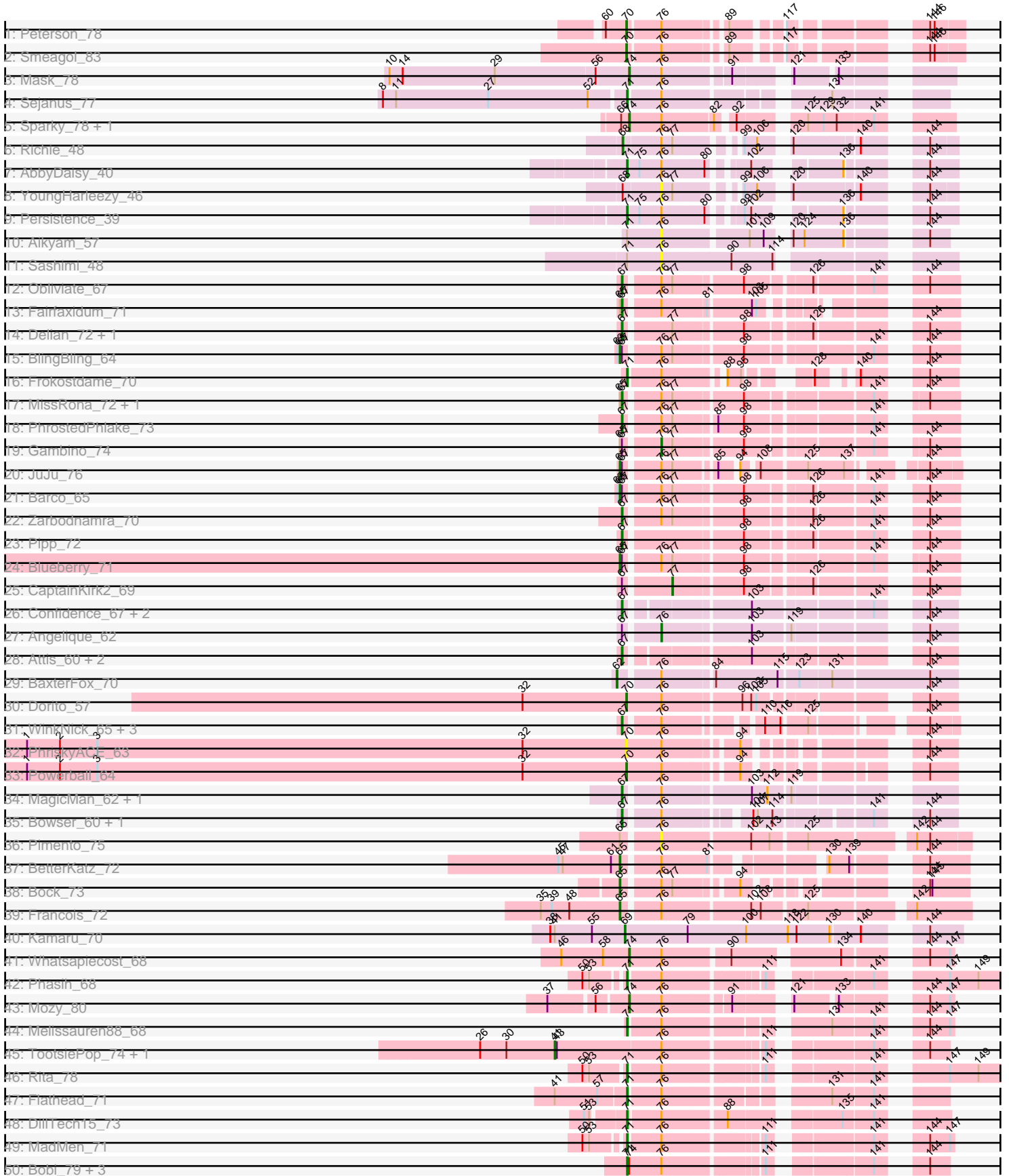
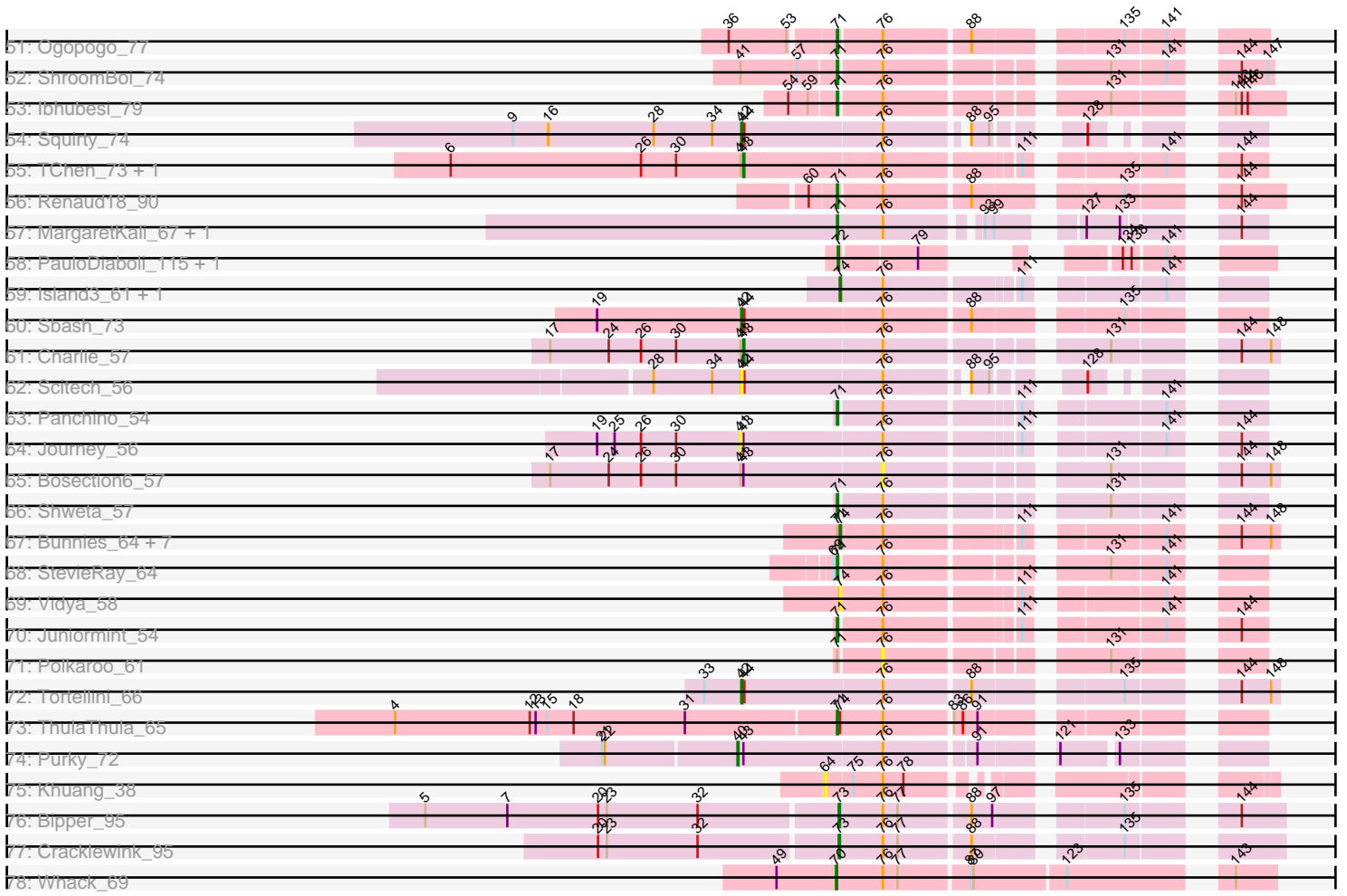


Pham 171342



Pham 171342



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 171342 Report

This analysis was run 07/10/24 on database version 566.

