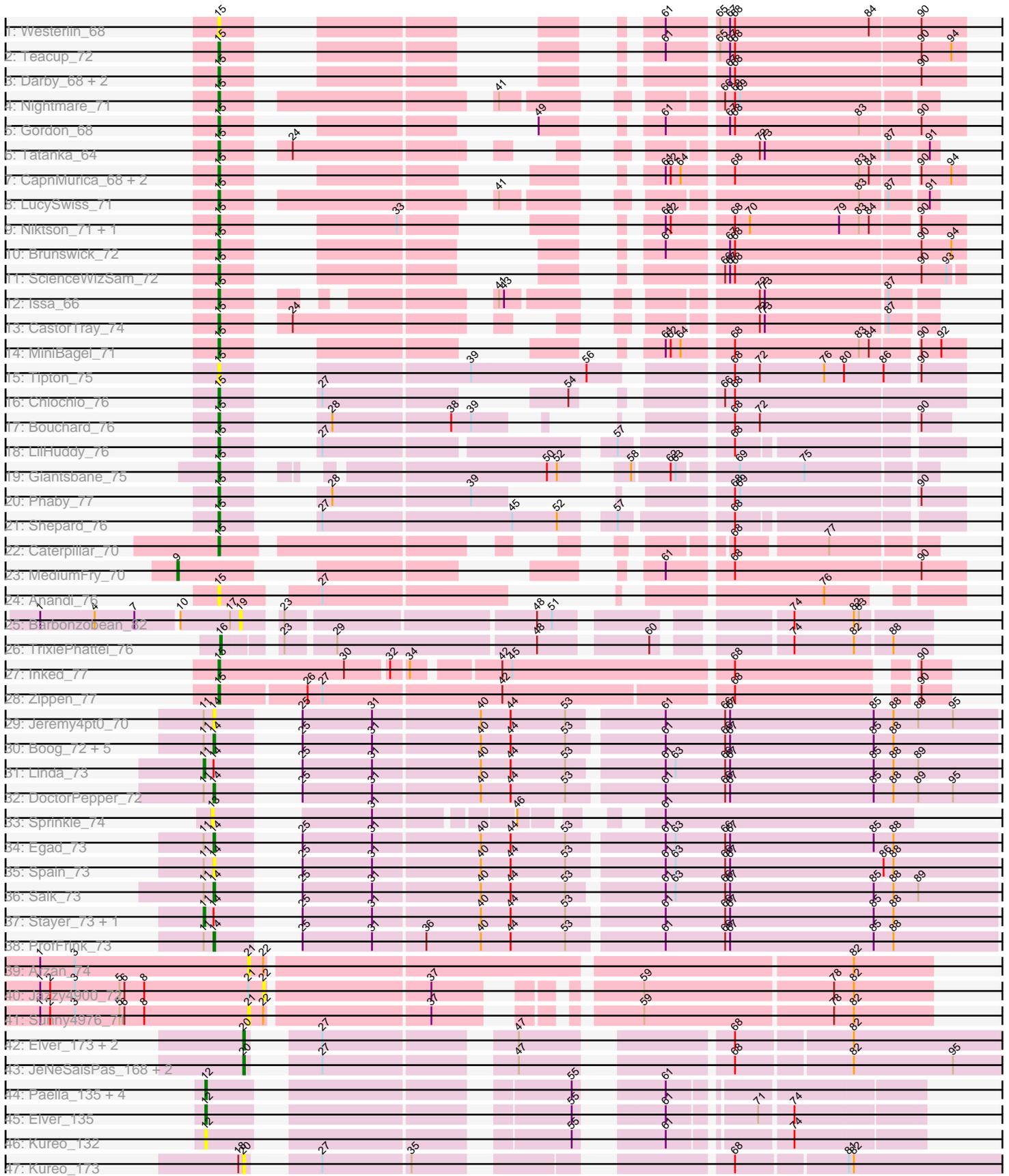# Pham 291148

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 291148 Report

This analysis was run 03/28/26 on database version 641.

