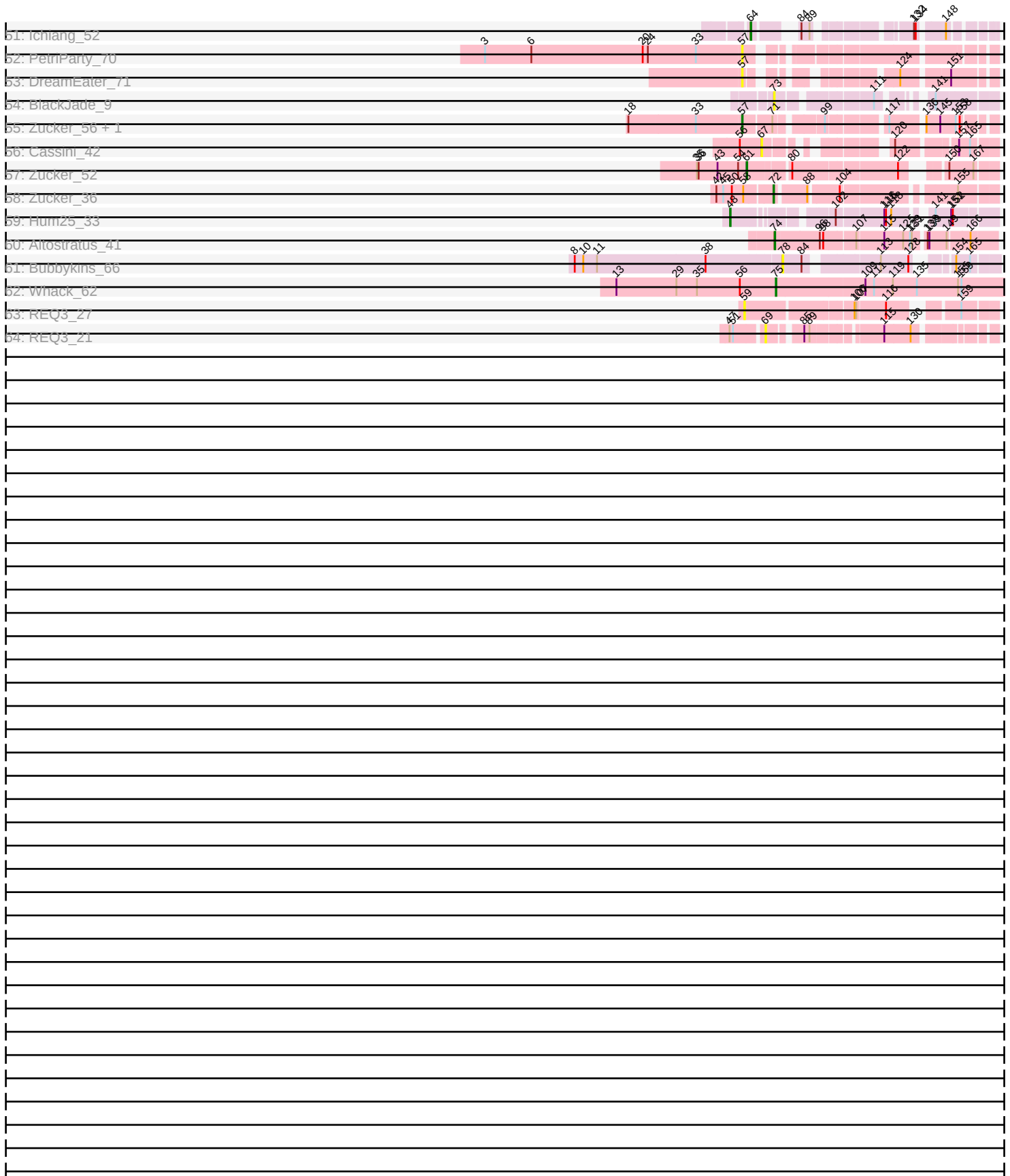






Note: Tracks are now grouped by subcluster and scaled. Switching in subcluster is indicated by changes in track color. Track scale is now set by default to display the region 30 bp upstream of start 1 to 30 bp downstream of the last possible start. If this default region is judged to be packed too tightly 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 280376 Report

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

Pham number 280376 has 76 members, 28 are drafts.

