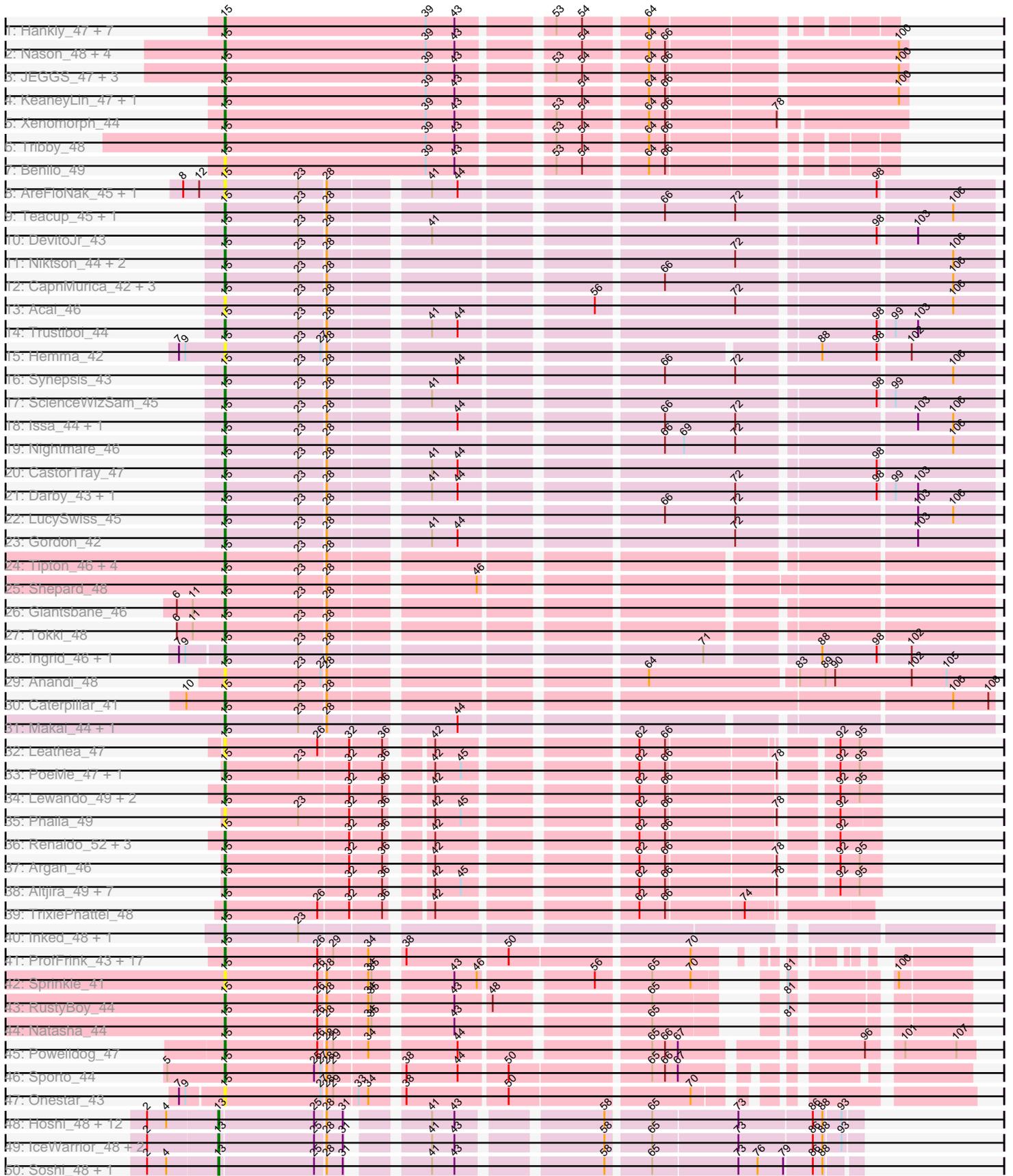# Pham 283530

Pham 283530

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 283530 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283530 has 174 members, 41 are drafts.