Pham number 291148 has 66 members, 19 are drafts.

Phages represented in each track:
• Track 1 : Westerlin_68
• Track 2 : Teacup_72
• Track 3 : Darby_68, Trustiboi_69, DevitoJr_70
• Track 4 : Nightmare_71
• Track 5 : Gordon_68
• Track 6 : Tatanka_64
• Track 7 : CapnMurica_68, Dinallo_66, Tenno_70
• Track 8 : LucySwiss_71
• Track 9 : Niktson_71, ElephantMan_71
• Track 10 : Brunswick_72
• Track 11 : ScienceWizSam_72
• Track 12 : Issa_66
• Track 13 : CastorTray_74
• Track 14 : MiniBagel_71
• Track 15 : Tipton_75
• Track 16 : Chlochlo_76
• Track 17 : Bouchard_76
• Track 18 : LilHuddy_76
• Track 19 : Giantsbane_75
• Track 20 : Phaby_77
• Track 21 : Shepard_76
• Track 22 : Caterpillar_70
• Track 23 : MediumFry_70
• Track 24 : Anandi_76
• Track 25 : Barbonzobean_82
• Track 26 : TrixiePhattel_76
• Track 27 : Inked_77
• Track 28 : Zippen_77
• Track 29 : Jeremy4pt0_70
• Track 30 : Boog_72, MrAaronian_73, Djungelskog_72, Sloopyjoe_73, BronxBay_73, StarLord_73
• Track 31 : Linda_73
• Track 32 : DoctorPepper_72
• Track 33 : Sprinkle_74
• Track 34 : Egad_73
• Track 35 : Spain_73
• Track 36 : Salk_73

- Track 37 : Stayer_73, Michelle_73
- Track 38 : ProfFrink_73
- Track 39 : Arzan_74
- Track 40 : Jazzy4900_72
- Track 41 : Sunny4976_71
- Track 42 : Elver_173, Gandionco_171, Marianna39_171
- Track 43 : JeNeSaisPas_168, Paella_174, Qui_174
- Track 44 : Paella_135, Gandionco_131, JeNeSaisPas_129, Marianna39_132, Qui_135
- Track 45 : Elver_135
- Track 46 : Kureo_132
- Track 47 : Kureo_173

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

The start number called the most often in the published annotations is 15, it was called in 26 of the 47 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- Anandi_76, Bouchard_76, Brunswick_72, CapnMurica_68, CastorTray_74, Caterpillar_70, Chlochlo_76, Darby_68, DevitoJr_70, Dinallo_66, ElephantMan_71, Giantsbane_75, Gordon_68, Inked_77, Issa_66, LilHuddy_76, LucySwiss_71, MiniBagel_71, Nightmare_71, Niktson_71, Phaby_77, ScienceWizSam_72, Shepard_76, Tatanka_64, Teacup_72, Tenno_70, Tipton_75, Trustiboi_69, Westerlin_68, Zippen_77,

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

Genes that do not have the "Most Annotated" start:
- Arzan_74, Barbonzobean_82, Boog_72, BronxBay_73, Djungelskog_72, DoctorPepper_72, Egad_73, Elver_135, Elver_173, Gandionco_131, Gandionco_171, Jazzy4900_72, JeNeSaisPas_129, JeNeSaisPas_168, Jeremy4pt0_70, Kureo_132, Kureo_173, Linda_73, Marianna39_132, Marianna39_171, MediumFry_70, Michelle_73, MrAaronian_73, Paella_135, Paella_174, ProfFrink_73, Qui_135, Qui_174, Salk_73, Sloopyjoe_73, Spain_73, Sprinkle_74, StarLord_73, Stayer_73, Sunny4976_71, TrixiePhattel_76,

Summary by start number:

Start 9:
- Found in 1 of 66 (1.5%) of genes in pham
- Manual Annotations of this start: 1 of 47
- Called 100.0% of time when present
- Phage (with cluster) where this start called: MediumFry_70 (AU4),

Start 11:
- Found in 15 of 66 (22.7%) of genes in pham
- Manual Annotations of this start: 3 of 47
- Called 20.0% of time when present

