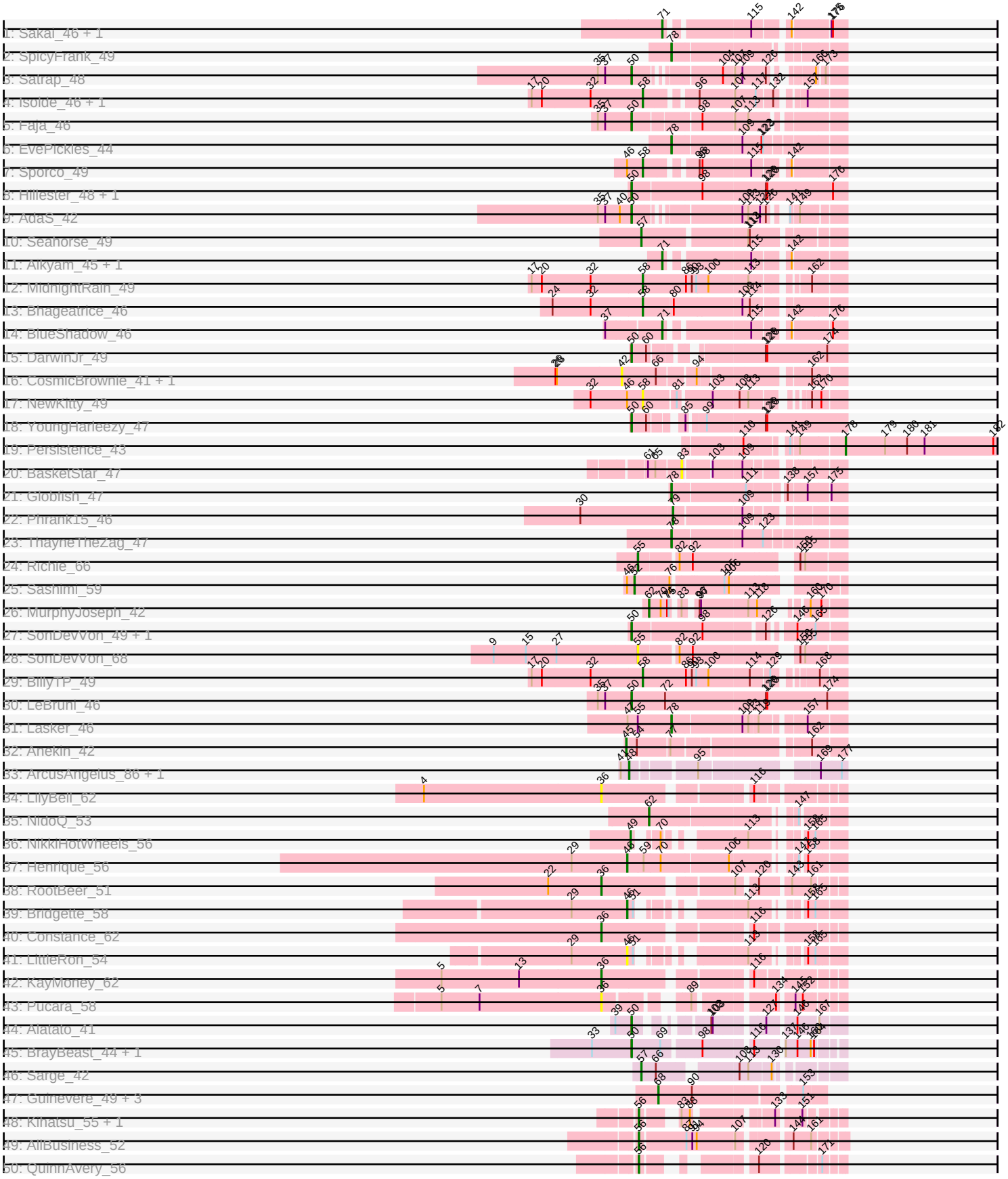
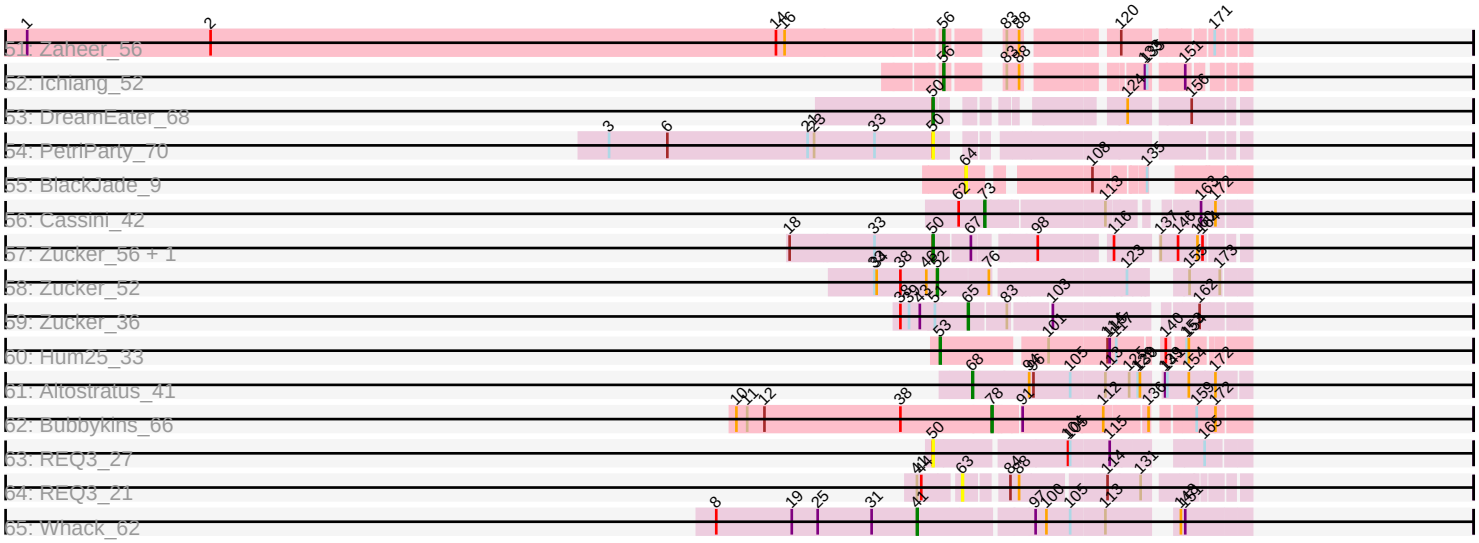
Pham 345620