Phages represented in each track:
• Track 1 : Hankly_47, NapoleonB_48, BenitoAntonio_48, Cheesy_48, Bowling_48, Kardesai_49, Mooshroom_50, Dynamite_48
• Track 2 : Nason_48, YoshiYama_48, Arcadia_48, Elsa_48, Circum_50
• Track 3 : JEGGS_47, Correa_46, Mudcat_45, Heisenberger_47
• Track 4 : KeaneyLin_47, GoCrazy_47
• Track 5 : Xenomorph_44
• Track 6 : Tribby_48
• Track 7 : Benllo_49
• Track 8 : AreFloNak_45, Nivinsha_45
• Track 9 : Teacup_45, Brunswick_45
• Track 10 : DevitoJr_43
• Track 11 : Niktson_44, ElephantMan_44, Tatanka_43
• Track 12 : CapnMurica_42, Dinallo_44, Tenno_45, MiniBagel_44
• Track 13 : Acai_46
• Track 14 : Trustiboi_44
• Track 15 : Hemma_42
• Track 16 : Synepsis_43
• Track 17 : ScienceWizSam_45
• Track 18 : Issa_44, Westerlin_44
• Track 19 : Nightmare_46
• Track 20 : CastorTray_47
• Track 21 : Darby_43, Breylor17_45
• Track 22 : LucySwiss_45
• Track 23 : Gordon_42
• Track 24 : Tipton_46, Chlochlo_46, Bouchard_44, LilHuddy_46, Phaby_46
• Track 25 : Shepard_48
• Track 26 : Giantsbane_46
• Track 27 : Tokki_48
• Track 28 : Ingrid_46, Loretta_46
• Track 29 : Anandi_48
• Track 30 : Caterpillar_41
• Track 31 : Makai_44, Truckee_42
• Track 32 : Leathea_47
• Track 33 : PoeMe_47, Navi1117_49
• Track 34 : Lewando_49, BarbieDoll_51, Kinny_50
• Track 35 : Phaila_49
• Track 36 : Renaldo_52, Muglass_49, Biscute_47, Barbonzobean_52

- Track 37 : Argan_46
- Track 38 : Altjira_49, Uzumaki_45, Zeina_48, GantcherGoblin_46, KevinMinion_47, Tenney120_48, Stardrop_51, Mardi_47
- Track 39 : TrixiePhattel_48
- Track 40 : Inked_48, Zippen_46
- Track 41 : ProfFrink_43, Raunak_46, Sloopyjoe_43, Linda_43, Michelle_43, Stayer_43, Djungelskog_43, Egad_43, Boog_42, BronxBay_43, Salk_43, StarLord_43, Jeremy4pt0_43, HerbBucket_43, Shiba_42, MrAaronian_43, DoctorPepper_42, Spain_46
- Track 42 : Sprinkle_41
- Track 43 : RustyBoy_44
- Track 44 : Natasha_44
- Track 45 : Powelldog_47
- Track 46 : Sporto_44
- Track 47 : Onestar_43
- Track 48 : Hoshi_48, Namo_50, Indigenous_49, Esketit_49, Maya_49, Rima_50, TieDye_48, OlympicHelado_49, Spectropatronm_49, TonyStarch_48, FidgetOrca_49, Jaylociraptor_49, Meibysrarus_47
- Track 49 : IceWarrior_48, CherryBlossom_49, TaidaOne_49
- Track 50 : Soshi_48, HazuAndZazu_48
- Track 51 : GirlPower_44
- Track 52 : Popy_49, FrodoSwaggins_49, Espio_50, DrGrey_48
- Track 53 : Madamato_50
- Track 54 : Wigberry_50
- Track 55 : Moozy_35, HotFries_35, SheRa_36, Annihilus_36
- Track 56 : Bilo_34
- Track 57 : Scap1_35
- Track 58 : PherryCruz_35, GoblinVoyage_36, Sangak_34, RavenPuff_35
- Track 59 : Doxi13_36
- Track 60 : Monse_35
- Track 61 : Ditters_35
- Track 62 : RosaAsantewaa_32
- Track 63 : LibertyBell_44
- Track 64 : FromIndy_45, Miek_44, Regigigas_46, Rainydai_44, CricKo_45, Thiqqums_45, SendItCS_43
- Track 65 : Bing_52
- Track 66 : Kardashian_47
- Track 67 : ClubPenguin_48
- Track 68 : GermyBearimy_56
- Track 69 : Jazzy4900_49, Sunny4976_48
- Track 70 : Arzan_50
- Track 71 : JeNeSaisPas_89, Gandionco_91, Kureo_93, Marianna39_92
- Track 72 : Pippin15_44
- Track 73 : Sweetclover_41
- Track 74 : JoyLin_44
- Track 75 : Serenabean_42
- Track 76 : AddiRose_41
- Track 77 : Eevee_44, Yotsuba_44
- Track 78 : Daddyjeff_42