Phages represented in each track:

- Track 1 : SpicyFrank_49
- Track 2 : Satrap_48
- Track 3 : NewKitty_49
- Track 4 : Isolde_46, Mapleville_44
- Track 5 : Faja_46
- Track 6 : EvePickles_44
- Track 7 : Hillester_48, RadFad_48
- Track 8 : AdaS_42
- Track 9 : Sakai_46, Gorpy_47
- Track 10 : Aikyam_45, MaterMagnus_47
- Track 11 : MidnightRain_49
- Track 12 : BlueShadow_46
- Track 13 : YoungHarleezy_47
- Track 14 : CosmicBrownie_41, GumGum_44
- Track 15 : Lawnathon_48, SonDevVon_49
- Track 16 : Persistence_43
- Track 17 : Globfish_47
- Track 18 : Phrank15_46
- Track 19 : Bhageatrice_46
- Track 20 : ThayneTheZag_47
- Track 21 : Richie_66
- Track 22 : Sashimi_59
- Track 23 : Seahorse_49
- Track 24 : Sporco_49
- Track 25 : SonDevVon_68
- Track 26 : Ding_43
- Track 27 : BillyTP_49
- Track 28 : LeBruni_48
- Track 29 : DarwinJr_50
- Track 30 : Lasker_46
- Track 31 : Anekin_42
- Track 32 : LilyBell_62
- Track 33 : NidoQ_53
- Track 34 : Henrique_56
- Track 35 : NikkiHotWheels_57
- Track 36 : KayMoney_62
- Track 37 : RootBeer_51

- Track 38 : Bridgette_58
- Track 39 : Constance_62
- Track 40 : LittleRon_54
- Track 41 : Pucara_58
- Track 42 : Kumotta_44
- Track 43 : BrayBeast_44, Raqqa_54
- Track 44 : Alatato_41
- Track 45 : Sarge_42
- Track 46 : Guinevere_49, Ichiang_46, Kihatsu_48, Nandita_49
- Track 47 : Kihatsu_55, Nandita_55
- Track 48 : AllBusiness_52
- Track 49 : QuinnAvery_56
- Track 50 : Zaheer_56
- Track 51 : Ichiang_52
- Track 52 : PetriParty_70
- Track 53 : DreamEater_71
- Track 54 : BlackJade_9
- Track 55 : Zucker_56, DillyDally_60
- Track 56 : Cassini_42
- Track 57 : Zucker_52
- Track 58 : Zucker_36
- Track 59 : Hum25_33
- Track 60 : Altostratus_41
- Track 61 : Bubbykins_66
- Track 62 : Whack_62
- Track 63 : REQ3_27
- Track 64 : REQ3_21

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

The start number called the most often in the published annotations is 64, it was called in 10 of the 48 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- AllBusiness_52, Bhageatrice_46, BillyTP_49, Ichiang_52, Isolde_46, Kihatsu_55, Mapleville_44, MidnightRain_49, Nandita_55, NewKitty_49, QuinnAvery_56, Sporco_49, Zaheer_56,

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

-

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

- AdaS_42, Aikyam_45, Alatato_41, Altostratus_41, Anekin_42, BlackJade_9, BlueShadow_46, BrayBeast_44, Bridgette_58, Bubbykins_66, Cassini_42, Constance_62, CosmicBrownie_41, DarwinJr_50, DillyDally_60, Ding_43, DreamEater_71, EvePickles_44, Faja_46, Globfish_47, Gorpy_47, Guinevere_49, GumGum_44, Henrique_56, Hillester_48, Hum25_33, Ichiang_46, KayMoney_62, Kihatsu_48, Kumotta_44, Lasker_46, Lawnathon_48, LeBruni_48, LilyBell_62, LittleRon_54, MaterMagnus_47, Nandita_49, NidoQ_53, NikkiHotWheels_57, Persistence_43, PetriParty_70, Phrank15_46, Pucara_58, REQ3_21, REQ3_27,

RadFad_48, Raqqa_54, Richie_66, RootBeer_51, Sakai_46, Sarge_42, Sashimi_59, Satrap_48, Seahorse_49, SonDevVon_49, SonDevVon_68, SpicyFrank_49, ThayneTheZag_47, Whack_62, YoungHarleezy_47, Zucker_36, Zucker_52, Zucker_56,