• Phage (with cluster) where this start called: Linda_73 (AW), Michelle_73 (AW), Stayer_73 (AW),

Start 12:
• Found in 7 of 66 (10.6%) of genes in pham
• Manual Annotations of this start: 3 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elver_135 (FK), Gandionco_131 (FK), JeNeSaisPas_129 (FK), Kureo_132 (FK), Marianna39_132 (FK), Paella_135 (FK), Qui_135 (FK),

Start 13:
• Found in 1 of 66 (1.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Sprinkle_74 (AW),

Start 14:
• Found in 15 of 66 (22.7%) of genes in pham
• Manual Annotations of this start: 10 of 47
• Called 80.0% of time when present
• Phage (with cluster) where this start called: Boog_72 (AW), BronxBay_73 (AW), Djungelskog_72 (AW), DoctorPepper_72 (AW), Egad_73 (AW), Jeremy4pt0_70 (AW), MrAaronian_73 (AW), ProfFrink_73 (AW), Salk_73 (AW), Sloopyjoe_73 (AW), Spain_73 (AW), StarLord_73 (AW),

Start 15:
• Found in 30 of 66 (45.5%) of genes in pham
• Manual Annotations of this start: 26 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Anandi_76 (AU4), Bouchard_76 (AU2), Brunswick_72 (AU1), CapnMurica_68 (AU1), CastorTray_74 (AU1), Caterpillar_70 (AU4), Chlochlo_76 (AU2), Darby_68 (AU1), DevitoJr_70 (AU1), Dinallo_66 (AU1), ElephantMan_71 (AU1), Giantsbane_75 (AU2), Gordon_68 (AU1), Inked_77 (AU7), Issa_66 (AU1), LilHuddy_76 (AU2), LucySwiss_71 (AU1), MiniBagel_71 (AU1), Nightmare_71 (AU1), Niktson_71 (AU1), Phaby_77 (AU2), ScienceWizSam_72 (AU1), Shepard_76 (AU2), Tatanka_64 (AU1), Teacup_72 (AU1), Tenno_70 (AU1), Tipton_75 (AU2), Trustiboi_69 (AU1), Westerlin_68 (AU1), Zippen_77 (AU7),

Start 16:
• Found in 1 of 66 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: TrixiePhattel_76 (AU6),

Start 19:
• Found in 1 of 66 (1.5%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Barbonzobean_82 (AU6),

Start 20:
• Found in 7 of 66 (10.6%) of genes in pham

• Manual Annotations of this start: 3 of 47
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Elver_173 (FK), Gandionco_171 (FK), JeNeSaisPas_168 (FK), Kureo_173 (FK), Marianna39_171 (FK), Paella_174 (FK), Qui_174 (FK),

Start 21:
• Found in 3 of 66 (4.5%) of genes in pham
• No Manual Annotations of this start.
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Arzan_74 (FI), Sunny4976_71 (FI),

Start 22:
• Found in 3 of 66 (4.5%) of genes in pham
• No Manual Annotations of this start.
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Jazzy4900_72 (FI),

Summary by clusters:

There are 8 clusters represented in this pham: AW, AU1, AU2, AU4, AU7, AU6, FI, FK,

Info for manual annotations of cluster AU1:
•Start number 15 was manually annotated 17 times for cluster AU1.

Info for manual annotations of cluster AU2:
•Start number 15 was manually annotated 6 times for cluster AU2.

Info for manual annotations of cluster AU4:
•Start number 9 was manually annotated 1 time for cluster AU4.
•Start number 15 was manually annotated 1 time for cluster AU4.

Info for manual annotations of cluster AU6:
•Start number 16 was manually annotated 1 time for cluster AU6.

Info for manual annotations of cluster AU7:
•Start number 15 was manually annotated 2 times for cluster AU7.

Info for manual annotations of cluster AW:
•Start number 11 was manually annotated 3 times for cluster AW.
•Start number 14 was manually annotated 10 times for cluster AW.