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 90 of the 133 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acai_46, AddiRose_41, Altjira_49, Anandi_48, Arcadia_48, AreFloNak_45, Argan_46, Arzan_50, BarbieDoll_51, Barbonzobean_52, BenitoAntonio_48, Benllo_49, Biscute_47, Boog_42, Bouchard_44, Bowling_48, Breylor17_45, BronxBay_43, Brunswick_45, CapnMurica_42, CastorTray_47, Caterpillar_41, Cheesy_48, Chlochlo_46, Circum_50, Correa_46, Daddyjeff_42, Darby_43, DevitoJr_43, Dinallo_44, Djungelskog_43, DoctorPepper_42, Dynamite_48, Eevee_44, Egad_43, ElephantMan_44, Elsa_48, Gandionco_91, GantcherGoblin_46, GermyBearimy_56, Giantsbane_46, GoCrazy_47, Gordon_42, Hankly_47, Heisenberger_47, Hemma_42, HerbBucket_43, Ingrid_46, Inked_48, Issa_44, JEGGS_47, Jazzy4900_49, JeNeSaisPas_89, Jeremy4pt0_43, JoyLin_44, Kardesai_49, KeaneyLin_47, KevinMinion_47, Kinny_50, Kureo_93, Leathea_47, Lewando_49, LilHuddy_46, Linda_43, Loretta_46, LucySwiss_45, Makai_44, Mardi_47, Marianna39_92, Michelle_43, MiniBagel_44, Mooshroom_50, MrAaronian_43, Mudcat_45, Muglass_49, NapoleonB_48, Nason_48, Natasha_44, Navi1117_49, Nightmare_46, Niktson_44, Nivinsha_45, Onestar_43, Phaby_46, Phaila_49, Pippin15_44, PoeMe_47, Powelldog_47, ProfFrink_43, Raunak_46, Renaldo_52, RustyBoy_44, Salk_43, ScienceWizSam_45, Serenabean_42, Shepard_48, Shiba_42, Sloopyjoe_43, Spain_46, Sporto_44, Sprinkle_41, StarLord_43, Stardrop_51, Stayer_43, Sunny4976_48, Sweetclover_41, Synepsis_43, Tatanka_43, Teacup_45, Tenney120_48, Tenno_45, Tipton_46, Tokki_48, Tribby_48, TrixiePhattel_48, Truckee_42, Trustiboi_44, Uzumaki_45, Westerlin_44, Xenomorph_44, YoshiYama_48, Yotsuba_44, Zeina_48, Zippen_46,

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

Genes that do not have the "Most Annotated" start:
• Annihilus_36, Bilo_34, Bing_52, CherryBlossom_49, ClubPenguin_48, CricKo_45, Ditters_35, Doxi13_36, DrGrey_48, Esketit_49, Espio_50, FidgetOrca_49, FrodoSwaggins_49, FromIndy_45, GirlPower_44, GoblinVoyage_36, HazuAndZazu_48, Hoshi_48, HotFries_35, IceWarrior_48, Indigenous_49, Jaylociraptor_49, Kardashian_47, LibertyBell_44, Madamato_50, Maya_49, Meibysrarus_47, Miek_44, Monse_35, Moozy_35, Namo_50, OlympicHelado_49, PherryCruz_35, Popy_49, Rainydai_44, RavenPuff_35, Regigigas_46, Rima_50, RosaAsantewaa_32, Sangak_34, Scap1_35, SendItCS_43, SheRa_36, Soshi_48, Spectropatronm_49, TaidaOne_49, Thiqqums_45, TieDye_48, TonyStarch_48, Wigberry_50,

Summary by start number:

Start 13:
• Found in 36 of 174 (20.7%) of genes in pham
• Manual Annotations of this start: 32 of 133
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Bing_52 (BI5), CherryBlossom_49 (BI1), ClubPenguin_48 (BI7), CricKo_45 (BI4), DrGrey_48 (BI1), Esketit_49 (BI1), Espio_50 (BI1), FidgetOrca_49 (BI1), FrodoSwaggins_49 (BI1), FromIndy_45 (BI4), GirlPower_44 (BI1), HazuAndZazu_48 (BI1), Hoshi_48 (BI1), IceWarrior_48 (BI1),

Indigenous_49 (BI1), Jaylociraptor_49 (BI1), Kardashian_47 (BI6), LibertyBell_44 (BI3), Madamato_50 (BI1), Maya_49 (BI1), Meibysrarus_47 (BI1), Miek_44 (BI4), Namo_50 (BI1), OlympicHelado_49 (BI1), Popy_49 (BI1), Rainydai_44 (BI4), Regigigas_46 (BI4), Rima_50 (BI1), SendItCS_43 (BI4), Soshi_48 (BI1), Spectropatronm_49 (BI1), TaidaOne_49 (BI1), Thiqqums_45 (BI4), TieDye_48 (BI1), TonyStarch_48 (BI1), Wigberry_50 (BI1),

Start 14:
• Found in 14 of 174 (8.0%) of genes in pham
• Manual Annotations of this start: 11 of 133
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Annihilus_36 (BI2), Bilo_34 (BI2), Ditters_35 (BI2), Doxi13_36 (BI2), GoblinVoyage_36 (BI2), HotFries_35 (BI2), Monse_35 (BI2), Moozy_35 (BI2), PherryCruz_35 (BI2), RavenPuff_35 (BI2), RosaAsantewaa_32 (BI2), Sangak_34 (BI2), Scap1_35 (BI2), SheRa_36 (BI2),