Pham number 171342 has 105 members, 13 are drafts.

Phages represented in each track:

- Track 1 : Peterson_78
- Track 2 : Smeagol_83
- Track 3 : Mask_78
- Track 4 : Sejanus_77
- Track 5 : Sparky_78, Farewell_79
- Track 6 : Richie_48
- Track 7 : AbbyDaisy_40
- Track 8 : YoungHarleezy_46
- Track 9 : Persistence_39
- Track 10 : Aikyam_57
- Track 11 : Sashimi_48
- Track 12 : Obliviate_67
- Track 13 : Fairfaxidum_71
- Track 14 : Delian_72, MintFen_69
- Track 15 : BlingBling_64
- Track 16 : Frokostdame_70
- Track 17 : MissRona_72, Azula_72
- Track 18 : PhrostedPhlake_73
- Track 19 : Gambino_74
- Track 20 : JuJu_76
- Track 21 : Barco_65
- Track 22 : Zarbodnamra_70
- Track 23 : Pipp_72
- Track 24 : Blueberry_71
- Track 25 : CaptainKirk2_69
- Track 26 : Confidence_67, Hyzer_79, Bunnybear_62
- Track 27 : Angelique_62
- Track 28 : Attis_60, SoilAssassin_60, LordFarquaad_62
- Track 29 : BaxterFox_70
- Track 30 : Dorito_57
- Track 31 : WinkNick_65, Easley_62, Dolores_65, Sekhmet_64
- Track 32 : PhriskyACE_63
- Track 33 : Powerball_64
- Track 34 : MagicMan_62, Opie_65
- Track 35 : Bowser_60, TaronosaurusRx_68
- Track 36 : Pimento_75
- Track 37 : BetterKatz_72

- Track 38 : Bock_73
- Track 39 : Francois_72
- Track 40 : Kamaru_70
- Track 41 : Whatsapiecost_68
- Track 42 : Phasih_68
- Track 43 : Mozy_80
- Track 44 : Melissauren88_68
- Track 45 : TootsiePop_74, Misha28_74
- Track 46 : Rita_78
- Track 47 : Flathead_71
- Track 48 : DillTech15_73
- Track 49 : MadMen_71
- Track 50 : Bobi_79, Atcoo_61, Brusacoram_61, Thespis_61
- Track 51 : Ogopogo_77
- Track 52 : ShroomBoi_74
- Track 53 : lbhubesi_79
- Track 54 : Squirty_74
- Track 55 : TChen_73, LunaStella_71
- Track 56 : Renaud18_90
- Track 57 : MargaretKali_67, Kumotta_71
- Track 58 : PauloDiaboli_115, A3Wally_115
- Track 59 : Island3_61, Brujita_60
- Track 60 : Sbash_73
- Track 61 : Charlie_57
- Track 62 : Scitech_56
- Track 63 : Panchino_54
- Track 64 : Journey_56
- Track 65 : Bosection6_57
- Track 66 : Shweta_57
- Track 67 : Bunnies_64, CactusJack_59, Willsammy_59, Glaske_58, Ksquared_62, KilKor_59, Phalm_59, StressBall_59
- Track 68 : StevieRay_64
- Track 69 : Vidya_58
- Track 70 : Juniormint_54
- Track 71 : Polkaroo_61
- Track 72 : Tortellini_66
- Track 73 : ThulaThula_65
- Track 74 : Purky_72
- Track 75 : Khuang_38
- Track 76 : Bipper_95
- Track 77 : Cracklewink_95
- Track 78 : Whack_69

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

The start number called the most often in the published annotations is 71, it was called in 25 of the 92 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AbbyDaisy_40, Atcoo_61, Bobi_79, Brusacoram_61, DillTech15_73, Flathead_71, Frokostdame_70, Ibhubesi_79, Juniormint_54, Kumotta_71, MadMen_71, MargaretKali_67, Melissauren88_68, Ogopogo_77, Panchino_54, Persistence_39, Phasih_68, Renaud18_90, Rita_78, Sejanus_77, ShroomBoi_74, Shweta_57, StevieRay_64, Thespis_61, ThulaThula_65,

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

- Aikyam_57, Bunnies_64, CactusJack_59, Glaske_58, KilKor_59, Ksquared_62, Phalm_59, Polkaroo_61, Sashimi_48, StressBall_59, Willsammy_59,

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

- A3Wally_115, Angelique_62, Attis_60, Azula_72, Barco_65, BaxterFox_70, BetterKatz_72, Bipper_95, BlingBling_64, Blueberry_71, Bock_73, Bosection6_57, Bowser_60, Brujita_60, Bunnybear_62, CaptainKirk2_69, Charlie_57, Confidence_67, Cracklewink_95, Delian_72, Dolores_65, Dorito_57, Easley_62, Fairfaxidum_71, Farewell_79, Francois_72, Gambino_74, Hyzer_79, Island3_61, Journey_56, JuJu_76, Kamaru_70, Khuang_38, LordFarquaad_62, LunaStella_71, MagicMan_62, Mask_78, MintFen_69, Misha28_74, MissRona_72, Mozy_80, Obliviate_67, Opie_65, PauloDiaboli_115, Peterson_78, PhriskyACE_63, PhrostedPhlake_73, Pimento_75, Pipp_72, Powerball_64, Purky_72, Richie_48, Sbash_73, Scitech_56, Sekhmet_64, Smeagol_83, SoilAssassin_60, Sparky_78, Squirty_74, TChen_73, TaronosaurusRx_68, TootsiePop_74, Tortellini_66, Vidya_58, Whack_69, Whatsapiecost_68, WinkNick_65, YoungHarleezy_46, Zarbodnamra_70,

Summary by start number:

Start 40:

- Found in 1 of 105 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 92
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Purky_72 (P6),

Start 41:

- Found in 10 of 105 (9.5%) of genes in pham
- Manual Annotations of this start: 2 of 92
- Called 30.0% of time when present
- Phage (with cluster) where this start called: Journey_56 (N), Misha28_74 (F1), TootsiePop_74 (F1),

Start 42:

- Found in 4 of 105 (3.8%) of genes in pham
- Manual Annotations of this start: 3 of 92
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sbash_73 (I2), Scitech_56 (N), Squirty_74 (F3), Tortellini_66 (P2),

Start 43:

- Found in 8 of 105 (7.6%) of genes in pham
- Manual Annotations of this start: 3 of 92
- Called 37.5% of time when present
- Phage (with cluster) where this start called: Charlie_57 (N), LunaStella_71 (F4), TChen_73 (F4),

Start 62:

- Found in 1 of 105 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 92
- Called 100.0% of time when present
- Phage (with cluster) where this start called: BaxterFox_70 (CZ3),

Start 64:

- Found in 1 of 105 (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: Khuang_38 (UNK),

Start 65:

- Found in 12 of 105 (11.4%) of genes in pham
- Manual Annotations of this start: 7 of 92
- Called 58.3% of time when present
- Phage (with cluster) where this start called: Barco_65 (CV), BetterKatz_72 (DI), BlingBling_64 (CV), Blueberry_71 (CV), Bock_73 (DI), Francois_72 (DI), JuJu_76 (CV),

Start 67:

- Found in 30 of 105 (28.6%) of genes in pham
- Manual Annotations of this start: 21 of 92
- Called 76.7% of time when present
- Phage (with cluster) where this start called: Attis_60 (CZ2), Azula_72 (CV), Bowser_60 (DB), Bunnybear_62 (CZ), Confidence_67 (CY1), Delian_72 (CV), Dolores_65 (CZ4), Easley_62 (CZ4), Fairfaxidum_71 (CV), Hyzer_79 (CZ1), LordFarquaad_62 (CZ2), MagicMan_62 (DB), MintFen_69 (CV), MissRona_72 (CV), Obliviate_67 (CV), Opie_65 (DB), PhrostedPhlake_73 (CV), Pipp_72 (CV), Sekhmet_64 (CZ4), SoilAssassin_60 (CZ2), TaronosaurusRx_68 (DB), WinkNick_65 (CZ4), Zarbodnamra_70 (CV),

Start 68:

- Found in 2 of 105 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 92
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Richie_48 (AY),

Start 69:

- Found in 2 of 105 (1.9%) of genes in pham
- Manual Annotations of this start: 1 of 92
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Kamaru_70 (DN1),

Start 70:

- Found in 6 of 105 (5.7%) of genes in pham
- Manual Annotations of this start: 5 of 92
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Dorito_57 (CZ4), Peterson_78 (A1), PhriskyACE_63 (CZ4), Powerball_64 (CZ4), Smeagol_83 (A1), Whack_69 (singleton),

Start 71:

- Found in 36 of 105 (34.3%) of genes in pham
- Manual Annotations of this start: 25 of 92
- Called 69.4% of time when present
- Phage (with cluster) where this start called: AbbyDaisy_40 (AY), Atcoo_61 (P1), Bobi_79 (F1), Brusacoram_61 (P1), DillTech15_73 (F1), Flathead_71 (F1), Frokostdame_70 (CV), Ibhubesi_79 (F1), Juniormint_54 (P1), Kumotta_71 (FB), MadMen_71 (F1), MargaretKali_67 (FB), Melissauren88_68 (F1), Ogopogo_77 (F1), Panchino_54 (N), Persistence_39 (AY), Phasih_68 (F1), Renaud18_90 (F4), Rita_78 (F1), Sejanus_77 (AD), ShroomBoi_74 (F1), Shweta_57 (N), StevieRay_64 (P1), Thespis_61 (P1), ThulaThula_65 (P5),

Start 72:

- Found in 2 of 105 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 92
- Called 100.0% of time when present
- Phage (with cluster) where this start called: A3Wally_115 (GD1), PauloDiaboli_115 (GD1),

Start 73:

- Found in 2 of 105 (1.9%) of genes in pham
- Manual Annotations of this start: 2 of 92
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bipper_95 (Y), Cracklewink_95 (Y),

Start 74:

- Found in 21 of 105 (20.0%) of genes in pham
- Manual Annotations of this start: 15 of 92
- Called 76.2% of time when present
- Phage (with cluster) where this start called: Brujita_60 (I1), Bunnies_64 (P1), CactusJack_59 (P1), Farewell_79 (AF), Glaske_58 (P1), Island3_61 (I1), KilKor_59 (P1), Ksquared_62 (P1), Mask_78 (AD), Mozy_80 (F1), Phalm_59 (P1), Sparky_78 (AF), StressBall_59 (P1), Vidya_58 (P1), Whatsapiecost_68 (F1), Willsammy_59 (P1),

Start 76:

- Found in 92 of 105 (87.6%) of genes in pham
- Manual Annotations of this start: 2 of 92
- Called 8.7% of time when present
- Phage (with cluster) where this start called: Aikyam_57 (AY), Angelique_62 (CY1), Bosection6_57 (N), Gambino_74 (CV), Pimento_75 (DI), Polkaroo_61 (P1), Sashimi_48 (AY), YoungHarleezy_46 (AY),

Start 77:

- Found in 19 of 105 (18.1%) of genes in pham
- Manual Annotations of this start: 1 of 92
- Called 5.3% of time when present
- Phage (with cluster) where this start called: CaptainKirk2_69 (CV),

Summary by clusters:

There are 29 clusters represented in this pham: GD1, singleton, DI, CZ2, CZ3, CZ1, DB, CZ4, Y, FB, AF, I1, I2, A1, DN1, P2, CY1, P1, P6, AD, P5, N, CZ, AY, UNK, CV, F1, F3, F4,

Info for manual annotations of cluster A1:

- Start number 70 was manually annotated 2 times for cluster A1.

Info for manual annotations of cluster AD:

- Start number 71 was manually annotated 1 time for cluster AD.
- Start number 74 was manually annotated 1 time for cluster AD.

Info for manual annotations of cluster AF:

- Start number 74 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AY:

- Start number 68 was manually annotated 1 time for cluster AY.
- Start number 71 was manually annotated 2 times for cluster AY.

Info for manual annotations of cluster CV:

- Start number 65 was manually annotated 4 times for cluster CV.
- Start number 67 was manually annotated 9 times for cluster CV.
- Start number 71 was manually annotated 1 time for cluster CV.
- Start number 76 was manually annotated 1 time for cluster CV.
- Start number 77 was manually annotated 1 time for cluster CV.

Info for manual annotations of cluster CY1:

- Start number 67 was manually annotated 1 time for cluster CY1.
- Start number 76 was manually annotated 1 time for cluster CY1.

Info for manual annotations of cluster CZ:

- Start number 67 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ2:

- Start number 67 was manually annotated 3 times for cluster CZ2.

Info for manual annotations of cluster CZ3:

- Start number 62 was manually annotated 1 time for cluster CZ3.

Info for manual annotations of cluster CZ4:

- Start number 67 was manually annotated 4 times for cluster CZ4.
- Start number 70 was manually annotated 2 times for cluster CZ4.

Info for manual annotations of cluster DB:

- Start number 67 was manually annotated 3 times for cluster DB.