Info for manual annotations of cluster FK:
•Start number 12 was manually annotated 3 times for cluster FK.
•Start number 20 was manually annotated 3 times for cluster FK.

Gene Information:
Gene: Anandi_76 Start: 48145, Stop: 48471, Start Num: 15

Candidate Starts for Anandi_76:
(Start: 15 @48145 has 26 MA's), (27, 48193), (76, 48406),

Gene: Arzan_74 Start: 46947, Stop: 47339, Start Num: 21
Candidate Starts for Arzan_74:
(1, 46821), (3, 46842), (21, 46947), (22, 46956), (82, 47292),

Gene: Barbonzobean_82 Start: 47363, Stop: 47725, Start Num: 19
Candidate Starts for Barbonzobean_82:
(1, 47246), (4, 47279), (7, 47303), (10, 47327), (17, 47357), (19, 47363), (23, 47381), (48, 47522), (51, 47531), (74, 47645), (82, 47681), (83, 47684),

Gene: Boog_72 Start: 45439, Stop: 45873, Start Num: 14
Candidate Starts for Boog_72:
(Start: 11 @45433 has 3 MA's), (Start: 14 @45439 has 10 MA's), (25, 45463), (31, 45505), (40, 45568), (44, 45586), (53, 45619), (61, 45673), (66, 45709), (67, 45712), (85, 45799), (88, 45811),

Gene: Bouchard_76 Start: 48019, Stop: 48327, Start Num: 15
Candidate Starts for Bouchard_76:
(Start: 15 @48019 has 26 MA's), (28, 48049), (38, 48118), (39, 48130), (68, 48205), (72, 48220), (90, 48310),

Gene: BronxBay_73 Start: 45711, Stop: 46145, Start Num: 14
Candidate Starts for BronxBay_73:
(Start: 11 @45705 has 3 MA's), (Start: 14 @45711 has 10 MA's), (25, 45735), (31, 45777), (40, 45840), (44, 45858), (53, 45891), (61, 45945), (66, 45981), (67, 45984), (85, 46071), (88, 46083),

Gene: Brunswick_72 Start: 47263, Stop: 47580, Start Num: 15
Candidate Starts for Brunswick_72:
(Start: 15 @47263 has 26 MA's), (61, 47407), (67, 47440), (68, 47443), (90, 47554), (94, 47572),

Gene: CapnMurica_68 Start: 47980, Stop: 48297, Start Num: 15
Candidate Starts for CapnMurica_68:
(Start: 15 @47980 has 26 MA's), (61, 48130), (62, 48133), (64, 48139), (68, 48166), (83, 48241), (84, 48247), (90, 48271), (94, 48289),

Gene: CastorTray_74 Start: 48014, Stop: 48340, Start Num: 15
Candidate Starts for CastorTray_74:
(Start: 15 @48014 has 26 MA's), (24, 48044), (72, 48239), (73, 48242), (87, 48314),

Gene: Caterpillar_70 Start: 46858, Stop: 47175, Start Num: 15
Candidate Starts for Caterpillar_70:
(Start: 15 @46858 has 26 MA's), (68, 47065), (77, 47116),

Gene: Chlochlo_76 Start: 47546, Stop: 47869, Start Num: 15
Candidate Starts for Chlochlo_76:
(Start: 15 @47546 has 26 MA's), (27, 47570), (54, 47672), (66, 47726), (68, 47732),

Gene: Darby_68 Start: 47007, Stop: 47324, Start Num: 15
Candidate Starts for Darby_68:
(Start: 15 @47007 has 26 MA's), (67, 47184), (68, 47187), (90, 47298),

Gene: DevitoJr_70 Start: 47392, Stop: 47709, Start Num: 15

Candidate Starts for DevitoJr_70:
(Start: 15 @47392 has 26 MA's), (67, 47569), (68, 47572), (90, 47683),

Gene: Dinallo_66 Start: 48272, Stop: 48589, Start Num: 15
Candidate Starts for Dinallo_66:
(Start: 15 @48272 has 26 MA's), (61, 48422), (62, 48425), (64, 48431), (68, 48458), (83, 48533), (84, 48539), (90, 48563), (94, 48581),