Start 15:
• Found in 124 of 174 (71.3%) of genes in pham
• Manual Annotations of this start: 90 of 133
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acai_46 (AU1), AddiRose_41 (JA), Altjira_49 (AU6), Anandi_48 (AU4), Arcadia_48 (AM), AreFloNak_45 (AU1), Argan_46 (AU6), Arzan_50 (FI), BarbieDoll_51 (AU6), Barbonzobean_52 (AU6), BenitoAntonio_48 (AM), Benllo_49 (AM), Biscute_47 (AU6), Boog_42 (AW), Bouchard_44 (AU2), Bowling_48 (AM), Breylor17_45 (AU1), BronxBay_43 (AW), Brunswick_45 (AU1), CapnMurica_42 (AU1), CastorTray_47 (AU1), Caterpillar_41 (AU4), Cheesy_48 (AM), Chlochlo_46 (AU2), Circum_50 (AM), Correa_46 (AM), Daddyjeff_42 (JA), Darby_43 (AU1), DevitoJr_43 (AU1), Dinallo_44 (AU1), Djungelskog_43 (AW), DoctorPepper_42 (AW), Dynamite_48 (AM), Eevee_44 (JA), Egad_43 (AW), ElephantMan_44 (AU1), Elsa_48 (AM), Gandionco_91 (FK), GantcherGoblin_46 (AU6), GermyBearimy_56 (FI), Giantsbane_46 (AU2), GoCrazy_47 (AM), Gordon_42 (AU1), Hankly_47 (AM), Heisenberger_47 (AM), Hemma_42 (AU1), HerbBucket_43 (AW), Ingrid_46 (AU3), Inked_48 (AU7), Issa_44 (AU1), JEGGS_47 (AM), Jazzy4900_49 (FI), JeNeSaisPas_89 (FK), Jeremy4pt0_43 (AW), JoyLin_44 (JA), Kardesai_49 (AM), KeaneyLin_47 (AM), KevinMinion_47 (AU6), Kinny_50 (AU6), Kureo_93 (FK), Leathea_47 (AU6), Lewando_49 (AU6), LilHuddy_46 (AU2), Linda_43 (AW), Loretta_46 (AU3), LucySwiss_45 (AU1), Makai_44 (AU5), Mardi_47 (AU6), Marianna39_92 (FK), Michelle_43 (AW), MiniBagel_44 (AU1), Mooshroom_50 (AM), MrAaronian_43 (AW), Mudcat_45 (AM), Muglass_49 (AU6), NapoleonB_48 (AM), Nason_48 (AM), Natasha_44 (AW), Navi1117_49 (AU6), Nightmare_46 (AU1), Niktson_44 (AU1), Nivinsha_45 (AU1), Onestar_43 (AW), Phaby_46 (AU2), Phaila_49 (AU6), Pippin15_44 (JA), PoeMe_47 (AU6), Powelldog_47 (AW), ProfFrink_43 (AW), Raunak_46 (AW), Renaldo_52 (AU6), RustyBoy_44 (AW), Salk_43 (AW), ScienceWizSam_45 (AU1), Serenabean_42 (JA), Shepard_48 (AU2), Shiba_42 (AW), Sloopyjoe_43 (AW), Spain_46 (AW), Sporto_44 (AW), Sprinkle_41 (AW), StarLord_43 (AW), Stardrop_51 (AU6), Stayer_43 (AW), Sunny4976_48 (FI), Sweetclover_41 (JA), Synepsis_43 (AU1), Tatanka_43 (AU1), Teacup_45 (AU1), Tenney120_48 (AU6), Tenno_45 (AU1), Tipton_46 (AU2), Tokki_48 (AU2), Tribby_48 (AM), TrixiePhattel_48 (AU6), Truckee_42 (AU5), Trustiboi_44 (AU1), Uzumaki_45 (AU6), Westerlin_44 (AU1), Xenomorph_44 (AM), YoshiYama_48 (AM), Yotsuba_44 (JA), Zeina_48 (AU6), Zippen_46 (AU7),

Summary by clusters:

There are 19 clusters represented in this pham: FK, AU7, FI, AM, BI3, AU1, AU3, AU2, AU5, AU4, AW, AU6, BI6, BI7, BI4, BI5, BI2, JA, BI1,

Info for manual annotations of cluster AM:
•Start number 15 was manually annotated 20 times for cluster AM.

Info for manual annotations of cluster AU1:
•Start number 15 was manually annotated 19 times for cluster AU1.

Info for manual annotations of cluster AU2:
•Start number 15 was manually annotated 7 times for cluster AU2.

Info for manual annotations of cluster AU3:
•Start number 15 was manually annotated 2 times for cluster AU3.

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

Info for manual annotations of cluster AU5:
•Start number 15 was manually annotated 2 times for cluster AU5.