Summary by start number:

Start 28:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kumotta_44 (FB),

Start 39:

- Found in 5 of 76 (6.6%) of genes in pham
- Manual Annotations of this start: 3 of 48
- 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 43:

- Found in 2 of 76 (2.6%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Ding_43 (AY),

Start 48:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Hum25_33 (FQ),

Start 49:

- Found in 2 of 76 (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 53:

- Found in 13 of 76 (17.1%) of genes in pham
- Manual Annotations of this start: 9 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AdaS_42 (AY), Anekin_42 (AY), DarwinJr_50 (AY), Faja_46 (AY), Hillester_48 (AY), Lawnathon_48 (AY), LeBruni_48 (AY), RadFad_48 (AY), Sarge_42 (FB), Satrap_48 (AY), Seahorse_49 (AY), SonDevVon_49 (AY), YoungHarleezy_47 (AY),

Start 57:

- Found in 10 of 76 (13.2%) of genes in pham
- Manual Annotations of this start: 4 of 48
- Called 100.0% of time when present

- Phage (with cluster) where this start called: Alatato_41 (FB), BrayBeast_44 (FB), Bridgette_58 (FA), DillyDally_60 (singleton), DreamEater_71 (FJ), Henrique_56 (FA), LittleRon_54 (FA), PetriParty_70 (FJ), Raqqa_54 (AY), Zucker_56 (FN),

Start 59:

- Found in 1 of 76 (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_27 (singleton),

Start 60:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: NikkiHotWheels_57 (FA), Persistence_43 (AY),

Start 61:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 2 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sashimi_59 (AY), Zucker_52 (FN),

Start 64:

- Found in 13 of 76 (17.1%) of genes in pham
- Manual Annotations of this start: 10 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: AllBusiness_52 (FF), Bhageatrice_46 (AY), BillyTP_49 (AY), Ichiang_52 (FF), Isolde_46 (AY), Kihatsu_55 (FF), Mapleville_44 (AY), MidnightRain_49 (AY), Nandita_55 (FF), NewKitty_49 (AY), QuinnAvery_56 (FF), Sporco_49 (AY), Zaheer_56 (FF),

Start 65:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Richie_66 (AY), SonDevVon_68 (AY),

Start 67:

- Found in 1 of 76 (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: Cassini_42 (FN),

Start 69:

- Found in 6 of 76 (7.9%) of genes in pham
- Manual Annotations of this start: 5 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: EvePickles_44 (AY), Globfish_47 (AY), Phrank15_46 (AY), REQ3_21 (singleton), SpicyFrank_49 (AY), ThayneTheZag_47 (AY),

Start 70:

- Found in 1 of 76 (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: NidoQ_53 (FA),

Start 72:

- Found in 1 of 76 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Zucker_36 (FN),

Start 73:

- Found in 3 of 76 (3.9%) of genes in pham
- No Manual Annotations of this start.
- Called 33.3% of time when present
- Phage (with cluster) where this start called: BlackJade_9 (FL),

Start 74:

- Found in 5 of 76 (6.6%) of genes in pham
- Manual Annotations of this start: 5 of 48
- 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 75:

- Found in 3 of 76 (3.9%) of genes in pham
- Manual Annotations of this start: 1 of 48
- Called 33.3% of time when present
- Phage (with cluster) where this start called: Whack_62 (singleton),

Start 76:

- Found in 5 of 76 (6.6%) of genes in pham
- Manual Annotations of this start: 4 of 48
- 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 78:

- Found in 4 of 76 (5.3%) of genes in pham
- No Manual Annotations of this start.
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Bubbykins_66 (UNK), Lasker_46 (AY),

Summary by clusters:

There are 11 clusters represented in this pham: FQ, singleton, FS, FA, FB, FF, AY, FJ, UNK, FL, FN,

Info for manual annotations of cluster AY:

- Start number 53 was manually annotated 8 times for cluster AY.
- Start number 60 was manually annotated 1 time for cluster AY.
- Start number 61 was manually annotated 1 time for cluster AY.
- Start number 64 was manually annotated 4 times for cluster AY.