Info for manual annotations of cluster DI:

- Start number 65 was manually annotated 3 times for cluster DI.

Info for manual annotations of cluster DN1:

- Start number 69 was manually annotated 1 time for cluster DN1.

Info for manual annotations of cluster F1:

- Start number 41 was manually annotated 2 times for cluster F1.
- Start number 71 was manually annotated 10 times for cluster F1.
- Start number 74 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster F3:

- Start number 42 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

- Start number 43 was manually annotated 2 times for cluster F4.
- Start number 71 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster FB:

- Start number 71 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster GD1:

- Start number 72 was manually annotated 2 times for cluster GD1.

Info for manual annotations of cluster I1:

- Start number 74 was manually annotated 2 times for cluster I1.

Info for manual annotations of cluster I2:

- Start number 42 was manually annotated 1 time for cluster I2.

Info for manual annotations of cluster N:

- Start number 43 was manually annotated 1 time for cluster N.
- Start number 71 was manually annotated 2 times for cluster N.

Info for manual annotations of cluster P1:

- Start number 71 was manually annotated 5 times for cluster P1.
- Start number 74 was manually annotated 8 times for cluster P1.

Info for manual annotations of cluster P2:

- Start number 42 was manually annotated 1 time for cluster P2.

Info for manual annotations of cluster P5:

- Start number 71 was manually annotated 1 time for cluster P5.

Info for manual annotations of cluster P6:

- Start number 40 was manually annotated 1 time for cluster P6.

Info for manual annotations of cluster Y:

- Start number 73 was manually annotated 2 times for cluster Y.

Gene Information:

Gene: A3Wally_115 Start: 79463, Stop: 79188, Start Num: 72

Candidate Starts for A3Wally_115:

(Start: 72 @79463 has 2 MA's), (79, 79391), (134, 79298), (138, 79289), (141, 79259),

Gene: AbbyDaisy_40 Start: 28577, Stop: 28236, Start Num: 71

Candidate Starts for AbbyDaisy_40:

(Start: 71 @28577 has 25 MA's), (75, 28562), (Start: 76 @28532 has 2 MA's), (80, 28475), (102, 28436), (136, 28346), (144, 28274),

Gene: Aikyam_57 Start: 32072, Stop: 32380, Start Num: 76

Candidate Starts for Aikyam_57:

(Start: 71 @32027 has 25 MA's), (Start: 76 @32072 has 2 MA's), (101, 32180), (109, 32198), (120, 32216), (124, 32231), (136, 32282), (144, 32354),

Gene: Angelique_62 Start: 44919, Stop: 45251, Start Num: 76

Candidate Starts for Angelique_62:

(Start: 67 @44877 has 21 MA's), (Start: 76 @44919 has 2 MA's), (103, 45030), (119, 45078), (144, 45216),

Gene: Atcoo_61 Start: 41458, Stop: 41793, Start Num: 71

Candidate Starts for Atcoo_61:

(Start: 71 @41458 has 25 MA's), (Start: 74 @41461 has 15 MA's), (Start: 76 @41503 has 2 MA's), (111, 41620), (141, 41728), (144, 41767),

Gene: Attis_60 Start: 40973, Stop: 41338, Start Num: 67

Candidate Starts for Attis_60:

(Start: 67 @40973 has 21 MA's), (103, 41117), (144, 41303),

Gene: Azula_72 Start: 45840, Stop: 46205, Start Num: 67

Candidate Starts for Azula_72:

(Start: 65 @45837 has 7 MA's), (Start: 67 @45840 has 21 MA's), (Start: 76 @45882 has 2 MA's), (Start: 77 @45897 has 1 MA's), (98, 45981), (141, 46131), (144, 46167),

Gene: Barco_65 Start: 42185, Stop: 42556, Start Num: 65

Candidate Starts for Barco_65:

(63, 42182), (Start: 65 @42185 has 7 MA's), (Start: 67 @42188 has 21 MA's), (Start: 76 @42230 has 2 MA's), (Start: 77 @42245 has 1 MA's), (98, 42329), (126, 42407), (141, 42479), (144, 42518),

Gene: BaxterFox_70 Start: 47064, Stop: 47483, Start Num: 62

Candidate Starts for BaxterFox_70:

(Start: 62 @47064 has 1 MA's), (Start: 76 @47112 has 2 MA's), (84, 47175), (115, 47256), (123, 47280), (131, 47322), (144, 47448),

Gene: BetterKatz_72 Start: 48566, Stop: 48934, Start Num: 65

Candidate Starts for BetterKatz_72:

(45, 48482), (47, 48488), (61, 48554), (Start: 65 @48566 has 7 MA's), (Start: 76 @48611 has 2 MA's), (81, 48671), (130, 48788), (139, 48815), (144, 48881),

Gene: Bipper_95 Start: 60239, Stop: 60613, Start Num: 73

Candidate Starts for Bipper_95:

(5, 59825), (7, 59909), (20, 60002), (23, 60011), (32, 60104), (Start: 73 @60239 has 2 MA's), (Start: 76 @60284 has 2 MA's), (Start: 77 @60299 has 1 MA's), (88, 60365), (97, 60386), (135, 60491), (144, 60569),

Gene: BlingBling_64 Start: 43067, Stop: 43438, Start Num: 65

Candidate Starts for BlingBling_64:

(63, 43064), (Start: 65 @43067 has 7 MA's), (Start: 67 @43070 has 21 MA's), (Start: 76 @43112 has 2 MA's), (Start: 77 @43127 has 1 MA's), (98, 43211), (141, 43361), (144, 43400),

Gene: Blueberry_71 Start: 45837, Stop: 46205, Start Num: 65

Candidate Starts for Blueberry_71:

(Start: 65 @45837 has 7 MA's), (Start: 67 @45840 has 21 MA's), (Start: 76 @45882 has 2 MA's),
(Start: 77 @45897 has 1 MA's), (98, 45981), (141, 46131), (144, 46167),

Gene: Bobi_79 Start: 48352, Stop: 48687, Start Num: 71

Candidate Starts for Bobi_79:

(Start: 71 @48352 has 25 MA's), (Start: 74 @48355 has 15 MA's), (Start: 76 @48397 has 2 MA's),
(111, 48514), (141, 48622), (144, 48661),

Gene: Bock_73 Start: 48168, Stop: 48518, Start Num: 65

Candidate Starts for Bock_73:

(Start: 65 @48168 has 7 MA's), (Start: 76 @48213 has 2 MA's), (Start: 77 @48228 has 1 MA's), (94,
48300), (144, 48465), (145, 48468),

Gene: Bosection6_57 Start: 38193, Stop: 38504, Start Num: 76

Candidate Starts for Bosection6_57:

(17, 37857), (24, 37917), (26, 37950), (30, 37986), (Start: 41 @38052 has 2 MA's), (Start: 43 @38055
has 3 MA's), (Start: 76 @38193 has 2 MA's), (131, 38376), (144, 38466), (148, 38496),

Gene: Bowser_60 Start: 41674, Stop: 42021, Start Num: 67

Candidate Starts for Bowser_60:

(Start: 67 @41674 has 21 MA's), (Start: 76 @41716 has 2 MA's), (104, 41812), (107, 41818), (114,
41836), (141, 41947), (144, 41986),

Gene: Brujita_60 Start: 39319, Stop: 39651, Start Num: 74

Candidate Starts for Brujita_60:

(Start: 74 @39319 has 15 MA's), (Start: 76 @39361 has 2 MA's), (111, 39478), (141, 39586),

Gene: Brusacoram_61 Start: 40001, Stop: 40336, Start Num: 71

Candidate Starts for Brusacoram_61:

(Start: 71 @40001 has 25 MA's), (Start: 74 @40004 has 15 MA's), (Start: 76 @40046 has 2 MA's),
(111, 40163), (141, 40271), (144, 40310),

Gene: Bunnies_64 Start: 41294, Stop: 41638, Start Num: 74

Candidate Starts for Bunnies_64:

(Start: 71 @41291 has 25 MA's), (Start: 74 @41294 has 15 MA's), (Start: 76 @41336 has 2 MA's),
(111, 41453), (141, 41561), (144, 41600), (148, 41630),

Gene: Bunnybear_62 Start: 45138, Stop: 45503, Start Num: 67

Candidate Starts for Bunnybear_62:

(Start: 67 @45138 has 21 MA's), (103, 45282), (141, 45429), (144, 45468),

Gene: CactusJack_59 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for CactusJack_59:

(Start: 71 @40159 has 25 MA's), (Start: 74 @40162 has 15 MA's), (Start: 76 @40204 has 2 MA's),
(111, 40321), (141, 40429), (144, 40468), (148, 40498),

Gene: CaptainKirk2_69 Start: 41893, Stop: 42204, Start Num: 77

Candidate Starts for CaptainKirk2_69:

(Start: 67 @41836 has 21 MA's), (Start: 77 @41893 has 1 MA's), (98, 41977), (126, 42055), (144,
42166),

Gene: Charlie_57 Start: 37679, Stop: 38128, Start Num: 43

Candidate Starts for Charlie_57:

(17, 37481), (24, 37541), (26, 37574), (30, 37610), (Start: 41 @37676 has 2 MA's), (Start: 43 @37679 has 3 MA's), (Start: 76 @37817 has 2 MA's), (131, 38000), (144, 38090), (148, 38120),

Gene: Confidence_67 Start: 44239, Stop: 44604, Start Num: 67
Candidate Starts for Confidence_67:
(Start: 67 @44239 has 21 MA's), (103, 44383), (141, 44530), (144, 44569),

Gene: Cracklewink_95 Start: 59474, Stop: 59848, Start Num: 73
Candidate Starts for Cracklewink_95:
(20, 59237), (23, 59246), (32, 59339), (Start: 73 @59474 has 2 MA's), (Start: 76 @59519 has 2 MA's), (Start: 77 @59534 has 1 MA's), (88, 59600), (135, 59726),

Gene: Delian_72 Start: 41834, Stop: 42202, Start Num: 67
Candidate Starts for Delian_72:
(Start: 67 @41834 has 21 MA's), (Start: 77 @41891 has 1 MA's), (98, 41975), (126, 42053), (144, 42164),

Gene: DillTech15_73 Start: 44178, Stop: 44531, Start Num: 71
Candidate Starts for DillTech15_73:
(51, 44133), (53, 44139), (Start: 71 @44178 has 25 MA's), (Start: 76 @44220 has 2 MA's), (88, 44301), (135, 44427), (141, 44466),

Gene: Dolores_65 Start: 41484, Stop: 41837, Start Num: 67
Candidate Starts for Dolores_65:
(Start: 67 @41484 has 21 MA's), (Start: 76 @41526 has 2 MA's), (110, 41631), (116, 41652), (125, 41679), (144, 41802),

Gene: Dorito_57 Start: 39050, Stop: 39421, Start Num: 70
Candidate Starts for Dorito_57:
(32, 38909), (Start: 70 @39050 has 5 MA's), (Start: 76 @39098 has 2 MA's), (96, 39197), (102, 39209), (105, 39215), (144, 39386),

Gene: Easley_62 Start: 40977, Stop: 41312, Start Num: 67
Candidate Starts for Easley_62:
(Start: 67 @40977 has 21 MA's), (Start: 76 @41019 has 2 MA's), (110, 41124), (116, 41145), (125, 41172), (144, 41277),

Gene: Fairfaxidum_71 Start: 44423, Stop: 44767, Start Num: 67
Candidate Starts for Fairfaxidum_71:
(Start: 65 @44420 has 7 MA's), (Start: 67 @44423 has 21 MA's), (Start: 76 @44465 has 2 MA's), (81, 44522), (103, 44576), (105, 44582),

Gene: Farewell_79 Start: 52056, Stop: 52409, Start Num: 74
Candidate Starts for Farewell_79:
(66, 52047), (Start: 74 @52056 has 15 MA's), (Start: 76 @52098 has 2 MA's), (82, 52164), (92, 52182), (125, 52251), (129, 52272), (132, 52290), (141, 52338),

Gene: Flathead_71 Start: 44823, Stop: 45164, Start Num: 71
Candidate Starts for Flathead_71:
(Start: 41 @44730 has 2 MA's), (57, 44787), (Start: 71 @44823 has 25 MA's), (Start: 76 @44865 has 2 MA's), (131, 45048), (141, 45099),

Gene: Francois_72 Start: 48407, Stop: 48832, Start Num: 65

Candidate Starts for Francois_72:

(35, 48302), (39, 48317), (48, 48341), (Start: 65 @48407 has 7 MA's), (Start: 76 @48452 has 2 MA's), (102, 48566), (108, 48578), (125, 48635), (142, 48758),

Gene: Frokostdame_70 Start: 45207, Stop: 45515, Start Num: 71

Candidate Starts for Frokostdame_70:

(Start: 71 @45207 has 25 MA's), (Start: 76 @45249 has 2 MA's), (88, 45318), (95, 45336), (128, 45390), (140, 45420), (144, 45477),

Gene: Gambino_74 Start: 45882, Stop: 46205, Start Num: 76

Candidate Starts for Gambino_74:

(Start: 65 @45837 has 7 MA's), (Start: 67 @45840 has 21 MA's), (Start: 76 @45882 has 2 MA's), (Start: 77 @45897 has 1 MA's), (98, 45981), (141, 46131), (144, 46167),

Gene: Glaske_58 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for Glaske_58:

(Start: 71 @40159 has 25 MA's), (Start: 74 @40162 has 15 MA's), (Start: 76 @40204 has 2 MA's), (111, 40321), (141, 40429), (144, 40468), (148, 40498),

Gene: Hyzer_79 Start: 52741, Stop: 53109, Start Num: 67

Candidate Starts for Hyzer_79:

(Start: 67 @52741 has 21 MA's), (103, 52885), (141, 53032), (144, 53071),

Gene: Ibhubesi_79 Start: 46556, Stop: 46915, Start Num: 71

Candidate Starts for Ibhubesi_79:

(54, 46514), (59, 46532), (Start: 71 @46556 has 25 MA's), (Start: 76 @46598 has 2 MA's), (131, 46781), (143, 46865), (144, 46871), (146, 46877),

Gene: Island3_61 Start: 39319, Stop: 39651, Start Num: 74

Candidate Starts for Island3_61:

(Start: 74 @39319 has 15 MA's), (Start: 76 @39361 has 2 MA's), (111, 39478), (141, 39586),

Gene: Journey_56 Start: 35411, Stop: 35842, Start Num: 41

Candidate Starts for Journey_56:

(19, 35267), (25, 35282), (26, 35309), (30, 35345), (Start: 41 @35411 has 2 MA's), (Start: 43 @35414 has 3 MA's), (Start: 76 @35552 has 2 MA's), (111, 35669), (141, 35777), (144, 35816),

Gene: JuJu_76 Start: 47574, Stop: 47936, Start Num: 65

Candidate Starts for JuJu_76:

(Start: 65 @47574 has 7 MA's), (Start: 67 @47577 has 21 MA's), (Start: 76 @47619 has 2 MA's), (Start: 77 @47634 has 1 MA's), (85, 47682), (94, 47700), (108, 47718), (125, 47772), (137, 47820), (144, 47898),

Gene: Juniormint_54 Start: 36223, Stop: 36555, Start Num: 71

Candidate Starts for Juniormint_54:

(Start: 71 @36223 has 25 MA's), (Start: 76 @36265 has 2 MA's), (111, 36382), (141, 36490), (144, 36529),

Gene: Kamaru_70 Start: 42911, Stop: 43327, Start Num: 69

Candidate Starts for Kamaru_70:

(38, 42809), (Start: 41 @42815 has 2 MA's), (55, 42866), (Start: 69 @42911 has 1 MA's), (79, 42995), (100, 43073), (118, 43130), (122, 43142), (130, 43187), (140, 43226), (144, 43283),

Gene: Khuang_38 Start: 25760, Stop: 25416, Start Num: 64
Candidate Starts for Khuang_38:
(64, 25760), (75, 25736), (Start: 76 @25706 has 2 MA's), (78, 25685),

Gene: KilKor_59 Start: 40855, Stop: 41199, Start Num: 74
Candidate Starts for KilKor_59:
(Start: 71 @40852 has 25 MA's), (Start: 74 @40855 has 15 MA's), (Start: 76 @40897 has 2 MA's),
(111, 41014), (141, 41122), (144, 41161), (148, 41191),

Gene: Ksquared_62 Start: 41294, Stop: 41638, Start Num: 74
Candidate Starts for Ksquared_62:
(Start: 71 @41291 has 25 MA's), (Start: 74 @41294 has 15 MA's), (Start: 76 @41336 has 2 MA's),
(111, 41453), (141, 41561), (144, 41600), (148, 41630),

Gene: Kumotta_71 Start: 37919, Stop: 38248, Start Num: 71
Candidate Starts for Kumotta_71:
(Start: 71 @37919 has 25 MA's), (Start: 76 @37964 has 2 MA's), (93, 38042), (99, 38051), (127,
38111), (133, 38144), (144, 38222),

Gene: LordFarquaad_62 Start: 40954, Stop: 41319, Start Num: 67
Candidate Starts for LordFarquaad_62:
(Start: 67 @40954 has 21 MA's), (103, 41098), (144, 41284),

Gene: LunaStella_71 Start: 45366, Stop: 45794, Start Num: 43
Candidate Starts for LunaStella_71:
(6, 45066), (26, 45261), (30, 45297), (Start: 41 @45363 has 2 MA's), (Start: 43 @45366 has 3 MA's),
(Start: 76 @45504 has 2 MA's), (111, 45621), (141, 45729), (144, 45768),

Gene: MadMen_71 Start: 44891, Stop: 45229, Start Num: 71
Candidate Starts for MadMen_71:
(50, 44849), (53, 44855), (Start: 71 @44891 has 25 MA's), (Start: 76 @44933 has 2 MA's), (111,
45050), (141, 45158), (144, 45197), (147, 45224),

Gene: MagicMan_62 Start: 42714, Stop: 43088, Start Num: 67
Candidate Starts for MagicMan_62:
(Start: 67 @42714 has 21 MA's), (Start: 76 @42756 has 2 MA's), (103, 42867), (112, 42888), (119,
42915),

Gene: MargaretKali_67 Start: 36537, Stop: 36866, Start Num: 71
Candidate Starts for MargaretKali_67:
(Start: 71 @36537 has 25 MA's), (Start: 76 @36582 has 2 MA's), (93, 36660), (99, 36669), (127,
36729), (133, 36762), (144, 36840),

Gene: Mask_78 Start: 57551, Stop: 57895, Start Num: 74
Candidate Starts for Mask_78:
(10, 57227), (14, 57245), (29, 57371), (56, 57506), (Start: 74 @57551 has 15 MA's), (Start: 76
@57593 has 2 MA's), (91, 57674), (121, 57728), (133, 57779),

Gene: Melissauren88_68 Start: 43644, Stop: 43991, Start Num: 71
Candidate Starts for Melissauren88_68:
(Start: 71 @43644 has 25 MA's), (Start: 76 @43686 has 2 MA's), (131, 43869), (141, 43920), (144,
43959), (147, 43986),

Gene: MintFen_69 Start: 42450, Stop: 42818, Start Num: 67
Candidate Starts for MintFen_69:
(Start: 67 @42450 has 21 MA's), (Start: 77 @42507 has 1 MA's), (98, 42591), (126, 42669), (144, 42780),

Gene: Misha28_74 Start: 45990, Stop: 46421, Start Num: 41
Candidate Starts for Misha28_74:
(26, 45888), (30, 45924), (Start: 41 @45990 has 2 MA's), (Start: 43 @45993 has 3 MA's), (Start: 76 @46131 has 2 MA's), (111, 46248), (141, 46356), (144, 46395),

Gene: MissRona_72 Start: 45841, Stop: 46206, Start Num: 67
Candidate Starts for MissRona_72:
(Start: 65 @45838 has 7 MA's), (Start: 67 @45841 has 21 MA's), (Start: 76 @45883 has 2 MA's), (Start: 77 @45898 has 1 MA's), (98, 45982), (141, 46132), (144, 46168),

Gene: Mozy_80 Start: 45738, Stop: 46079, Start Num: 74
Candidate Starts for Mozy_80:
(37, 45645), (56, 45702), (Start: 74 @45738 has 15 MA's), (Start: 76 @45780 has 2 MA's), (91, 45861), (121, 45915), (133, 45966), (144, 46047), (147, 46074),

Gene: Obliviate_67 Start: 42359, Stop: 42727, Start Num: 67
Candidate Starts for Obliviate_67:
(Start: 67 @42359 has 21 MA's), (Start: 76 @42401 has 2 MA's), (Start: 77 @42416 has 1 MA's), (98, 42500), (126, 42578), (141, 42650), (144, 42689),