Info for manual annotations of cluster AU6:
•Start number 15 was manually annotated 11 times 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 15 was manually annotated 18 times for cluster AW.

Info for manual annotations of cluster BI1:
•Start number 13 was manually annotated 23 times for cluster BI1.

Info for manual annotations of cluster BI2:
•Start number 14 was manually annotated 11 times for cluster BI2.

Info for manual annotations of cluster BI3:
•Start number 13 was manually annotated 1 time for cluster BI3.

Info for manual annotations of cluster BI4:
•Start number 13 was manually annotated 5 times for cluster BI4.

Info for manual annotations of cluster BI5:
•Start number 13 was manually annotated 1 time for cluster BI5.

Info for manual annotations of cluster BI6:
•Start number 13 was manually annotated 1 time for cluster BI6.

Info for manual annotations of cluster BI7:
•Start number 13 was manually annotated 1 time for cluster BI7.

Info for manual annotations of cluster JA:
•Start number 15 was manually annotated 8 times for cluster JA.

Gene Information:

Gene: Acai_46 Start: 33525, Stop: 34184, Start Num: 15
Candidate Starts for Acai_46:
(Start: 15 @33525 has 90 MA's), (23, 33594), (28, 33618), (56, 33837), (72, 33960), (106, 34146),

Gene: AddiRose_41 Start: 30292, Stop: 30936, Start Num: 15
Candidate Starts for AddiRose_41:
(Start: 15 @30292 has 90 MA's), (26, 30376), (55, 30583), (62, 30631), (66, 30655), (68, 30670), (75, 30724),

Gene: Altjira_49 Start: 33420, Stop: 33953, Start Num: 15
Candidate Starts for Altjira_49:
(Start: 15 @33420 has 90 MA's), (32, 33534), (36, 33561), (42, 33591), (45, 33615), (62, 33753), (66, 33777), (78, 33873), (92, 33915), (95, 33933),

Gene: Anandi_48 Start: 33821, Stop: 34489, Start Num: 15
Candidate Starts for Anandi_48:
(Start: 15 @33821 has 90 MA's), (23, 33890), (27, 33911), (28, 33914), (64, 34175), (83, 34307), (89, 34331), (90, 34340), (102, 34412), (105, 34445),

Gene: Annihilus_36 Start: 26356, Stop: 26877, Start Num: 14
Candidate Starts for Annihilus_36:
(Start: 14 @26356 has 11 MA's), (28, 26449), (64, 26692), (65, 26695), (66, 26707), (67, 26719), (86, 26845),

Gene: Arcadia_48 Start: 31859, Stop: 32455, Start Num: 15
Candidate Starts for Arcadia_48:
(Start: 15 @31859 has 90 MA's), (39, 32048), (43, 32075), (54, 32174), (64, 32228), (66, 32243), (100, 32447),

Gene: AreFloNak_45 Start: 33292, Stop: 33951, Start Num: 15
Candidate Starts for AreFloNak_45:
(8, 33253), (12, 33268), (Start: 15 @33292 has 90 MA's), (23, 33361), (28, 33385), (41, 33469), (44, 33493), (98, 33847),

Gene: Argan_46 Start: 32018, Stop: 32551, Start Num: 15
Candidate Starts for Argan_46:
(Start: 15 @32018 has 90 MA's), (32, 32132), (36, 32159), (42, 32189), (62, 32351), (66, 32375), (78, 32471), (92, 32513), (95, 32531),

Gene: Arzan_50 Start: 33168, Stop: 33752, Start Num: 15
Candidate Starts for Arzan_50:
(Start: 15 @33168 has 90 MA's), (40, 33333), (42, 33339), (55, 33465), (57, 33474), (76, 33576), (77, 33585), (98, 33672), (104, 33708),

Gene: BarbieDoll_51 Start: 33705, Stop: 34238, Start Num: 15
Candidate Starts for BarbieDoll_51:
(Start: 15 @33705 has 90 MA's), (32, 33819), (36, 33846), (42, 33876), (62, 34038), (66, 34062), (92, 34200), (95, 34218),

Gene: Barbonzobean_52 Start: 33749, Stop: 34282, Start Num: 15
Candidate Starts for Barbonzobean_52:
(Start: 15 @33749 has 90 MA's), (32, 33863), (36, 33890), (42, 33920), (62, 34082), (66, 34106), (92, 34244),

Gene: BenitoAntonio_48 Start: 31423, Stop: 31992, Start Num: 15
Candidate Starts for BenitoAntonio_48:
(Start: 15 @31423 has 90 MA's), (39, 31612), (43, 31639), (53, 31714), (54, 31738), (64, 31792),

Gene: Benllo_49 Start: 32107, Stop: 32676, Start Num: 15
Candidate Starts for Benllo_49:
(Start: 15 @32107 has 90 MA's), (39, 32296), (43, 32323), (53, 32398), (54, 32422), (64, 32476), (66, 32491),