1: Sakai_46 + 1
2: SpicyFrank_49
3: Satrap_48
4: Isolde_46 + 1
5: Faja_46
6: EvePickles_44
7: Sporco_49
8: Hillester_48 + 1
9: AdaS_42
10: Seahorse_49
11: Alkyam_45 + 1
12: MidnightRain_49
13: Bhageatrice_46
14: BlueShadow_46
15: DarwinJr_49
16: CosmicBrownie_41 + 1
17: NewKitty_49
18: YoungHaneezy_47
19: Persistence_43
20: BasketStar_47
21: Globfish_47
22: Phrank15_46
23: ThayneTheZag_47
24: Richie_66
25: Sashimi_59
26: MurphyJoseph_42
27: SonDevVon_49 + 1
28: SonDevVon_68
29: BillyTP_49
30: LeBruni_46
31: Lasker_46
32: Anekin_42
33: ArcusAngelus_86 + 1
34: LilyBell_62
35: NiddO_53
36: NikkiHotWheels_56
37: Henrique_56
38: RootBeer_51
39: Bridgette_58
40: Constance_62
41: LittleRon_54
42: KayMoney_62
43: Pucara_58
44: Alatato_41
45: BrayBeast_44 + 1
46: Sarge_42
47: Guinevere_49 + 3
48: Kinatsu_55 + 1
49: AllBusiness_52
50: QuinnAvery_56

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51: Zaheer_56
52: Ichiang_52
53: DreamEater_68
54: PetriParty_70
55: BlackJade_9
56: Cassini_42
57: Zucker_56 + 1
58: Zucker_52
59: Zucker_36
60: Hum25_33
61: Altostratus_41
62: Bubbykins_66
63: REQ3_27
64: REQ3_21
65: Whack_62

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 345620 Report

This analysis was run 11/14/26 on database version 672.

Pham number 345620 has 78 members, 15 are drafts.

Phages represented in each track:
- Track 1 : Sakai_46, Gorpy_47
- Track 2 : SpicyFrank_49
- Track 3 : Satrap_48
- Track 4 : Isolde_46, Mapleville_43
- Track 5 : Faja_46
- Track 6 : EvePickles_44
- Track 7 : Sporco_49
- Track 8 : Hillester_48, RadFad_48
- Track 9 : AdaS_42
- Track 10 : Seahorse_49
- Track 11 : Aikyam_45, MaterMagnus_47
- Track 12 : MidnightRain_49
- Track 13 : Bhageatrice_46
- Track 14 : BlueShadow_46
- Track 15 : DarwinJr_49
- Track 16 : CosmicBrownie_41, GumGum_44
- Track 17 : NewKitty_49
- Track 18 : YoungHarleezy_47
- Track 19 : Persistence_43
- Track 20 : BasketStar_47
- Track 21 : Globfish_47
- Track 22 : Phrank15_46
- Track 23 : ThayneTheZag_47
- Track 24 : Richie_66
- Track 25 : Sashimi_59
- Track 26 : MurphyJoseph_42
- Track 27 : SonDevVon_49, Lawnathon_48
- Track 28 : SonDevVon_68
- Track 29 : BillyTP_49
- Track 30 : LeBruni_46
- Track 31 : Lasker_46
- Track 32 : Anekin_42
- Track 33 : ArcusAngelus_86, Chevrolet_89
- Track 34 : LilyBell_62
- Track 35 : NidoQ_53
- Track 36 : NikkiHotWheels_56
- Track 37 : Henrique_56