- Start number 65 was manually annotated 1 time for cluster AY.
- Start number 69 was manually annotated 5 times for cluster AY.
- Start number 76 was manually annotated 4 times for cluster AY.

Info for manual annotations of cluster FA:

- Start number 39 was manually annotated 3 times for cluster FA.
- Start number 57 was manually annotated 1 time for cluster FA.

Info for manual annotations of cluster FB:

- Start number 28 was manually annotated 1 time for cluster FB.
- Start number 53 was manually annotated 1 time for cluster FB.
- Start number 57 was manually annotated 2 times for cluster FB.

Info for manual annotations of cluster FF:

- Start number 64 was manually annotated 6 times for cluster FF.
- Start number 74 was manually annotated 4 times for cluster FF.

Info for manual annotations of cluster FN:

- Start number 57 was manually annotated 1 time for cluster FN.
- Start number 61 was manually annotated 1 time for cluster FN.
- Start number 72 was manually annotated 1 time for cluster FN.

Info for manual annotations of cluster FQ:

- Start number 48 was manually annotated 1 time for cluster FQ.

Info for manual annotations of cluster FS:

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

Gene Information:

Gene: AdaS_42 Start: 27993, Stop: 28319, Start Num: 53

Candidate Starts for AdaS_42:

(34, 27924), (37, 27939), (44, 27969), (Start: 53 @27993 has 9 MA's), (112, 28167), (114, 28176), (121, 28200), (125, 28212), (138, 28227), (144, 28242),

Gene: Aikyam_45 Start: 27569, Stop: 27871, Start Num: 76

Candidate Starts for Aikyam_45:

(Start: 76 @27569 has 4 MA's), (116, 27716), (140, 27776),

Gene: Alatato_41 Start: 27251, Stop: 27568, Start Num: 57

Candidate Starts for Alatato_41:

(45, 27221), (Start: 57 @27251 has 4 MA's), (103, 27344), (104, 27347), (126, 27434), (145, 27485), (161, 27521),

Gene: AllBusiness_52 Start: 37847, Stop: 38209, Start Num: 64

Candidate Starts for AllBusiness_52:

(Start: 64 @37847 has 10 MA's), (87, 37934), (91, 37946), (95, 37955), (110, 38030), (141, 38117), (154, 38153),

Gene: Altostratus_41 Start: 26248, Stop: 25892, Start Num: 74

Candidate Starts for Altostratus_41:

(Start: 74 @26248 has 5 MA's), (96, 26173), (98, 26167), (107, 26116), (115, 26071), (125, 26038), (129, 26026), (131, 26023), (138, 26005), (139, 26002), (149, 25972), (166, 25936),

Gene: Anekin_42 Start: 29225, Stop: 29605, Start Num: 53

Candidate Starts for Anekin_42:

(Start: 53 @29225 has 9 MA's), (62, 29243), (81, 29306), (155, 29543),

Gene: Bhageatrice_46 Start: 31181, Stop: 31543, Start Num: 64

Candidate Starts for Bhageatrice_46:

(23, 30998), (31, 31076), (Start: 64 @31181 has 10 MA's), (79, 31241), (112, 31376), (115, 31388),

Gene: BillyTP_49 Start: 31109, Stop: 31462, Start Num: 64

Candidate Starts for BillyTP_49:

(16, 30884), (19, 30905), (31, 31004), (Start: 64 @31109 has 10 MA's), (86, 31196), (90, 31208), (94, 31217), (101, 31241), (115, 31319), (127, 31352), (162, 31415),

Gene: BlackJade_9 Start: 7571, Stop: 7284, Start Num: 73

Candidate Starts for BlackJade_9:

(73, 7571), (111, 7433), (141, 7376),

Gene: BlueShadow_46 Start: 29854, Stop: 30156, Start Num: 76

Candidate Starts for BlueShadow_46:

(40, 29749), (Start: 76 @29854 has 4 MA's), (116, 30001), (140, 30061), (170, 30130),

Gene: BrayBeast_44 Start: 27825, Stop: 28184, Start Num: 57

Candidate Starts for BrayBeast_44:

(33, 27747), (Start: 57 @27825 has 4 MA's), (Start: 75 @27882 has 1 MA's), (99, 27948), (117, 28035), (136, 28086), (145, 28110), (153, 28134), (158, 28137),