Gene: Bilo_34 Start: 26468, Stop: 26989, Start Num: 14
Candidate Starts for Bilo_34:
(Start: 14 @26468 has 11 MA's), (21, 26507), (28, 26561), (64, 26804), (65, 26807), (66, 26819), (86, 26957),

Gene: Bing_52 Start: 33497, Stop: 34048, Start Num: 13
Candidate Starts for Bing_52:
(Start: 13 @33497 has 32 MA's), (17, 33509), (42, 33671), (43, 33689), (47, 33719), (65, 33854), (73, 33935), (82, 33986),

Gene: Biscute_47 Start: 33357, Stop: 33890, Start Num: 15
Candidate Starts for Biscute_47:
(Start: 15 @33357 has 90 MA's), (32, 33471), (36, 33498), (42, 33528), (62, 33690), (66, 33714), (92, 33852),

Gene: Boog_42 Start: 30697, Stop: 31257, Start Num: 15
Candidate Starts for Boog_42:
(Start: 15 @30697 has 90 MA's), (26, 30784), (29, 30796), (34, 30826), (38, 30850), (50, 30940), (70, 31099),

Gene: Bouchard_44 Start: 33214, Stop: 33864, Start Num: 15
Candidate Starts for Bouchard_44:
(Start: 15 @33214 has 90 MA's), (23, 33283), (28, 33307),

Gene: Bowling_48 Start: 31632, Stop: 32201, Start Num: 15
Candidate Starts for Bowling_48:
(Start: 15 @31632 has 90 MA's), (39, 31821), (43, 31848), (53, 31923), (54, 31947), (64, 32001),

Gene: Breylor17_45 Start: 34090, Stop: 34749, Start Num: 15
Candidate Starts for Breylor17_45:
(Start: 15 @34090 has 90 MA's), (23, 34159), (28, 34183), (41, 34267), (44, 34291), (72, 34525), (98, 34645), (99, 34657), (103, 34678),

Gene: BronxBay_43 Start: 30995, Stop: 31555, Start Num: 15

Candidate Starts for BronxBay_43:
(Start: 15 @30995 has 90 MA's), (26, 31082), (29, 31094), (34, 31124), (38, 31148), (50, 31238), (70, 31397),

Gene: Brunswick_45 Start: 33172, Stop: 33831, Start Num: 15
Candidate Starts for Brunswick_45:
(Start: 15 @33172 has 90 MA's), (23, 33241), (28, 33265), (66, 33541), (72, 33607), (106, 33793),

Gene: CapnMurica_42 Start: 34070, Stop: 34729, Start Num: 15
Candidate Starts for CapnMurica_42:
(Start: 15 @34070 has 90 MA's), (23, 34139), (28, 34163), (66, 34439), (106, 34691),

Gene: CastorTray_47 Start: 33900, Stop: 34559, Start Num: 15
Candidate Starts for CastorTray_47:
(Start: 15 @33900 has 90 MA's), (23, 33969), (28, 33993), (41, 34077), (44, 34101), (98, 34455),

Gene: Caterpillar_41 Start: 32360, Stop: 33028, Start Num: 15
Candidate Starts for Caterpillar_41:
(10, 32324), (Start: 15 @32360 has 90 MA's), (23, 32429), (28, 32453), (106, 32990), (108, 33023),

Gene: Cheesy_48 Start: 31608, Stop: 32177, Start Num: 15
Candidate Starts for Cheesy_48:
(Start: 15 @31608 has 90 MA's), (39, 31797), (43, 31824), (53, 31899), (54, 31923), (64, 31977),

Gene: CherryBlossom_49 Start: 32728, Stop: 33255, Start Num: 13
Candidate Starts for CherryBlossom_49:
(2, 32665), (Start: 13 @32728 has 32 MA's), (25, 32815), (28, 32824), (31, 32839), (41, 32896), (43, 32917), (58, 33034), (65, 33070), (73, 33148), (86, 33214), (88, 33223), (93, 33238),

Gene: Chlochlo_46 Start: 33279, Stop: 33929, Start Num: 15
Candidate Starts for Chlochlo_46:
(Start: 15 @33279 has 90 MA's), (23, 33348), (28, 33372),

Gene: Circum_50 Start: 32270, Stop: 32866, Start Num: 15
Candidate Starts for Circum_50:
(Start: 15 @32270 has 90 MA's), (39, 32459), (43, 32486), (54, 32585), (64, 32639), (66, 32654), (100, 32858),

Gene: ClubPenguin_48 Start: 32048, Stop: 32584, Start Num: 13
Candidate Starts for ClubPenguin_48:
(Start: 13 @32048 has 32 MA's), (18, 32063), (28, 32144), (49, 32276), (54, 32345), (55, 32351), (56, 32357), (66, 32414), (73, 32483), (80, 32528),