• Track 38 : RootBeer_51
• Track 39 : Bridgette_58
• Track 40 : Constance_62
• Track 41 : LittleRon_54
• Track 42 : KayMoney_62
• Track 43 : Pucara_58
• Track 44 : Alatato_41
• Track 45 : BrayBeast_44, Raqqa_54
• Track 46 : Sarge_42
• Track 47 : Guinevere_49, Kihatsu_48, Ichiang_46, Nandita_49
• Track 48 : Kihatsu_55, Nandita_55
• Track 49 : AllBusiness_52
• Track 50 : QuinnAvery_56
• Track 51 : Zaheer_56
• Track 52 : Ichiang_52
• Track 53 : DreamEater_68
• Track 54 : PetriParty_70
• Track 55 : BlackJade_9
• Track 56 : Cassini_42
• Track 57 : Zucker_56, DillyDally_57
• Track 58 : Zucker_52
• Track 59 : Zucker_36
• Track 60 : Hum25_33
• Track 61 : Altostratus_41
• Track 62 : Bubbykins_66
• Track 63 : REQ3_27
• Track 64 : REQ3_21
• Track 65 : Whack_62

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

The start number called the most often in the published annotations is 50, it was called in 14 of the 63 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• AdaS_42, Alatato_41, BrayBeast_44, DarwinJr_49, DillyDally_57, DreamEater_68, Faja_46, Hillester_48, Lawnathon_48, LeBruni_46, PetriParty_70, REQ3_27, RadFad_48, Raqqa_54, Satrap_48, SonDevVon_49, YoungHarleezy_47, Zucker_56,

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

Genes that do not have the "Most Annotated" start:
• Aikyam_45, AllBusiness_52, Altostratus_41, Anekin_42, ArcusAngelus_86, BasketStar_47, Bhageatrice_46, BillyTP_49, BlackJade_9, BlueShadow_46, Bridgette_58, Bubbykins_66, Cassini_42, Chevrolet_89, Constance_62, CosmicBrownie_41, EvePickles_44, Globfish_47, Gorpy_47, Guinevere_49, GumGum_44, Henrique_56, Hum25_33, Ichiang_46, Ichiang_52, Isolde_46, KayMoney_62, Kihatsu_48, Kihatsu_55, Lasker_46, LilyBell_62, LittleRon_54, Mapleville_43, MaterMagnus_47, MidnightRain_49, MurphyJoseph_42, Nandita_49,

Nandita_55, NewKitty_49, NidoQ_53, NikkiHotWheels_56, Persistence_43, Phrank15_46, Pucara_58, QuinnAvery_56, REQ3_21, Richie_66, RootBeer_51, Sakai_46, Sarge_42, Sashimi_59, Seahorse_49, SonDevVon_68, SpicyFrank_49, Sporco_49, ThayneTheZag_47, Whack_62, Zaheer_56, Zucker_36, Zucker_52,

Summary by start number:

Start 36:
• Found in 5 of 78 (6.4%) of genes in pham
• Manual Annotations of this start: 3 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Constance_62 (FA), KayMoney_62 (FA), LilyBell_62 (FA), Pucara_58 (FA), RootBeer_51 (FA),

Start 41:
• Found in 4 of 78 (5.1%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Whack_62 (singleton),

Start 42:
• Found in 2 of 78 (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: CosmicBrownie_41 (AY), GumGum_44 (AY),

Start 45:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anekin_42 (AY),

Start 46:
• Found in 7 of 78 (9.0%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 42.9% of time when present
• Phage (with cluster) where this start called: Bridgette_58 (FA), Henrique_56 (FA), LittleRon_54 (FA),

Start 48:
• Found in 2 of 78 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: ArcusAngelus_86 (F1), Chevrolet_89 (F1),

Start 49:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: NikkiHotWheels_56 (FA),

Start 50:
• Found in 18 of 78 (23.1%) of genes in pham
• Manual Annotations of this start: 14 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AdaS_42 (AY), Alatato_41 (FB), BrayBeast_44 (FB), DarwinJr_49 (AY), DillyDally_57 (singleton), DreamEater_68 (FJ), Faja_46 (AY), Hillester_48 (AY), Lawnathon_48 (AY), LeBruni_46 (AY), PetriParty_70 (FJ), REQ3_27 (singleton), RadFad_48 (AY), Raqqa_54 (AY), Satrap_48 (AY), SonDevVon_49 (AY), YoungHarleezy_47 (AY), Zucker_56 (FN),

Start 52:
• Found in 2 of 78 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sashimi_59 (AY), Zucker_52 (FN),

Start 53:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Hum25_33 (FQ1),

Start 55:
• Found in 3 of 78 (3.8%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Richie_66 (AY), SonDevVon_68 (AY),

Start 56:
• Found in 6 of 78 (7.7%) of genes in pham
• Manual Annotations of this start: 6 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: AllBusiness_52 (FF), Ichiang_52 (FF), Kihatsu_55 (FF), Nandita_55 (FF), QuinnAvery_56 (FF), Zaheer_56 (FF),

Start 57:
• Found in 2 of 78 (2.6%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sarge_42 (FB), Seahorse_49 (AY),