Gene: Djungelskog_72 Start: 45713, Stop: 46147, Start Num: 14
Candidate Starts for Djungelskog_72:
(Start: 11 @45707 has 3 MA's), (Start: 14 @45713 has 10 MA's), (25, 45737), (31, 45779), (40, 45842), (44, 45860), (53, 45893), (61, 45947), (66, 45983), (67, 45986), (85, 46073), (88, 46085),

Gene: DoctorPepper_72 Start: 45415, Stop: 45849, Start Num: 14
Candidate Starts for DoctorPepper_72:
(Start: 11 @45409 has 3 MA's), (Start: 14 @45415 has 10 MA's), (25, 45439), (31, 45481), (40, 45544), (44, 45562), (53, 45595), (61, 45649), (66, 45685), (67, 45688), (85, 45775), (88, 45787), (89, 45802), (95, 45823),

Gene: Egad_73 Start: 45689, Stop: 46123, Start Num: 14
Candidate Starts for Egad_73:
(Start: 11 @45683 has 3 MA's), (Start: 14 @45689 has 10 MA's), (25, 45713), (31, 45755), (40, 45818), (44, 45836), (53, 45869), (61, 45923), (63, 45929), (66, 45959), (67, 45962), (85, 46049), (88, 46061),

Gene: ElephantMan_71 Start: 47893, Stop: 48210, Start Num: 15
Candidate Starts for ElephantMan_71:
(Start: 15 @47893 has 26 MA's), (33, 47962), (61, 48043), (62, 48046), (68, 48079), (70, 48088), (79, 48142), (83, 48154), (84, 48160), (90, 48184),

Gene: Elver_173 Start: 85588, Stop: 85980, Start Num: 20
Candidate Starts for Elver_173:
(Start: 20 @85588 has 3 MA's), (27, 85612), (47, 85711), (68, 85813), (82, 85879),

Gene: Elver_135 Start: 71797, Stop: 72144, Start Num: 12
Candidate Starts for Elver_135:
(Start: 12 @71797 has 3 MA's), (55, 71974), (61, 72007), (71, 72052), (74, 72070),

Gene: Gandionco_171 Start: 84981, Stop: 85373, Start Num: 20
Candidate Starts for Gandionco_171:
(Start: 20 @84981 has 3 MA's), (27, 85005), (47, 85104), (68, 85206), (82, 85272),

Gene: Gandionco_131 Start: 70615, Stop: 70962, Start Num: 12
Candidate Starts for Gandionco_131:
(Start: 12 @70615 has 3 MA's), (55, 70792), (61, 70825),

Gene: Giantsbane_75 Start: 46546, Stop: 46899, Start Num: 15
Candidate Starts for Giantsbane_75:
(Start: 15 @46546 has 26 MA's), (50, 46702), (52, 46708), (58, 46732), (62, 46753), (63, 46756), (69, 46786), (75, 46825),

Gene: Gordon_68 Start: 47880, Stop: 48197, Start Num: 15
Candidate Starts for Gordon_68:

(Start: 15 @47880 has 26 MA's), (49, 47982), (61, 48024), (67, 48057), (68, 48060), (83, 48135), (90, 48171),

Gene: Inked_77 Start: 48470, Stop: 48871, Start Num: 15
Candidate Starts for Inked_77:
(Start: 15 @48470 has 26 MA's), (30, 48545), (32, 48569), (34, 48578), (42, 48623), (45, 48629), (68, 48758), (90, 48854),

Gene: Issa_66 Start: 47054, Stop: 47380, Start Num: 15
Candidate Starts for Issa_66:
(Start: 15 @47054 has 26 MA's), (41, 47165), (43, 47168), (72, 47279), (73, 47282), (87, 47354),

Gene: Jazzy4900_72 Start: 47820, Stop: 48170, Start Num: 22
Candidate Starts for Jazzy4900_72:
(1, 47685), (2, 47691), (3, 47706), (5, 47733), (6, 47736), (8, 47748), (21, 47811), (22, 47820), (37, 47913), (59, 48000), (78, 48111), (82, 48123),

