3413 has 2 MA's), (104, 3590),

Gene: MargaretKali_1 Start: 50, Stop: 577, Start Num: 16
Candidate Starts for MargaretKali_1:
(Start: 16 @50 has 1 MA's), (44, 152), (65, 206), (71, 221), (101, 341), (111, 359), (160, 542), (170, 569),

Gene: MaryV_93 Start: 56140, Stop: 56508, Start Num: 64
Candidate Starts for MaryV_93:
(Start: 64 @56140 has 2 MA's), (104, 56281), (138, 56398), (146, 56434), (150, 56458), (153, 56464), (159, 56485),

Gene: MidnightRain_85 Start: 46712, Stop: 47188, Start Num: 63
Candidate Starts for MidnightRain_85:
(Start: 63 @46712 has 3 MA's), (116, 46892), (131, 46955), (147, 47039), (159, 47084), (167, 47105), (169, 47111),

Gene: Miskis_43 Start: 17170, Stop: 17628, Start Num: 27
Candidate Starts for Miskis_43:
(Start: 27 @17170 has 15 MA's),

Gene: Nicholasp3_102 Start: 61924, Stop: 62331, Start Num: 47
Candidate Starts for Nicholasp3_102:
(Start: 47 @61924 has 5 MA's), (84, 62029), (85, 62038), (126, 62173), (146, 62266), (153, 62296),

Gene: Nitro_45 Start: 34067, Stop: 34558, Start Num: 20
Candidate Starts for Nitro_45:
(12, 33968), (Start: 20 @34067 has 1 MA's), (121, 34355), (151, 34502),

Gene: Norvs_42 Start: 17409, Stop: 17867, Start Num: 27
Candidate Starts for Norvs_42:
(Start: 27 @17409 has 15 MA's),

Gene: Nova53_189 Start: 99250, Stop: 99705, Start Num: 34
Candidate Starts for Nova53_189:
(Start: 22 @99220 has 2 MA's), (Start: 34 @99250 has 6 MA's), (104, 99475), (155, 99667),

Gene: Omega_199 Start: 97671, Stop: 98360, Start Num: 9
Candidate Starts for Omega_199:
(Start: 9 @97671 has 1 MA's), (72, 97917), (105, 98058), (146, 98217), (148, 98226),

Gene: Persimmon_179 Start: 94749, Stop: 95180, Start Num: 34
Candidate Starts for Persimmon_179:
(Start: 34 @94749 has 6 MA's), (67, 94827), (99, 94953), (106, 94971), (138, 95082), (147, 95124),

Gene: Phabba_53 Start: 19044, Stop: 18553, Start Num: 23
Candidate Starts for Phabba_53:
(Start: 23 @19044 has 1 MA's), (26, 19035), (54, 18975), (70, 18933), (118, 18795), (120, 18789), (133, 18732), (148, 18651), (160, 18606),

Gene: PhinkBoden_41 Start: 17790, Stop: 18248, Start Num: 27
Candidate Starts for PhinkBoden_41:
(Start: 27 @17790 has 15 MA's),

Gene: Predator_10 Start: 6815, Stop: 7189, Start Num: 63
Candidate Starts for Predator_10:
(Start: 63 @6815 has 3 MA's), (91, 6929), (103, 6965), (110, 6980), (125, 7025), (136, 7046), (144, 7103), (157, 7145), (159, 7157), (163, 7169), (166, 7175),

Gene: PumpkinSpice_263 Start: 119441, Stop: 118899, Start Num: 13
Candidate Starts for PumpkinSpice_263:
(Start: 13 @119441 has 8 MA's), (40, 119318), (76, 119231), (96, 119138), (117, 119087), (118, 119084), (147, 118955),

Gene: Quby_89 Start: 56408, Stop: 56815, Start Num: 56
Candidate Starts for Quby_89:
(56, 56408), (80, 56486), (114, 56591), (117, 56594), (123, 56615), (133, 56660), (135, 56666), (148, 56741), (168, 56807),

Gene: ReginaGlobina_142 Start: 97638, Stop: 98060, Start Num: 34
Candidate Starts for ReginaGlobina_142:
(Start: 34 @97638 has 6 MA's), (118, 97872), (159, 98046),

Gene: Rikishi_269 Start: 119623, Stop: 119081, Start Num: 13
Candidate Starts for Rikishi_269:
(Start: 13 @119623 has 8 MA's), (40, 119500), (70, 119422), (96, 119320), (117, 119269), (118, 119266), (147, 119137),

Gene: Rumpelstiltskin_98 Start: 61717, Stop: 62124, Start Num: 47
Candidate Starts for Rumpelstiltskin_98:
(Start: 47 @61717 has 5 MA's), (84, 61822), (85, 61831), (126, 61966), (146, 62059), (153, 62089),

Gene: Sham_181 Start: 98652, Stop: 99035, Start Num: 53
Candidate Starts for Sham_181:
(45, 98640), (Start: 53 @98652 has 2 MA's), (113, 98844), (134, 98907), (154, 99000), (161, 99027),

Gene: Shawty_32 Start: 26307, Stop: 26723, Start Num: 51
Candidate Starts for Shawty_32:
(Start: 51 @26307 has 2 MA's), (81, 26400), (89, 26439), (147, 26661), (156, 26688),

Gene: Smoothie_42 Start: 17407, Stop: 17865, Start Num: 27
Candidate Starts for Smoothie_42:
(Start: 27 @17407 has 15 MA's),

Gene: SpeedDemon_240 Start: 15094, Stop: 15555, Start Num: 29
Candidate Starts for SpeedDemon_240:
(Start: 29 @15094 has 3 MA's), (136, 15418), (139, 15454), (156, 15514),