Start 58:
• Found in 7 of 78 (9.0%) of genes in pham
• Manual Annotations of this start: 6 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bhageatrice_46 (AY), BillyTP_49 (AY), Isolde_46 (AY), Mapleville_43 (AY), MidnightRain_49 (AY), NewKitty_49 (AY), Sporco_49 (AY),

Start 62:
• Found in 3 of 78 (3.8%) of genes in pham
• Manual Annotations of this start: 2 of 63
• Called 66.7% of time when present

• Phage (with cluster) where this start called: MurphyJoseph_42 (AY), NidoQ_53 (FA),

Start 63:
• Found in 1 of 78 (1.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: REQ3_21 (singleton),

Start 64:
• Found in 1 of 78 (1.3%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BlackJade_9 (FL),

Start 65:
• Found in 2 of 78 (2.6%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Zucker_36 (FN),

Start 68:
• Found in 5 of 78 (6.4%) of genes in pham
• Manual Annotations of this start: 5 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Altostratus_41 (FS), Guinevere_49 (FF), Ichiang_46 (FF), Kihatsu_48 (FF), Nandita_49 (FF),

Start 71:
• Found in 5 of 78 (6.4%) of genes in pham
• Manual Annotations of this start: 4 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Aikyam_45 (AY), BlueShadow_46 (AY), Gorpy_47 (AY), MaterMagnus_47 (AY), Sakai_46 (AY),

Start 73:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Cassini_42 (FN),

Start 78:
• Found in 6 of 78 (7.7%) of genes in pham
• Manual Annotations of this start: 6 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bubbykins_66 (UNK), EvePickles_44 (AY), Globfish_47 (AY), Lasker_46 (AY), SpicyFrank_49 (AY), ThayneTheZag_47 (AY),

Start 79:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Phrank15_46 (AY),

Start 83:
• Found in 7 of 78 (9.0%) of genes in pham
• No Manual Annotations of this start.
• Called 14.3% of time when present
• Phage (with cluster) where this start called: BasketStar_47 (AY),

Start 178:
• Found in 1 of 78 (1.3%) of genes in pham
• Manual Annotations of this start: 1 of 63
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Persistence_43 (AY),

Summary by clusters:

There are 12 clusters represented in this pham: F1, singleton, FS, UNK, FA, FB, FF, AY, FJ, FQ1, FL, FN,

Info for manual annotations of cluster AY:
•Start number 45 was manually annotated 1 time for cluster AY.
•Start number 50 was manually annotated 9 times for cluster AY.
•Start number 52 was manually annotated 1 time for cluster AY.
•Start number 55 was manually annotated 1 time for cluster AY.
•Start number 57 was manually annotated 1 time for cluster AY.
•Start number 58 was manually annotated 6 times for cluster AY.
•Start number 62 was manually annotated 1 time for cluster AY.
•Start number 71 was manually annotated 4 times for cluster AY.
•Start number 78 was manually annotated 5 times for cluster AY.
•Start number 79 was manually annotated 1 time for cluster AY.
•Start number 178 was manually annotated 1 time for cluster AY.

Info for manual annotations of cluster F1:
•Start number 48 was manually annotated 2 times for cluster F1.

Info for manual annotations of cluster FA:
•Start number 36 was manually annotated 3 times for cluster FA.
•Start number 46 was manually annotated 2 times for cluster FA.
•Start number 49 was manually annotated 1 time for cluster FA.
•Start number 62 was manually annotated 1 time for cluster FA.

Info for manual annotations of cluster FB:
•Start number 50 was manually annotated 2 times for cluster FB.
•Start number 57 was manually annotated 1 time for cluster FB.

Info for manual annotations of cluster FF:
•Start number 56 was manually annotated 6 times for cluster FF.
•Start number 68 was manually annotated 4 times for cluster FF.

Info for manual annotations of cluster FJ:
•Start number 50 was manually annotated 1 time for cluster FJ.

Info for manual annotations of cluster FN:

•Start number 50 was manually annotated 1 time for cluster FN.
•Start number 52 was manually annotated 1 time for cluster FN.
•Start number 65 was manually annotated 1 time for cluster FN.
•Start number 73 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster FQ1:
•Start number 53 was manually annotated 1 time for cluster FQ1.

Info for manual annotations of cluster FS:
•Start number 68 was manually annotated 1 time for cluster FS.

Info for manual annotations of cluster UNK:
•Start number 78 was manually annotated 1 time for cluster UNK.