Gene: Bridgette_58 Start: 36187, Stop: 36480, Start Num: 57

Candidate Starts for Bridgette_58:

(29, 36073), (Start: 57 @36187 has 4 MA's), (63, 36199), (114, 36340), (148, 36412), (156, 36427),

Gene: Bubbykins_66 Start: 47506, Stop: 47805, Start Num: 78

Candidate Starts for Bubbykins_66:

(8, 47152), (10, 47167), (11, 47191), (38, 47380), (78, 47506), (84, 47539), (113, 47647), (128, 47695), (154, 47737), (165, 47761),

Gene: Cassini_42 Start: 28534, Stop: 28830, Start Num: 67

Candidate Starts for Cassini_42:

(56, 28498), (67, 28534), (120, 28681), (157, 28771), (165, 28789),

Gene: Constance_62 Start: 40562, Stop: 40960, Start Num: 39

Candidate Starts for Constance_62:

(Start: 39 @40562 has 3 MA's), (117, 40820),

Gene: CosmicBrownie_41 Start: 28275, Stop: 28664, Start Num: 49

Candidate Starts for CosmicBrownie_41:

(26, 28140), (27, 28143), (49, 28275), (73, 28344), (99, 28410), (155, 28602),

Gene: DarwinJr_50 Start: 30723, Stop: 31094, Start Num: 53

Candidate Starts for DarwinJr_50:

(Start: 53 @30723 has 9 MA's), (66, 30750), (125, 30930), (127, 30933), (168, 31056),

Gene: DillyDally_60 Start: 36655, Stop: 37005, Start Num: 57

Candidate Starts for DillyDally_60:

(18, 36463), (33, 36577), (Start: 57 @36655 has 4 MA's), (71, 36700), (99, 36769), (117, 36856), (136, 36907), (145, 36931), (153, 36955), (158, 36958),

Gene: Ding_43 Start: 28971, Stop: 29366, Start Num: 43

Candidate Starts for Ding_43:

(43, 28971), (118, 29223), (146, 29280), (152, 29295),

Gene: DreamEater_71 Start: 41361, Stop: 41675, Start Num: 57

Candidate Starts for DreamEater_71:

(Start: 57 @41361 has 4 MA's), (124, 41535), (151, 41607),

Gene: EvePickles_44 Start: 30359, Stop: 30676, Start Num: 69

Candidate Starts for EvePickles_44:

(Start: 69 @30359 has 5 MA's), (112, 30491), (122, 30527), (123, 30530),

Gene: Faja_46 Start: 30956, Stop: 31330, Start Num: 53

Candidate Starts for Faja_46:

(34, 30887), (37, 30902), (Start: 53 @30956 has 9 MA's), (99, 31082), (110, 31145), (114, 31169),

Gene: Globfish_47 Start: 29845, Stop: 30156, Start Num: 69

Candidate Starts for Globfish_47:

(Start: 69 @29845 has 5 MA's), (114, 29986), (137, 30052), (152, 30085), (169, 30127),

Gene: Gorpy_47 Start: 30846, Stop: 31148, Start Num: 76

Candidate Starts for Gorpy_47:

(Start: 76 @30846 has 4 MA's), (116, 30993), (140, 31053), (169, 31119), (170, 31122),

Gene: Guinevere_49 Start: 32067, Stop: 32372, Start Num: 74

Candidate Starts for Guinevere_49:

(Start: 74 @32067 has 5 MA's), (93, 32136), (147, 32328),

Gene: GumGum_44 Start: 28695, Stop: 29084, Start Num: 49

Candidate Starts for GumGum_44:

(26, 28560), (27, 28563), (49, 28695), (73, 28764), (99, 28830), (155, 29022),

Gene: Henrique_56 Start: 35077, Stop: 35448, Start Num: 57

Candidate Starts for Henrique_56:

(29, 34963), (Start: 57 @35077 has 4 MA's), (68, 35110), (78, 35143), (108, 35275), (142, 35371), (148, 35380),

Gene: Hillester_48 Start: 30341, Stop: 30766, Start Num: 53

Candidate Starts for Hillester_48:

(Start: 53 @30341 has 9 MA's), (99, 30479), (125, 30602), (127, 30605), (170, 30740),