Gene: JeNeSaisPas_168 Start: 85709, Stop: 86101, Start Num: 20
Candidate Starts for JeNeSaisPas_168:
(Start: 20 @85709 has 3 MA's), (27, 85733), (47, 85832), (68, 85934), (82, 86000), (95, 86060),

Gene: JeNeSaisPas_129 Start: 71211, Stop: 71558, Start Num: 12
Candidate Starts for JeNeSaisPas_129:
(Start: 12 @71211 has 3 MA's), (55, 71388), (61, 71421),

Gene: Jeremy4pt0_70 Start: 45410, Stop: 45841, Start Num: 14
Candidate Starts for Jeremy4pt0_70:
(Start: 11 @45404 has 3 MA's), (Start: 14 @45410 has 10 MA's), (25, 45434), (31, 45476), (40, 45539), (44, 45557), (53, 45590), (61, 45641), (66, 45677), (67, 45680), (85, 45767), (88, 45779), (89, 45794), (95, 45815),

Gene: Kureo_132 Start: 70811, Stop: 71158, Start Num: 12
Candidate Starts for Kureo_132:
(Start: 12 @70811 has 3 MA's), (55, 70988), (61, 71021), (74, 71084),

Gene: Kureo_173 Start: 85163, Stop: 85549, Start Num: 20
Candidate Starts for Kureo_173:
(18, 85160), (Start: 20 @85163 has 3 MA's), (27, 85187), (35, 85238), (68, 85385), (81, 85448), (82, 85451),

Gene: LilHuddy_76 Start: 47672, Stop: 48037, Start Num: 15
Candidate Starts for LilHuddy_76:
(Start: 15 @47672 has 26 MA's), (27, 47696), (57, 47852), (68, 47912),

Gene: Linda_73 Start: 45702, Stop: 46139, Start Num: 11
Candidate Starts for Linda_73:
(Start: 11 @45702 has 3 MA's), (Start: 14 @45708 has 10 MA's), (25, 45732), (31, 45774), (40, 45837), (44, 45855), (53, 45888), (61, 45939), (63, 45945), (66, 45975), (67, 45978), (85, 46065), (88, 46077), (89, 46092),

Gene: LucySwiss_71 Start: 46999, Stop: 47349, Start Num: 15
Candidate Starts for LucySwiss_71:
(Start: 15 @46999 has 26 MA's), (41, 47134), (83, 47308), (87, 47323), (91, 47344),

Gene: Marianna39_171 Start: 85586, Stop: 85978, Start Num: 20
Candidate Starts for Marianna39_171:
(Start: 20 @85586 has 3 MA's), (27, 85610), (47, 85709), (68, 85811), (82, 85877),

Gene: Marianna39_132 Start: 71220, Stop: 71567, Start Num: 12
Candidate Starts for Marianna39_132:
(Start: 12 @71220 has 3 MA's), (55, 71397), (61, 71430),

Gene: MediumFry_70 Start: 47193, Stop: 47540, Start Num: 9
Candidate Starts for MediumFry_70:
(Start: 9 @47193 has 1 MA's), (61, 47367), (68, 47403), (90, 47514),

Gene: Michelle_73 Start: 45704, Stop: 46144, Start Num: 11
Candidate Starts for Michelle_73:
(Start: 11 @45704 has 3 MA's), (Start: 14 @45710 has 10 MA's), (25, 45734), (31, 45776), (40, 45839), (44, 45857), (53, 45890), (61, 45944), (66, 45980), (67, 45983), (85, 46070), (88, 46082),

Gene: MiniBagel_71 Start: 47984, Stop: 48301, Start Num: 15
Candidate Starts for MiniBagel_71:
(Start: 15 @47984 has 26 MA's), (61, 48134), (62, 48137), (64, 48143), (68, 48170), (83, 48245), (84, 48251), (90, 48275), (92, 48287),