Gene Information:

Gene: AdaS_42 Start: 27993, Stop: 28319, Start Num: 50
Candidate Starts for AdaS_42:
(35, 27924), (37, 27939), (40, 27969), (Start: 50 @27993 has 14 MA's), (109, 28167), (113, 28176), (121, 28200), (126, 28212), (141, 28227), (149, 28242),

Gene: Aikyam_45 Start: 27569, Stop: 27871, Start Num: 71
Candidate Starts for Aikyam_45:
(Start: 71 @27569 has 4 MA's), (115, 27716), (142, 27776),

Gene: Alatato_41 Start: 27251, Stop: 27568, Start Num: 50
Candidate Starts for Alatato_41:
(39, 27221), (Start: 50 @27251 has 14 MA's), (102, 27344), (103, 27347), (127, 27434), (146, 27485), (167, 27521),

Gene: AllBusiness_52 Start: 37847, Stop: 38209, Start Num: 56
Candidate Starts for AllBusiness_52:
(Start: 56 @37847 has 6 MA's), (87, 37934), (91, 37946), (94, 37955), (107, 38030), (144, 38117), (161, 38153),

Gene: Altostratus_41 Start: 26248, Stop: 25892, Start Num: 68
Candidate Starts for Altostratus_41:
(Start: 68 @26248 has 5 MA's), (94, 26173), (96, 26167), (105, 26116), (113, 26071), (125, 26038), (129, 26026), (130, 26023), (139, 26005), (141, 26002), (154, 25972), (172, 25936),

Gene: Anekin_42 Start: 29225, Stop: 29605, Start Num: 45
Candidate Starts for Anekin_42:
(Start: 45 @29225 has 1 MA's), (54, 29243), (77, 29306), (162, 29543),

Gene: ArcusAngelus_86 Start: 50829, Stop: 51188, Start Num: 48
Candidate Starts for ArcusAngelus_86:
(Start: 41 @50814 has 1 MA's), (Start: 48 @50829 has 2 MA's), (95, 50943), (169, 51141), (177, 51177),

Gene: BasketStar_47 Start: 30141, Stop: 30392, Start Num: 83
Candidate Starts for BasketStar_47:

(61, 30078), (Start: 65 @30093 has 1 MA's), (83, 30141), (103, 30189), (109, 30246),

Gene: Bhageatrice_46 Start: 31181, Stop: 31543, Start Num: 58
Candidate Starts for Bhageatrice_46:
(24, 30998), (32, 31076), (Start: 58 @31181 has 6 MA's), (80, 31241), (109, 31376), (114, 31388),

Gene: BillyTP_49 Start: 31109, Stop: 31462, Start Num: 58
Candidate Starts for BillyTP_49:
(17, 30884), (20, 30905), (32, 31004), (Start: 58 @31109 has 6 MA's), (86, 31196), (90, 31208), (93, 31217), (100, 31241), (114, 31319), (129, 31352), (168, 31415),

Gene: BlackJade_9 Start: 7571, Stop: 7284, Start Num: 64
Candidate Starts for BlackJade_9:
(64, 7571), (108, 7433), (135, 7376),

Gene: BlueShadow_46 Start: 29854, Stop: 30156, Start Num: 71
Candidate Starts for BlueShadow_46:
(37, 29749), (Start: 71 @29854 has 4 MA's), (115, 30001), (142, 30061), (176, 30130),

Gene: BrayBeast_44 Start: 27825, Stop: 28184, Start Num: 50
Candidate Starts for BrayBeast_44:
(33, 27747), (Start: 50 @27825 has 14 MA's), (69, 27882), (98, 27948), (116, 28035), (137, 28086), (146, 28110), (160, 28134), (164, 28137),

Gene: Bridgette_58 Start: 36187, Stop: 36480, Start Num: 46
Candidate Starts for Bridgette_58:
(29, 36073), (Start: 46 @36187 has 2 MA's), (51, 36199), (113, 36340), (158, 36412), (165, 36427),

Gene: Bubbykins_66 Start: 47506, Stop: 47805, Start Num: 78
Candidate Starts for Bubbykins_66:
(10, 47152), (11, 47167), (12, 47191), (38, 47380), (Start: 78 @47506 has 6 MA's), (91, 47539), (112, 47647), (136, 47695), (159, 47737), (172, 47761),

Gene: Cassini_42 Start: 28534, Stop: 28830, Start Num: 73
Candidate Starts for Cassini_42:
(Start: 62 @28498 has 2 MA's), (Start: 73 @28534 has 1 MA's), (113, 28681), (163, 28771), (172, 28789),

Gene: Chevrolet_89 Start: 50830, Stop: 51189, Start Num: 48
Candidate Starts for Chevrolet_89:
(Start: 41 @50815 has 1 MA's), (Start: 48 @50830 has 2 MA's), (95, 50944), (169, 51142), (177, 51178),

Gene: Constance_62 Start: 40562, Stop: 40960, Start Num: 36
Candidate Starts for Constance_62:
(Start: 36 @40562 has 3 MA's), (116, 40820),

Gene: CosmicBrownie_41 Start: 28275, Stop: 28664, Start Num: 42
Candidate Starts for CosmicBrownie_41:
(26, 28140), (28, 28143), (42, 28275), (66, 28344), (94, 28410), (162, 28602),

Gene: DarwinJr_49 Start: 30723, Stop: 31094, Start Num: 50
Candidate Starts for DarwinJr_49:

(Start: 50 @30723 has 14 MA's), (60, 30750), (126, 30930), (128, 30933), (174, 31056),

Gene: DillyDally_57 Start: 36655, Stop: 37005, Start Num: 50
Candidate Starts for DillyDally_57:
(18, 36463), (33, 36577), (Start: 50 @36655 has 14 MA's), (67, 36700), (98, 36769), (116, 36856), (137, 36907), (146, 36931), (160, 36955), (164, 36958),