Gene: Ogopogo_77 Start: 45102, Stop: 45455, Start Num: 71
Candidate Starts for Ogopogo_77:
(36, 45006), (53, 45063), (Start: 71 @45102 has 25 MA's), (Start: 76 @45144 has 2 MA's), (88, 45225), (135, 45351), (141, 45390),

Gene: Opie_65 Start: 42832, Stop: 43206, Start Num: 67
Candidate Starts for Opie_65:
(Start: 67 @42832 has 21 MA's), (Start: 76 @42874 has 2 MA's), (103, 42985), (112, 43006), (119, 43033),

Gene: Panchino_54 Start: 38226, Stop: 38558, Start Num: 71
Candidate Starts for Panchino_54:
(Start: 71 @38226 has 25 MA's), (Start: 76 @38268 has 2 MA's), (111, 38385), (141, 38493),

Gene: PauloDiaboli_115 Start: 78808, Stop: 78533, Start Num: 72
Candidate Starts for PauloDiaboli_115:
(Start: 72 @78808 has 2 MA's), (79, 78736), (134, 78643), (138, 78634), (141, 78604),

Gene: Persistence_39 Start: 27398, Stop: 27057, Start Num: 71
Candidate Starts for Persistence_39:
(Start: 71 @27398 has 25 MA's), (75, 27383), (Start: 76 @27353 has 2 MA's), (80, 27296), (99, 27266), (102, 27257), (136, 27167), (144, 27095),

Gene: Peterson_78 Start: 48630, Stop: 48289, Start Num: 70
Candidate Starts for Peterson_78:
(60, 48654), (Start: 70 @48630 has 5 MA's), (Start: 76 @48588 has 2 MA's), (89, 48516), (117, 48462), (144, 48333), (146, 48327),

Gene: Phalm_59 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for Phalm_59:

(Start: 71 @40159 has 25 MA's), (Start: 74 @40162 has 15 MA's), (Start: 76 @40204 has 2 MA's), (111, 40321), (141, 40429), (144, 40468), (148, 40498),

Gene: Phasih_68 Start: 44413, Stop: 44874, Start Num: 71

Candidate Starts for Phasih_68:

(50, 44371), (53, 44377), (Start: 71 @44413 has 25 MA's), (Start: 76 @44455 has 2 MA's), (111, 44572), (141, 44680), (147, 44746), (149, 44785),

Gene: PhriskyACE_63 Start: 42055, Stop: 42390, Start Num: 70

Candidate Starts for PhriskyACE_63:

(1, 41236), (2, 41281), (3, 41332), (32, 41914), (Start: 70 @42055 has 5 MA's), (Start: 76 @42103 has 2 MA's), (94, 42190), (144, 42355),

Gene: PhrostedPhlake_73 Start: 44238, Stop: 44606, Start Num: 67

Candidate Starts for PhrostedPhlake_73:

(Start: 67 @44238 has 21 MA's), (Start: 76 @44280 has 2 MA's), (Start: 77 @44295 has 1 MA's), (85, 44346), (98, 44379), (141, 44529),

Gene: Pimento_75 Start: 47915, Stop: 48292, Start Num: 76

Candidate Starts for Pimento_75:

(Start: 65 @47870 has 7 MA's), (Start: 76 @47915 has 2 MA's), (102, 48029), (113, 48053), (125, 48098), (142, 48221), (144, 48239),

Gene: Pipp_72 Start: 44407, Stop: 44775, Start Num: 67

Candidate Starts for Pipp_72:

(Start: 67 @44407 has 21 MA's), (98, 44548), (126, 44626), (141, 44698), (144, 44737),

Gene: Polkaroo_61 Start: 40802, Stop: 41101, Start Num: 76

Candidate Starts for Polkaroo_61:

(Start: 71 @40760 has 25 MA's), (Start: 76 @40802 has 2 MA's), (131, 40985),

Gene: Powerball_64 Start: 42164, Stop: 42493, Start Num: 70

Candidate Starts for Powerball_64:

(1, 41345), (2, 41390), (3, 41441), (32, 42023), (Start: 70 @42164 has 5 MA's), (Start: 76 @42212 has 2 MA's), (94, 42299), (144, 42458),

Gene: Purky_72 Start: 44925, Stop: 45359, Start Num: 40

Candidate Starts for Purky_72:

(21, 44793), (22, 44796), (Start: 40 @44925 has 1 MA's), (Start: 43 @44928 has 3 MA's), (Start: 76 @45066 has 2 MA's), (91, 45147), (121, 45201), (133, 45252),

Gene: Renaud18_90 Start: 49824, Stop: 50195, Start Num: 71

Candidate Starts for Renaud18_90:

(60, 49800), (Start: 71 @49824 has 25 MA's), (Start: 76 @49866 has 2 MA's), (88, 49947), (135, 50073), (144, 50151),

Gene: Richie_48 Start: 30189, Stop: 30533, Start Num: 68

Candidate Starts for Richie_48:

(Start: 68 @30189 has 1 MA's), (Start: 76 @30237 has 2 MA's), (Start: 77 @30252 has 1 MA's), (99, 30318), (106, 30333), (120, 30360), (140, 30441), (144, 30498),

Gene: Rita_78 Start: 47814, Stop: 48281, Start Num: 71

Candidate Starts for Rita_78:

(50, 47766), (53, 47772), (Start: 71 @47814 has 25 MA's), (Start: 76 @47856 has 2 MA's), (111, 47973), (141, 48081), (147, 48147), (149, 48186),

Gene: Sashimi_48 Start: 31181, Stop: 31513, Start Num: 76

Candidate Starts for Sashimi_48:

(Start: 71 @31136 has 25 MA's), (Start: 76 @31181 has 2 MA's), (90, 31274), (114, 31328),

Gene: Sbash_73 Start: 47394, Stop: 47846, Start Num: 42

Candidate Starts for Sbash_73:

(19, 47247), (Start: 42 @47394 has 3 MA's), (44, 47397), (Start: 76 @47535 has 2 MA's), (88, 47616), (135, 47742),

Gene: Scitech_56 Start: 38238, Stop: 38633, Start Num: 42

Candidate Starts for Scitech_56:

(28, 38148), (34, 38208), (Start: 42 @38238 has 3 MA's), (44, 38241), (Start: 76 @38379 has 2 MA's), (88, 38448), (95, 38466), (128, 38520),

Gene: Sejanus_77 Start: 56012, Stop: 56353, Start Num: 71

Candidate Starts for Sejanus_77:

(8, 55688), (11, 55706), (27, 55832), (52, 55967), (Start: 71 @56012 has 25 MA's), (Start: 76 @56054 has 2 MA's), (131, 56237),

Gene: Sekhmet_64 Start: 41883, Stop: 42236, Start Num: 67

Candidate Starts for Sekhmet_64:

(Start: 67 @41883 has 21 MA's), (Start: 76 @41925 has 2 MA's), (110, 42030), (116, 42051), (125, 42078), (144, 42201),