Gene: MrAaronian_73 Start: 45710, Stop: 46144, Start Num: 14
Candidate Starts for MrAaronian_73:
(Start: 11 @45704 has 3 MA's), (Start: 14 @45710 has 10 MA's), (25, 45734), (31, 45776), (40, 45839), (44, 45857), (53, 45890), (61, 45944), (66, 45980), (67, 45983), (85, 46070), (88, 46082),

Gene: Nightmare_71 Start: 48297, Stop: 48647, Start Num: 15
Candidate Starts for Nightmare_71:
(Start: 15 @48297 has 26 MA's), (41, 48432), (66, 48525), (68, 48531), (69, 48534),

Gene: Niktson_71 Start: 47893, Stop: 48210, Start Num: 15
Candidate Starts for Niktson_71:
(Start: 15 @47893 has 26 MA's), (33, 47962), (61, 48043), (62, 48046), (68, 48079), (70, 48088), (79, 48142), (83, 48154), (84, 48160), (90, 48184),

Gene: Paella_174 Start: 86462, Stop: 86854, Start Num: 20
Candidate Starts for Paella_174:
(Start: 20 @86462 has 3 MA's), (27, 86486), (47, 86585), (68, 86687), (82, 86753), (95, 86813),

Gene: Paella_135 Start: 72360, Stop: 72707, Start Num: 12
Candidate Starts for Paella_135:
(Start: 12 @72360 has 3 MA's), (55, 72537), (61, 72570),

Gene: Phaby_77 Start: 48203, Stop: 48517, Start Num: 15
Candidate Starts for Phaby_77:
(Start: 15 @48203 has 26 MA's), (28, 48233), (39, 48314), (68, 48386), (69, 48389), (90, 48491),

Gene: ProfFrink_73 Start: 45688, Stop: 46122, Start Num: 14
Candidate Starts for ProfFrink_73:
(Start: 11 @45682 has 3 MA's), (Start: 14 @45688 has 10 MA's), (25, 45712), (31, 45754), (36, 45784), (40, 45817), (44, 45835), (53, 45868), (61, 45922), (66, 45958), (67, 45961), (85, 46048), (88, 46060),

Gene: Qui_174 Start: 86460, Stop: 86852, Start Num: 20
Candidate Starts for Qui_174:
(Start: 20 @86460 has 3 MA's), (27, 86484), (47, 86583), (68, 86685), (82, 86751), (95, 86811),

Gene: Qui_135 Start: 72360, Stop: 72707, Start Num: 12
Candidate Starts for Qui_135:
(Start: 12 @72360 has 3 MA's), (55, 72537), (61, 72570),

Gene: Salk_73 Start: 45708, Stop: 46139, Start Num: 14
Candidate Starts for Salk_73:
(Start: 11 @45702 has 3 MA's), (Start: 14 @45708 has 10 MA's), (25, 45732), (31, 45774), (40, 45837),
(44, 45855), (53, 45888), (61, 45939), (63, 45945), (66, 45975), (67, 45978), (85, 46065), (88, 46077),
(89, 46092),

Gene: ScienceWizSam_72 Start: 47594, Stop: 47908, Start Num: 15
Candidate Starts for ScienceWizSam_72:
(Start: 15 @47594 has 26 MA's), (66, 47768), (67, 47771), (68, 47774), (90, 47885), (93, 47900),

Gene: Shepard_76 Start: 47525, Stop: 47896, Start Num: 15
Candidate Starts for Shepard_76:
(Start: 15 @47525 has 26 MA's), (27, 47549), (45, 47660), (52, 47687), (57, 47711), (68, 47771),

Gene: Sloopyjoe_73 Start: 45712, Stop: 46146, Start Num: 14
Candidate Starts for Sloopyjoe_73:
(Start: 11 @45706 has 3 MA's), (Start: 14 @45712 has 10 MA's), (25, 45736), (31, 45778), (40, 45841),
(44, 45859), (53, 45892), (61, 45946), (66, 45982), (67, 45985), (85, 46072), (88, 46084),