Gene: DreamEater_68 Start: 41361, Stop: 41675, Start Num: 50
Candidate Starts for DreamEater_68:
(Start: 50 @41361 has 14 MA's), (124, 41535), (156, 41607),

Gene: EvePickles_44 Start: 30359, Stop: 30676, Start Num: 78
Candidate Starts for EvePickles_44:
(Start: 78 @30359 has 6 MA's), (109, 30491), (122, 30527), (123, 30530),

Gene: Faja_46 Start: 30956, Stop: 31330, Start Num: 50
Candidate Starts for Faja_46:
(35, 30887), (37, 30902), (Start: 50 @30956 has 14 MA's), (98, 31082), (107, 31145), (113, 31169),

Gene: Globfish_47 Start: 29845, Stop: 30156, Start Num: 78
Candidate Starts for Globfish_47:
(Start: 78 @29845 has 6 MA's), (111, 29986), (138, 30052), (157, 30085), (175, 30127),

Gene: Gorpy_47 Start: 30846, Stop: 31148, Start Num: 71
Candidate Starts for Gorpy_47:
(Start: 71 @30846 has 4 MA's), (115, 30993), (142, 31053), (175, 31119), (176, 31122),

Gene: Guinevere_49 Start: 32067, Stop: 32372, Start Num: 68
Candidate Starts for Guinevere_49:
(Start: 68 @32067 has 5 MA's), (90, 32136), (153, 32328),

Gene: GumGum_44 Start: 28695, Stop: 29084, Start Num: 42
Candidate Starts for GumGum_44:
(26, 28560), (28, 28563), (42, 28695), (66, 28764), (94, 28830), (162, 29022),

Gene: Henrique_56 Start: 35077, Stop: 35448, Start Num: 46
Candidate Starts for Henrique_56:
(29, 34963), (Start: 46 @35077 has 2 MA's), (59, 35110), (70, 35143), (106, 35275), (147, 35371), (158, 35380),

Gene: Hillester_48 Start: 30341, Stop: 30766, Start Num: 50
Candidate Starts for Hillester_48:
(Start: 50 @30341 has 14 MA's), (98, 30479), (126, 30602), (128, 30605), (176, 30740),

Gene: Hum25_33 Start: 23949, Stop: 23587, Start Num: 53
Candidate Starts for Hum25_33:
(Start: 53 @23949 has 1 MA's), (101, 23814), (114, 23739), (115, 23736), (117, 23727), (140, 23679), (153, 23658), (154, 23655),

Gene: Ichiang_46 Start: 31493, Stop: 31798, Start Num: 68
Candidate Starts for Ichiang_46:
(Start: 68 @31493 has 5 MA's), (90, 31562), (153, 31754),

Gene: Ichiang_52 Start: 35915, Stop: 36196, Start Num: 56
Candidate Starts for Ichiang_52:
(Start: 56 @35915 has 6 MA's), (83, 35963), (88, 35975), (133, 36104), (135, 36107), (151, 36143),

Gene: Isolde_46 Start: 29682, Stop: 30020, Start Num: 58
Candidate Starts for Isolde_46:
(17, 29457), (20, 29478), (32, 29577), (Start: 58 @29682 has 6 MA's), (96, 29769), (107, 29838), (117, 29877), (132, 29907), (157, 29949),

Gene: KayMoney_62 Start: 39908, Stop: 40306, Start Num: 36
Candidate Starts for KayMoney_62:
(5, 39581), (13, 39740), (Start: 36 @39908 has 3 MA's), (116, 40166),

Gene: Kihatsu_55 Start: 37463, Stop: 37744, Start Num: 56
Candidate Starts for Kihatsu_55:
(Start: 56 @37463 has 6 MA's), (83, 37511), (88, 37523), (133, 37652), (151, 37691),

Gene: Kihatsu_48 Start: 33037, Stop: 33342, Start Num: 68
Candidate Starts for Kihatsu_48:
(Start: 68 @33037 has 5 MA's), (90, 33106), (153, 33298),

Gene: Lasker_46 Start: 29990, Stop: 30289, Start Num: 78
Candidate Starts for Lasker_46:
(47, 29900), (Start: 55 @29921 has 1 MA's), (Start: 78 @29990 has 6 MA's), (109, 30122), (113, 30131), (119, 30146), (157, 30218),

Gene: Lawnathon_48 Start: 29793, Stop: 30173, Start Num: 50
Candidate Starts for Lawnathon_48:
(Start: 50 @29793 has 14 MA's), (98, 29931), (126, 30042), (146, 30081), (165, 30117),

Gene: LeBruni_46 Start: 29191, Stop: 29619, Start Num: 50
Candidate Starts for LeBruni_46:
(35, 29122), (37, 29137), (Start: 50 @29191 has 14 MA's), (72, 29257), (126, 29455), (128, 29458), (174, 29581),

Gene: LilyBell_62 Start: 39493, Stop: 39888, Start Num: 36
Candidate Starts for LilyBell_62:
(4, 39130), (Start: 36 @39493 has 3 MA's), (116, 39751),