Gene: Hum25_33 Start: 23949, Stop: 23587, Start Num: 48

Candidate Starts for Hum25_33:

(Start: 48 @23949 has 1 MA's), (102, 23814), (115, 23739), (116, 23736), (118, 23727), (141, 23679), (151, 23658), (152, 23655),

Gene: Ichiang_46 Start: 31493, Stop: 31798, Start Num: 74

Candidate Starts for Ichiang_46:

(Start: 74 @31493 has 5 MA's), (93, 31562), (147, 31754),

Gene: Ichiang_52 Start: 35915, Stop: 36196, Start Num: 64

Candidate Starts for Ichiang_52:

(Start: 64 @35915 has 10 MA's), (84, 35963), (89, 35975), (132, 36104), (134, 36107), (148, 36143),

Gene: Isolde_46 Start: 29682, Stop: 30020, Start Num: 64

Candidate Starts for Isolde_46:

(16, 29457), (19, 29478), (31, 29577), (Start: 64 @29682 has 10 MA's), (97, 29769), (110, 29838), (118, 29877), (132, 29907), (152, 29949),

Gene: KayMoney_62 Start: 39908, Stop: 40306, Start Num: 39

Candidate Starts for KayMoney_62:

(5, 39581), (12, 39740), (Start: 39 @39908 has 3 MA's), (117, 40166),

Gene: Kihatsu_55 Start: 37463, Stop: 37744, Start Num: 64

Candidate Starts for Kihatsu_55:

(Start: 64 @37463 has 10 MA's), (84, 37511), (89, 37523), (132, 37652), (148, 37691),

Gene: Kihatsu_48 Start: 33037, Stop: 33342, Start Num: 74

Candidate Starts for Kihatsu_48:

(Start: 74 @33037 has 5 MA's), (93, 33106), (147, 33298),

Gene: Kumotta_44 Start: 28660, Stop: 28989, Start Num: 28

Candidate Starts for Kumotta_44:

(Start: 28 @28660 has 1 MA's), (41, 28732),

Gene: Lasker_46 Start: 29990, Stop: 30289, Start Num: 78

Candidate Starts for Lasker_46:

(46, 29900), (55, 29921), (78, 29990), (112, 30122), (114, 30131), (118, 30146), (152, 30218),

Gene: Lawnathon_48 Start: 29793, Stop: 30173, Start Num: 53

Candidate Starts for Lawnathon_48:

(Start: 53 @29793 has 9 MA's), (99, 29931), (125, 30042), (145, 30081), (159, 30117),

Gene: LeBruni_48 Start: 29191, Stop: 29619, Start Num: 53

Candidate Starts for LeBruni_48:

(34, 29122), (37, 29137), (Start: 53 @29191 has 9 MA's), (77, 29257), (125, 29455), (127, 29458), (168, 29581),

Gene: LilyBell_62 Start: 39493, Stop: 39888, Start Num: 39

Candidate Starts for LilyBell_62:

(4, 39130), (Start: 39 @39493 has 3 MA's), (117, 39751),

Gene: LittleRon_54 Start: 35741, Stop: 36034, Start Num: 57

Candidate Starts for LittleRon_54:

(29, 35627), (Start: 57 @35741 has 4 MA's), (63, 35753), (114, 35894), (148, 35966), (156, 35981),

Gene: Mapleville_44 Start: 29506, Stop: 29844, Start Num: 64

Candidate Starts for Mapleville_44:

(16, 29281), (19, 29302), (31, 29401), (Start: 64 @29506 has 10 MA's), (97, 29593), (110, 29662), (118, 29701), (132, 29731), (152, 29773),

Gene: MaterMagnus_47 Start: 29741, Stop: 30043, Start Num: 76

Candidate Starts for MaterMagnus_47:

(Start: 76 @29741 has 4 MA's), (116, 29888), (140, 29948),

Gene: MidnightRain_49 Start: 30942, Stop: 31298, Start Num: 64

Candidate Starts for MidnightRain_49:

(16, 30717), (19, 30738), (31, 30837), (Start: 64 @30942 has 10 MA's), (86, 31029), (90, 31041), (94, 31050), (101, 31074), (114, 31149), (155, 31239),

Gene: Nandita_55 Start: 36477, Stop: 36758, Start Num: 64

Candidate Starts for Nandita_55:

(Start: 64 @36477 has 10 MA's), (84, 36525), (89, 36537), (132, 36666), (148, 36705),

Gene: Nandita_49 Start: 32062, Stop: 32367, Start Num: 74

Candidate Starts for Nandita_49:

(Start: 74 @32062 has 5 MA's), (93, 32131), (147, 32323),

Gene: NewKitty_49 Start: 29701, Stop: 30036, Start Num: 64

Candidate Starts for NewKitty_49:

(31, 29596), (52, 29671), (Start: 64 @29701 has 10 MA's), (82, 29764), (104, 29827), (111, 29878), (114, 29893), (155, 29974), (163, 29992),

Gene: NidoQ_53 Start: 35783, Stop: 36109, Start Num: 70

Candidate Starts for NidoQ_53:

(70, 35783), (142, 36032),

Gene: NikkiHotWheels_57 Start: 34991, Stop: 35272, Start Num: 60

Candidate Starts for NikkiHotWheels_57:

(Start: 60 @34991 has 1 MA's), (78, 35015), (114, 35132), (148, 35204), (156, 35219),

Gene: Persistence_43 Start: 28918, Stop: 29229, Start Num: 60

Candidate Starts for Persistence_43:

(21, 28753), (30, 28819), (32, 28834), (Start: 60 @28918 has 1 MA's), (84, 28999), (105, 29044), (110, 29080), (171, 29221),

Gene: PetriParty_70 Start: 40320, Stop: 40664, Start Num: 57

Candidate Starts for PetriParty_70:

(3, 39873), (6, 39954), (20, 40149), (24, 40158), (33, 40242), (Start: 57 @40320 has 4 MA's),

Gene: Phrank15_46 Start: 29454, Stop: 29732, Start Num: 69

Candidate Starts for Phrank15_46:

(25, 29268), (Start: 69 @29454 has 5 MA's), (112, 29586),

Gene: Pucara_58 Start: 39657, Stop: 40034, Start Num: 39

Candidate Starts for Pucara_58:

(5, 39330), (7, 39408), (Start: 39 @39657 has 3 MA's), (89, 39780), (133, 39921), (143, 39948), (149, 39963),

Gene: QuinnAvery_56 Start: 37283, Stop: 37561, Start Num: 64

Candidate Starts for QuinnAvery_56:

(Start: 64 @37283 has 10 MA's), (120, 37430), (164, 37526),

Gene: REQ3_27 Start: 12625, Stop: 12996, Start Num: 59

Candidate Starts for REQ3_27:

(59, 12625), (106, 12799), (107, 12802), (116, 12850), (159, 12940),

Gene: REQ3_21 Start: 9467, Stop: 9787, Start Num: 69

Candidate Starts for REQ3_21:

(47, 9416), (51, 9422), (Start: 69 @9467 has 5 MA's), (85, 9515), (89, 9524), (115, 9629), (130, 9674),

Gene: RadFad_48 Start: 30341, Stop: 30766, Start Num: 53

Candidate Starts for RadFad_48:

(Start: 53 @30341 has 9 MA's), (99, 30479), (125, 30602), (127, 30605), (170, 30740),

Gene: Raqqa_54 Start: 31854, Stop: 32213, Start Num: 57

Candidate Starts for Raqqa_54:

(33, 31776), (Start: 57 @31854 has 4 MA's), (Start: 75 @31911 has 1 MA's), (99, 31977), (117, 32064), (136, 32115), (145, 32139), (153, 32163), (158, 32166),

Gene: Richie_66 Start: 35688, Stop: 36038, Start Num: 65

Candidate Starts for Richie_66:

(Start: 65 @35688 has 1 MA's), (83, 35757), (92, 35784), (144, 35952), (150, 35961),

Gene: RootBeer_51 Start: 36505, Stop: 36915, Start Num: 39

Candidate Starts for RootBeer_51:

(22, 36397), (Start: 39 @36505 has 3 MA's), (110, 36739), (120, 36769), (140, 36823), (154, 36862),

Gene: Sakai_46 Start: 29557, Stop: 29859, Start Num: 76

Candidate Starts for Sakai_46:

(Start: 76 @29557 has 4 MA's), (116, 29704), (140, 29764), (169, 29830), (170, 29833),