Gene: Correa_46 Start: 30727, Stop: 31323, Start Num: 15
Candidate Starts for Correa_46:
(Start: 15 @30727 has 90 MA's), (39, 30916), (43, 30943), (53, 31018), (54, 31042), (64, 31096), (66, 31111), (100, 31315),

Gene: CricKo_45 Start: 30767, Stop: 31297, Start Num: 13
Candidate Starts for CricKo_45:
(Start: 13 @30767 has 32 MA's), (25, 30857), (28, 30866), (37, 30905), (38, 30914), (44, 30962), (73, 31184), (82, 31232), (86, 31250),

Gene: Daddyjeff_42 Start: 30571, Stop: 31212, Start Num: 15
Candidate Starts for Daddyjeff_42:
(Start: 15 @30571 has 90 MA's), (26, 30655), (55, 30862), (62, 30910), (75, 31003),

Gene: Darby_43 Start: 33072, Stop: 33731, Start Num: 15
Candidate Starts for Darby_43:
(Start: 15 @33072 has 90 MA's), (23, 33141), (28, 33165), (41, 33249), (44, 33273), (72, 33507), (98, 33627), (99, 33639), (103, 33660),

Gene: DevitoJr_43 Start: 33260, Stop: 33919, Start Num: 15
Candidate Starts for DevitoJr_43:
(Start: 15 @33260 has 90 MA's), (23, 33329), (28, 33353), (41, 33437), (98, 33815), (103, 33848),

Gene: Dinallo_44 Start: 34379, Stop: 35038, Start Num: 15
Candidate Starts for Dinallo_44:
(Start: 15 @34379 has 90 MA's), (23, 34448), (28, 34472), (66, 34748), (106, 35000),

Gene: Ditters_35 Start: 26795, Stop: 27316, Start Num: 14
Candidate Starts for Ditters_35:
(Start: 14 @26795 has 11 MA's), (21, 26834), (28, 26888), (34, 26912), (38, 26936), (66, 27146),

Gene: Djungelskog_43 Start: 30994, Stop: 31554, Start Num: 15
Candidate Starts for Djungelskog_43:
(Start: 15 @30994 has 90 MA's), (26, 31081), (29, 31093), (34, 31123), (38, 31147), (50, 31237), (70, 31396),

Gene: DoctorPepper_42 Start: 30699, Stop: 31259, Start Num: 15
Candidate Starts for DoctorPepper_42:
(Start: 15 @30699 has 90 MA's), (26, 30786), (29, 30798), (34, 30828), (38, 30852), (50, 30942), (70, 31101),

Gene: Doxi13_36 Start: 26330, Stop: 26851, Start Num: 14
Candidate Starts for Doxi13_36:
(Start: 14 @26330 has 11 MA's), (21, 26369), (28, 26423), (64, 26666), (65, 26669), (66, 26681), (67, 26693), (73, 26750),

Gene: DrGrey_48 Start: 33096, Stop: 33620, Start Num: 13
Candidate Starts for DrGrey_48:
(Start: 13 @33096 has 32 MA's), (25, 33183), (28, 33192), (31, 33207), (41, 33264), (43, 33285), (58, 33402), (65, 33438), (73, 33516), (76, 33534), (79, 33558), (86, 33582), (88, 33591),

Gene: Dynamite_48 Start: 31823, Stop: 32392, Start Num: 15
Candidate Starts for Dynamite_48:
(Start: 15 @31823 has 90 MA's), (39, 32012), (43, 32039), (53, 32114), (54, 32138), (64, 32192),

Gene: Eevee_44 Start: 33674, Stop: 34315, Start Num: 15
Candidate Starts for Eevee_44:
(Start: 15 @33674 has 90 MA's), (20, 33704), (24, 33752), (42, 33848), (55, 33968), (61, 34010), (62, 34016), (75, 34103),

Gene: Egad_43 Start: 30996, Stop: 31556, Start Num: 15
Candidate Starts for Egad_43:

(Start: 15 @30996 has 90 MA's), (26, 31083), (29, 31095), (34, 31125), (38, 31149), (50, 31239), (70, 31398),

Gene: ElephantMan_44 Start: 33745, Stop: 34404, Start Num: 15
Candidate Starts for ElephantMan_44:
(Start: 15 @33745 has 90 MA's), (23, 33814), (28, 33838), (72, 34180), (106, 34366),

Gene: Elsa_48 Start: 31859, Stop: 32455, Start Num: 15
Candidate Starts for Elsa_48:
(Start: 15 @31859 has 90 MA's), (39, 32048), (43, 32075), (54, 32174), (64, 32228), (66, 32243), (100, 32447),