Gene: ShroomBoi_74 Start: 46463, Stop: 46810, Start Num: 71

Candidate Starts for ShroomBoi_74:

(Start: 41 @46370 has 2 MA's), (57, 46427), (Start: 71 @46463 has 25 MA's), (Start: 76 @46505 has 2 MA's), (131, 46688), (141, 46739), (144, 46778), (147, 46805),

Gene: Shweta_57 Start: 37933, Stop: 38274, Start Num: 71

Candidate Starts for Shweta_57:

(Start: 71 @37933 has 25 MA's), (Start: 76 @37975 has 2 MA's), (131, 38158),

Gene: Smeagol_83 Start: 50364, Stop: 50023, Start Num: 70

Candidate Starts for Smeagol_83:

(Start: 70 @50364 has 5 MA's), (Start: 76 @50322 has 2 MA's), (89, 50250), (117, 50196), (144, 50067), (146, 50061),

Gene: SoilAssassin_60 Start: 40972, Stop: 41337, Start Num: 67

Candidate Starts for SoilAssassin_60:

(Start: 67 @40972 has 21 MA's), (103, 41116), (144, 41302),

Gene: Sparky_78 Start: 53650, Stop: 54003, Start Num: 74

Candidate Starts for Sparky_78:

(66, 53641), (Start: 74 @53650 has 15 MA's), (Start: 76 @53692 has 2 MA's), (82, 53758), (92, 53776), (125, 53845), (129, 53866), (132, 53884), (141, 53932),

Gene: Squirty_74 Start: 49246, Stop: 49641, Start Num: 42

Candidate Starts for Squirty_74:

(9, 49012), (16, 49048), (28, 49156), (34, 49216), (Start: 42 @49246 has 3 MA's), (44, 49249), (Start: 76 @49387 has 2 MA's), (88, 49456), (95, 49474), (128, 49528),

Gene: StevieRay_64 Start: 41228, Stop: 41569, Start Num: 71

Candidate Starts for StevieRay_64:

(Start: 69 @41225 has 1 MA's), (Start: 71 @41228 has 25 MA's), (Start: 76 @41270 has 2 MA's), (131, 41453), (141, 41504),

Gene: StressBall_59 Start: 40162, Stop: 40506, Start Num: 74

Candidate Starts for StressBall_59:

(Start: 71 @40159 has 25 MA's), (Start: 74 @40162 has 15 MA's), (Start: 76 @40204 has 2 MA's), (111, 40321), (141, 40429), (144, 40468), (148, 40498),

Gene: TChen_73 Start: 47317, Stop: 47745, Start Num: 43

Candidate Starts for TChen_73:

(6, 47017), (26, 47212), (30, 47248), (Start: 41 @47314 has 2 MA's), (Start: 43 @47317 has 3 MA's), (Start: 76 @47455 has 2 MA's), (111, 47572), (141, 47680), (144, 47719),

Gene: TaronosaurusRx_68 Start: 42279, Stop: 42626, Start Num: 67

Candidate Starts for TaronosaurusRx_68:

(Start: 67 @42279 has 21 MA's), (Start: 76 @42321 has 2 MA's), (104, 42417), (107, 42423), (114, 42441), (141, 42552), (144, 42591),

Gene: Thespis_61 Start: 40001, Stop: 40336, Start Num: 71

Candidate Starts for Thespis_61:

(Start: 71 @40001 has 25 MA's), (Start: 74 @40004 has 15 MA's), (Start: 76 @40046 has 2 MA's), (111, 40163), (141, 40271), (144, 40310),

Gene: ThulaThula_65 Start: 43845, Stop: 44189, Start Num: 71

Candidate Starts for ThulaThula_65:

(4, 43398), (12, 43536), (13, 43542), (15, 43554), (18, 43581), (31, 43695), (Start: 71 @43845 has 25 MA's), (Start: 74 @43848 has 15 MA's), (Start: 76 @43890 has 2 MA's), (83, 43953), (86, 43962), (91, 43977),

Gene: TootsiePop_74 Start: 45990, Stop: 46421, Start Num: 41

Candidate Starts for TootsiePop_74:

(26, 45888), (30, 45924), (Start: 41 @45990 has 2 MA's), (Start: 43 @45993 has 3 MA's), (Start: 76 @46131 has 2 MA's), (111, 46248), (141, 46356), (144, 46395),

Gene: Tortellini_66 Start: 44536, Stop: 45000, Start Num: 42

Candidate Starts for Tortellini_66:

(33, 44500), (Start: 42 @44536 has 3 MA's), (44, 44539), (Start: 76 @44677 has 2 MA's), (88, 44758), (135, 44884), (144, 44962), (148, 44992),

Gene: Vidya_58 Start: 38673, Stop: 39005, Start Num: 74

Candidate Starts for Vidya_58:

(Start: 74 @38673 has 15 MA's), (Start: 76 @38715 has 2 MA's), (111, 38832), (141, 38940),

Gene: Whack_69 Start: 45414, Stop: 45812, Start Num: 70

Candidate Starts for Whack_69:

(49, 45354), (Start: 70 @45414 has 5 MA's), (Start: 76 @45462 has 2 MA's), (Start: 77 @45477 has 1 MA's), (87, 45543), (89, 45546), (123, 45636), (143, 45771),

Gene: Whatsapiecost_68 Start: 41989, Stop: 42354, Start Num: 74

Candidate Starts for Whatsapiecost_68:

(46, 41896), (58, 41953), (Start: 74 @41989 has 15 MA's), (Start: 76 @42031 has 2 MA's), (90, 42115), (134, 42244), (144, 42322), (147, 42349),

Gene: Willsammy_59 Start: 40338, Stop: 40682, Start Num: 74

Candidate Starts for Willsammy_59:

(Start: 71 @40335 has 25 MA's), (Start: 74 @40338 has 15 MA's), (Start: 76 @40380 has 2 MA's), (111, 40497), (141, 40605), (144, 40644), (148, 40674),

Gene: WinkNick_65 Start: 41407, Stop: 41760, Start Num: 67

Candidate Starts for WinkNick_65:

(Start: 67 @41407 has 21 MA's), (Start: 76 @41449 has 2 MA's), (110, 41554), (116, 41575), (125, 41602), (144, 41725),

Gene: YoungHarleezy_46 Start: 29842, Stop: 30138, Start Num: 76

Candidate Starts for YoungHarleezy_46:

(Start: 68 @29794 has 1 MA's), (Start: 76 @29842 has 2 MA's), (Start: 77 @29857 has 1 MA's), (99, 29923), (106, 29938), (120, 29965), (140, 30046), (144, 30103),

Gene: Zarbodnamra_70 Start: 42931, Stop: 43299, Start Num: 67

Candidate Starts for Zarbodnamra_70:

(Start: 67 @42931 has 21 MA's), (Start: 76 @42973 has 2 MA's), (Start: 77 @42988 has 1 MA's), (98, 43072), (126, 43150), (141, 43222), (144, 43261),