Gene: Sarge_42 Start: 26531, Stop: 26854, Start Num: 53

Candidate Starts for Sarge_42:

(Start: 53 @26531 has 9 MA's), (66, 26558), (111, 26690), (114, 26705), (132, 26747),

Gene: Sashimi_59 Start: 34705, Stop: 35055, Start Num: 61

Candidate Starts for Sashimi_59:

(54, 34690), (Start: 61 @34705 has 2 MA's), (80, 34768), (107, 34864), (108, 34873),

Gene: Satrap_48 Start: 30265, Stop: 30582, Start Num: 53

Candidate Starts for Satrap_48:

(34, 30196), (37, 30211), (Start: 53 @30265 has 9 MA's), (106, 30403), (110, 30424), (112, 30439), (125, 30481), (160, 30535), (167, 30547),

Gene: Seahorse_49 Start: 31759, Stop: 32121, Start Num: 53

Candidate Starts for Seahorse_49:

(Start: 53 @31759 has 9 MA's), (114, 31954), (115, 31957),

Gene: SonDevVon_49 Start: 29942, Stop: 30322, Start Num: 53

Candidate Starts for SonDevVon_49:

(Start: 53 @29942 has 9 MA's), (99, 30080), (125, 30191), (145, 30230), (159, 30266),

Gene: SonDevVon_68 Start: 35036, Stop: 35386, Start Num: 65

Candidate Starts for SonDevVon_68:

(9, 34742), (15, 34808), (27, 34871), (Start: 65 @35036 has 1 MA's), (83, 35105), (92, 35132), (144, 35300), (150, 35309),

Gene: SpicyFrank_49 Start: 30340, Stop: 30630, Start Num: 69

Candidate Starts for SpicyFrank_49:

(Start: 69 @30340 has 5 MA's),

Gene: Sporco_49 Start: 30151, Stop: 30489, Start Num: 64

Candidate Starts for Sporco_49:

(52, 30121), (Start: 64 @30151 has 10 MA's), (97, 30235), (99, 30241), (116, 30334), (140, 30394),

Gene: ThayneTheZag_47 Start: 29657, Stop: 29974, Start Num: 69

Candidate Starts for ThayneTheZag_47:

(Start: 69 @29657 has 5 MA's), (112, 29789), (123, 29828),

Gene: Whack_62 Start: 41425, Stop: 41829, Start Num: 75

Candidate Starts for Whack_62:

(13, 41146), (29, 41251), (35, 41287), (56, 41362), (Start: 75 @41425 has 1 MA's), (109, 41575), (111, 41590), (119, 41623), (135, 41665), (155, 41737), (159, 41743),

Gene: YoungHarleezy_47 Start: 30135, Stop: 30518, Start Num: 53

Candidate Starts for YoungHarleezy_47:

(Start: 53 @30135 has 9 MA's), (66, 30162), (85, 30210), (100, 30240), (125, 30354), (127, 30357),

Gene: Zaheer_56 Start: 37545, Stop: 37838, Start Num: 64

Candidate Starts for Zaheer_56:

(1, 36288), (2, 36543), (14, 37329), (17, 37341), (Start: 64 @37545 has 10 MA's), (84, 37593), (89, 37605), (120, 37707), (164, 37803),

Gene: Zucker_56 Start: 33964, Stop: 34314, Start Num: 57

Candidate Starts for Zucker_56:

(18, 33772), (33, 33886), (Start: 57 @33964 has 4 MA's), (71, 34009), (99, 34078), (117, 34165), (136, 34216), (145, 34240), (153, 34264), (158, 34267),

Gene: Zucker_52 Start: 33035, Stop: 33385, Start Num: 61

Candidate Starts for Zucker_52:

(35, 32948), (36, 32951), (43, 32984), (54, 33020), (Start: 61 @33035 has 2 MA's), (80, 33098), (122, 33263), (150, 33308), (167, 33350),

Gene: Zucker_36 Start: 27843, Stop: 28172, Start Num: 72

Candidate Starts for Zucker_36:

(42, 27753), (45, 27765), (50, 27780), (58, 27798), (Start: 72 @27843 has 1 MA's), (88, 27891), (104, 27939), (155, 28110),