Gene: Spain_73 Start: 45710, Stop: 46144, Start Num: 14
Candidate Starts for Spain_73:
(Start: 11 @45704 has 3 MA's), (Start: 14 @45710 has 10 MA's), (25, 45734), (31, 45776), (40, 45839),
(44, 45857), (53, 45890), (61, 45944), (63, 45950), (66, 45980), (67, 45983), (86, 46076), (88, 46082),

Gene: Sprinkle_74 Start: 46402, Stop: 46740, Start Num: 13
Candidate Starts for Sprinkle_74:
(13, 46402), (31, 46468), (46, 46540), (61, 46591),

Gene: StarLord_73 Start: 45705, Stop: 46139, Start Num: 14
Candidate Starts for StarLord_73:
(Start: 11 @45699 has 3 MA's), (Start: 14 @45705 has 10 MA's), (25, 45729), (31, 45771), (40, 45834),
(44, 45852), (53, 45885), (61, 45939), (66, 45975), (67, 45978), (85, 46065), (88, 46077),

Gene: Stayer_73 Start: 45702, Stop: 46142, Start Num: 11
Candidate Starts for Stayer_73:
(Start: 11 @45702 has 3 MA's), (Start: 14 @45708 has 10 MA's), (25, 45732), (31, 45774), (40, 45837),
(44, 45855), (53, 45888), (61, 45942), (66, 45978), (67, 45981), (85, 46068), (88, 46080),

Gene: Sunny4976_71 Start: 47811, Stop: 48170, Start Num: 21
Candidate Starts for Sunny4976_71:
(1, 47685), (2, 47691), (3, 47706), (5, 47733), (6, 47736), (8, 47748), (21, 47811), (22, 47820), (37,
47913), (59, 48000), (78, 48111), (82, 48123),

Gene: Tatanka_64 Start: 47501, Stop: 47827, Start Num: 15

Candidate Starts for Tatanka_64:
(Start: 15 @47501 has 26 MA's), (24, 47531), (72, 47726), (73, 47729), (87, 47801), (91, 47822),

Gene: Teacup_72 Start: 47933, Stop: 48250, Start Num: 15
Candidate Starts for Teacup_72:
(Start: 15 @47933 has 26 MA's), (61, 48077), (65, 48104), (67, 48110), (68, 48113), (90, 48224), (94, 48242),

Gene: Tenno_70 Start: 48017, Stop: 48334, Start Num: 15
Candidate Starts for Tenno_70:
(Start: 15 @48017 has 26 MA's), (61, 48167), (62, 48170), (64, 48176), (68, 48203), (83, 48278), (84, 48284), (90, 48308), (94, 48326),

Gene: Tipton_75 Start: 48040, Stop: 48423, Start Num: 15
Candidate Starts for Tipton_75:
(Start: 15 @48040 has 26 MA's), (39, 48151), (56, 48220), (68, 48289), (72, 48304), (76, 48343), (80, 48355), (86, 48379), (90, 48397),

Gene: TrixiePhattel_76 Start: 45610, Stop: 45984, Start Num: 16
Candidate Starts for TrixiePhattel_76:
(Start: 16 @45610 has 1 MA's), (23, 45637), (29, 45664), (48, 45781), (60, 45838), (74, 45904), (82, 45940), (88, 45961),

Gene: Trustiboi_69 Start: 47616, Stop: 47933, Start Num: 15
Candidate Starts for Trustiboi_69:
(Start: 15 @47616 has 26 MA's), (67, 47793), (68, 47796), (90, 47907),

Gene: Westerlin_68 Start: 48703, Stop: 49020, Start Num: 15
Candidate Starts for Westerlin_68:
(Start: 15 @48703 has 26 MA's), (61, 48847), (65, 48874), (67, 48880), (68, 48883), (84, 48964), (90, 48994),

Gene: Zippen_77 Start: 48335, Stop: 48745, Start Num: 15
Candidate Starts for Zippen_77:
(Start: 15 @48335 has 26 MA's), (26, 48386), (27, 48395), (42, 48500), (68, 48632), (90, 48728),