Gene: LittleRon_54 Start: 35741, Stop: 36034, Start Num: 46
Candidate Starts for LittleRon_54:
(29, 35627), (Start: 46 @35741 has 2 MA's), (51, 35753), (113, 35894), (158, 35966), (165, 35981),

Gene: Mapleville_43 Start: 29506, Stop: 29844, Start Num: 58
Candidate Starts for Mapleville_43:
(17, 29281), (20, 29302), (32, 29401), (Start: 58 @29506 has 6 MA's), (96, 29593), (107, 29662), (117, 29701), (132, 29731), (157, 29773),

Gene: MaterMagnus_47 Start: 29741, Stop: 30043, Start Num: 71
Candidate Starts for MaterMagnus_47:
(Start: 71 @29741 has 4 MA's), (115, 29888), (142, 29948),

Gene: MidnightRain_49 Start: 30942, Stop: 31298, Start Num: 58

Candidate Starts for MidnightRain_49:
(17, 30717), (20, 30738), (32, 30837), (Start: 58 @30942 has 6 MA's), (86, 31029), (90, 31041), (93, 31050), (100, 31074), (113, 31149), (162, 31239),

Gene: MurphyJoseph_42 Start: 28518, Stop: 28811, Start Num: 62
Candidate Starts for MurphyJoseph_42:
(Start: 62 @28518 has 2 MA's), (70, 28542), (74, 28551), (75, 28554), (83, 28566), (96, 28584), (97, 28587), (113, 28677), (118, 28692), (160, 28746), (170, 28767),

Gene: Nandita_55 Start: 36477, Stop: 36758, Start Num: 56
Candidate Starts for Nandita_55:
(Start: 56 @36477 has 6 MA's), (83, 36525), (88, 36537), (133, 36666), (151, 36705),

Gene: Nandita_49 Start: 32062, Stop: 32367, Start Num: 68
Candidate Starts for Nandita_49:
(Start: 68 @32062 has 5 MA's), (90, 32131), (153, 32323),

Gene: NewKitty_49 Start: 29701, Stop: 30036, Start Num: 58
Candidate Starts for NewKitty_49:
(32, 29596), (Start: 46 @29671 has 2 MA's), (Start: 58 @29701 has 6 MA's), (81, 29764), (103, 29827), (108, 29878), (113, 29893), (162, 29974), (170, 29992),

Gene: NidoQ_53 Start: 35783, Stop: 36109, Start Num: 62
Candidate Starts for NidoQ_53:
(Start: 62 @35783 has 2 MA's), (147, 36032),

Gene: NikkiHotWheels_56 Start: 34991, Stop: 35272, Start Num: 49
Candidate Starts for NikkiHotWheels_56:
(Start: 49 @34991 has 1 MA's), (70, 35015), (113, 35132), (158, 35204), (165, 35219),

Gene: Persistence_43 Start: 28918, Stop: 29229, Start Num: 178
Candidate Starts for Persistence_43:
(110, 28753), (141, 28819), (149, 28834), (Start: 178 @28918 has 1 MA's), (179, 28999), (180, 29044), (181, 29080), (182, 29221),

Gene: PetriParty_70 Start: 40320, Stop: 40664, Start Num: 50
Candidate Starts for PetriParty_70:
(3, 39873), (6, 39954), (21, 40149), (23, 40158), (33, 40242), (Start: 50 @40320 has 14 MA's),

Gene: Phrank15_46 Start: 29454, Stop: 29732, Start Num: 79
Candidate Starts for Phrank15_46:
(30, 29268), (Start: 79 @29454 has 1 MA's), (109, 29586),

Gene: Pucara_58 Start: 39657, Stop: 40034, Start Num: 36
Candidate Starts for Pucara_58:
(5, 39330), (7, 39408), (Start: 36 @39657 has 3 MA's), (89, 39780), (134, 39921), (145, 39948), (152, 39963),

Gene: QuinnAvery_56 Start: 37283, Stop: 37561, Start Num: 56
Candidate Starts for QuinnAvery_56:
(Start: 56 @37283 has 6 MA's), (120, 37430), (171, 37526),

Gene: REQ3_27 Start: 12625, Stop: 12996, Start Num: 50

Candidate Starts for REQ3_27:
(Start: 50 @12625 has 14 MA's), (104, 12799), (105, 12802), (115, 12850), (165, 12940),

Gene: REQ3_21 Start: 9467, Stop: 9787, Start Num: 63
Candidate Starts for REQ3_21:
(Start: 41 @9416 has 1 MA's), (44, 9422), (63, 9467), (84, 9515), (88, 9524), (114, 9629), (131, 9674),

Gene: RadFad_48 Start: 30341, Stop: 30766, Start Num: 50
Candidate Starts for RadFad_48:
(Start: 50 @30341 has 14 MA's), (98, 30479), (126, 30602), (128, 30605), (176, 30740),

Gene: Raqqa_54 Start: 31854, Stop: 32213, Start Num: 50
Candidate Starts for Raqqa_54:
(33, 31776), (Start: 50 @31854 has 14 MA's), (69, 31911), (98, 31977), (116, 32064), (137, 32115), (146, 32139), (160, 32163), (164, 32166),