Gene: Spelly_265 Start: 118353, Stop: 117811, Start Num: 13
Candidate Starts for Spelly_265:
(Start: 13 @118353 has 8 MA's), (40, 118230), (70, 118152), (96, 118050), (117, 117999), (118, 117996), (147, 117867), (159, 117822),

Gene: Spilled_268 Start: 120017, Stop: 119475, Start Num: 13
Candidate Starts for Spilled_268:
(Start: 13 @120017 has 8 MA's), (40, 119894), (70, 119816), (96, 119714), (117, 119663), (118, 119660), (147, 119531), (159, 119486),

Gene: Spooks_31 Start: 20834, Stop: 20397, Start Num: 62
Candidate Starts for Spooks_31:
(Start: 62 @20834 has 1 MA's), (104, 20675), (118, 20648), (130, 20594), (133, 20588), (154, 20489),

Gene: Starbow_257 Start: 118397, Stop: 117855, Start Num: 13
Candidate Starts for Starbow_257:
(Start: 13 @118397 has 8 MA's), (40, 118274), (70, 118196), (96, 118094), (117, 118043), (118, 118040), (147, 117911), (159, 117866),

Gene: SteveFrench_16 Start: 15937, Stop: 16392, Start Num: 41
Candidate Starts for SteveFrench_16:
(Start: 15 @15832 has 1 MA's), (24, 15898), (Start: 41 @15937 has 1 MA's), (49, 15955), (77, 16036), (108, 16144), (117, 16162), (152, 16327), (166, 16369),

Gene: Success_33 Start: 20053, Stop: 19616, Start Num: 62
Candidate Starts for Success_33:
(Start: 62 @20053 has 1 MA's), (104, 19894), (130, 19813), (133, 19807), (154, 19708),

Gene: Syleon_103 Start: 59026, Stop: 59409, Start Num: 60
Candidate Starts for Syleon_103:
(57, 59023), (Start: 60 @59026 has 2 MA's), (138, 59308), (140, 59320),

Gene: TomSawyer_265 Start: 121328, Stop: 120786, Start Num: 13
Candidate Starts for TomSawyer_265:
(Start: 13 @121328 has 8 MA's), (70, 121127), (96, 121025), (117, 120974), (118, 120971), (147, 120842), (159, 120797),

Gene: Toniann_41 Start: 17352, Stop: 17810, Start Num: 27
Candidate Starts for Toniann_41:
(Start: 27 @17352 has 15 MA's),

Gene: TunaTartare_189 Start: 100701, Stop: 101084, Start Num: 53
Candidate Starts for TunaTartare_189:
(45, 100689), (Start: 53 @100701 has 2 MA's), (113, 100893), (134, 100956), (154, 101049), (161, 101076),

Gene: TunaTartare_254 Start: 124119, Stop: 124544, Start Num: 46
Candidate Starts for TunaTartare_254:
(Start: 46 @124119 has 3 MA's), (85, 124236), (104, 124317), (109, 124326), (139, 124443), (144, 124464), (148, 124479), (163, 124533),

Gene: Vetrix_100 Start: 61960, Stop: 62376, Start Num: 50
Candidate Starts for Vetrix_100:
(Start: 47 @61957 has 5 MA's), (Start: 50 @61960 has 1 MA's), (Start: 61 @61978 has 2 MA's), (146, 62299),

Gene: WRightOn_2 Start: 2629, Stop: 2976, Start Num: 69
Candidate Starts for WRightOn_2:
(68, 2626), (Start: 69 @2629 has 1 MA's), (88, 2707), (93, 2731), (110, 2776), (115, 2788), (145, 2905), (148, 2914), (163, 2968),

Gene: Westy_203 Start: 103797, Stop: 103372, Start Num: 28
Candidate Starts for Westy_203:
(28, 103797), (Start: 32 @103791 has 1 MA's), (79, 103674), (104, 103596), (125, 103542), (139, 103470),

Gene: WhereRU_178 Start: 95501, Stop: 95932, Start Num: 34
Candidate Starts for WhereRU_178:
(Start: 34 @95501 has 6 MA's), (67, 95579), (99, 95705), (106, 95723), (138, 95834), (147, 95876),

Gene: Wildcat_93 Start: 56150, Stop: 56518, Start Num: 64
Candidate Starts for Wildcat_93:
(Start: 64 @56150 has 2 MA's), (104, 56291), (138, 56408), (146, 56444), (150, 56468), (153, 56474), (159, 56495),

Gene: WilliamBoone_41 Start: 16716, Stop: 17174, Start Num: 27
Candidate Starts for WilliamBoone_41:
(Start: 27 @16716 has 15 MA's),

Gene: Wipeout_252 Start: 120280, Stop: 119738, Start Num: 13
Candidate Starts for Wipeout_252:
(Start: 13 @120280 has 8 MA's), (40, 120157), (76, 120070), (96, 119977), (117, 119926), (118, 119923), (147, 119794),

Gene: Yvonnetastic_38 Start: 18787, Stop: 19239, Start Num: 27
Candidate Starts for Yvonnetastic_38:
(Start: 27 @18787 has 15 MA's), (38, 18799), (74, 18874), (98, 18982),

Gene: Zany_25 Start: 17287, Stop: 17679, Start Num: 58

Candidate Starts for Zany_25:
(48, 17266), (Start: 58 @17287 has 1 MA's), (66, 17311), (78, 17353), (84, 17371), (147, 17614), (153, 17638),

Gene: Zooman_139 Start: 88579, Stop: 89034, Start Num: 34
Candidate Starts for Zooman_139:
(Start: 34 @88579 has 6 MA's), (95, 88768), (99, 88783), (126, 88858),