Gene: Richie_66 Start: 35688, Stop: 36038, Start Num: 55
Candidate Starts for Richie_66:
(Start: 55 @35688 has 1 MA's), (82, 35757), (92, 35784), (150, 35952), (155, 35961),

Gene: RootBeer_51 Start: 36505, Stop: 36915, Start Num: 36
Candidate Starts for RootBeer_51:
(22, 36397), (Start: 36 @36505 has 3 MA's), (107, 36739), (120, 36769), (143, 36823), (161, 36862),

Gene: Sakai_46 Start: 29557, Stop: 29859, Start Num: 71
Candidate Starts for Sakai_46:
(Start: 71 @29557 has 4 MA's), (115, 29704), (142, 29764), (175, 29830), (176, 29833),

Gene: Sarge_42 Start: 26531, Stop: 26854, Start Num: 57
Candidate Starts for Sarge_42:
(Start: 57 @26531 has 2 MA's), (66, 26558), (108, 26690), (113, 26705), (130, 26747),

Gene: Sashimi_59 Start: 34705, Stop: 35055, Start Num: 52
Candidate Starts for Sashimi_59:
(Start: 46 @34690 has 2 MA's), (Start: 52 @34705 has 2 MA's), (76, 34768), (105, 34864), (106, 34873),

Gene: Satrap_48 Start: 30265, Stop: 30582, Start Num: 50
Candidate Starts for Satrap_48:
(35, 30196), (37, 30211), (Start: 50 @30265 has 14 MA's), (104, 30403), (107, 30424), (109, 30439), (126, 30481), (166, 30535), (173, 30547),

Gene: Seahorse_49 Start: 31759, Stop: 32121, Start Num: 57
Candidate Starts for Seahorse_49:
(Start: 57 @31759 has 2 MA's), (113, 31954), (114, 31957),

Gene: SonDevVon_49 Start: 29942, Stop: 30322, Start Num: 50
Candidate Starts for SonDevVon_49:
(Start: 50 @29942 has 14 MA's), (98, 30080), (126, 30191), (146, 30230), (165, 30266),

Gene: SonDevVon_68 Start: 35036, Stop: 35386, Start Num: 55
Candidate Starts for SonDevVon_68:

(9, 34742), (15, 34808), (27, 34871), (Start: 55 @35036 has 1 MA's), (82, 35105), (92, 35132), (150, 35300), (155, 35309),

Gene: SpicyFrank_49 Start: 30340, Stop: 30630, Start Num: 78
Candidate Starts for SpicyFrank_49:
(Start: 78 @30340 has 6 MA's),

Gene: Sporco_49 Start: 30151, Stop: 30489, Start Num: 58
Candidate Starts for Sporco_49:
(Start: 46 @30121 has 2 MA's), (Start: 58 @30151 has 6 MA's), (96, 30235), (98, 30241), (115, 30334), (142, 30394),

Gene: ThayneTheZag_47 Start: 29657, Stop: 29974, Start Num: 78
Candidate Starts for ThayneTheZag_47:
(Start: 78 @29657 has 6 MA's), (109, 29789), (123, 29828),

Gene: Whack_62 Start: 41425, Stop: 41829, Start Num: 41
Candidate Starts for Whack_62:
(8, 41146), (19, 41251), (25, 41287), (31, 41362), (Start: 41 @41425 has 1 MA's), (97, 41575), (100, 41590), (105, 41623), (113, 41665), (148, 41737), (151, 41743),

Gene: YoungHarleezy_47 Start: 30135, Stop: 30518, Start Num: 50
Candidate Starts for YoungHarleezy_47:
(Start: 50 @30135 has 14 MA's), (60, 30162), (85, 30210), (99, 30240), (126, 30354), (128, 30357),

Gene: Zaheer_56 Start: 37545, Stop: 37838, Start Num: 56
Candidate Starts for Zaheer_56:
(1, 36288), (2, 36543), (14, 37329), (16, 37341), (Start: 56 @37545 has 6 MA's), (83, 37593), (88, 37605), (120, 37707), (171, 37803),

Gene: Zucker_56 Start: 33964, Stop: 34314, Start Num: 50
Candidate Starts for Zucker_56:
(18, 33772), (33, 33886), (Start: 50 @33964 has 14 MA's), (67, 34009), (98, 34078), (116, 34165), (137, 34216), (146, 34240), (160, 34264), (164, 34267),

Gene: Zucker_52 Start: 33035, Stop: 33385, Start Num: 52
Candidate Starts for Zucker_52:
(33, 32948), (34, 32951), (38, 32984), (Start: 46 @33020 has 2 MA's), (Start: 52 @33035 has 2 MA's), (76, 33098), (123, 33263), (155, 33308), (173, 33350),

Gene: Zucker_36 Start: 27843, Stop: 28172, Start Num: 65
Candidate Starts for Zucker_36:
(38, 27753), (39, 27765), (43, 27780), (51, 27798), (Start: 65 @27843 has 1 MA's), (83, 27891), (103, 27939), (162, 28110),