Gene: Esketit_49 Start: 32839, Stop: 33366, Start Num: 13
Candidate Starts for Esketit_49:
(2, 32776), (4, 32794), (Start: 13 @32839 has 32 MA's), (25, 32926), (28, 32935), (31, 32950), (41, 33007), (43, 33028), (58, 33145), (65, 33181), (73, 33259), (86, 33325), (88, 33334), (93, 33349),

Gene: Espio_50 Start: 33491, Stop: 34015, Start Num: 13
Candidate Starts for Espio_50:
(Start: 13 @33491 has 32 MA's), (25, 33578), (28, 33587), (31, 33602), (41, 33659), (43, 33680), (58, 33797), (65, 33833), (73, 33911), (76, 33929), (79, 33953), (86, 33977), (88, 33986),

Gene: FidgetOrca_49 Start: 32832, Stop: 33359, Start Num: 13
Candidate Starts for FidgetOrca_49:
(2, 32769), (4, 32787), (Start: 13 @32832 has 32 MA's), (25, 32919), (28, 32928), (31, 32943), (41, 33000), (43, 33021), (58, 33138), (65, 33174), (73, 33252), (86, 33318), (88, 33327), (93, 33342),

Gene: FrodoSwaggins_49 Start: 33490, Stop: 34014, Start Num: 13
Candidate Starts for FrodoSwaggins_49:
(Start: 13 @33490 has 32 MA's), (25, 33577), (28, 33586), (31, 33601), (41, 33658), (43, 33679), (58, 33796), (65, 33832), (73, 33910), (76, 33928), (79, 33952), (86, 33976), (88, 33985),

Gene: FromIndy_45 Start: 30371, Stop: 30901, Start Num: 13
Candidate Starts for FromIndy_45:
(Start: 13 @30371 has 32 MA's), (25, 30461), (28, 30470), (37, 30509), (38, 30518), (44, 30566), (73, 30788), (82, 30836), (86, 30854),

Gene: Gandionco_91 Start: 51754, Stop: 52386, Start Num: 15
Candidate Starts for Gandionco_91:
(8, 51715), (Start: 15 @51754 has 90 MA's), (19, 51769), (52, 52006), (59, 52075), (65, 52102), (77, 52198), (104, 52342),

Gene: GantcherGoblin_46 Start: 32217, Stop: 32750, Start Num: 15
Candidate Starts for GantcherGoblin_46:
(Start: 15 @32217 has 90 MA's), (32, 32331), (36, 32358), (42, 32388), (45, 32412), (62, 32550), (66, 32574), (78, 32670), (92, 32712), (95, 32730),

Gene: GermyBearimy_56 Start: 34512, Stop: 35096, Start Num: 15
Candidate Starts for GermyBearimy_56:
(Start: 15 @34512 has 90 MA's), (40, 34677), (42, 34683), (55, 34809), (57, 34818), (76, 34920), (77, 34929), (104, 35052),

Gene: Giantsbane_46 Start: 32465, Stop: 33115, Start Num: 15

Candidate Starts for Giantsbane_46:
(6, 32420), (11, 32435), (Start: 15 @32465 has 90 MA's), (23, 32534), (28, 32558),

Gene: GirlPower_44 Start: 33290, Stop: 33820, Start Num: 13
Candidate Starts for GirlPower_44:
(Start: 13 @33290 has 32 MA's), (22, 33338), (25, 33377), (28, 33386), (31, 33401), (41, 33458), (42, 33461), (43, 33479), (57, 33602), (58, 33608), (65, 33644), (73, 33722), (86, 33788), (88, 33797), (91, 33809),

Gene: GoCrazy_47 Start: 31735, Stop: 32331, Start Num: 15
Candidate Starts for GoCrazy_47:
(Start: 15 @31735 has 90 MA's), (39, 31924), (43, 31951), (54, 32050), (64, 32104), (66, 32119), (100, 32323),

Gene: GoblinVoyage_36 Start: 26330, Stop: 26851, Start Num: 14
Candidate Starts for GoblinVoyage_36:
(Start: 14 @26330 has 11 MA's), (28, 26423), (64, 26666), (65, 26669), (66, 26681), (67, 26693), (73, 26750),

Gene: Gordon_42 Start: 33925, Stop: 34584, Start Num: 15
Candidate Starts for Gordon_42:
(Start: 15 @33925 has 90 MA's), (23, 33994), (28, 34018), (41, 34102), (44, 34126), (72, 34360), (103, 34513),

Gene: Hankly_47 Start: 31036, Stop: 31605, Start Num: 15
Candidate Starts for Hankly_47:
(Start: 15 @31036 has 90 MA's), (39, 31225), (43, 31252), (53, 31327), (54, 31351), (64, 31405),

Gene: HazuAndZazu_48 Start: 33090, Stop: 33614, Start Num: 13
Candidate Starts for HazuAndZazu_48:
(2, 33027), (4, 33045), (Start: 13 @33090 has 32 MA's), (25, 33177), (28, 33186), (31, 33201), (41, 33258), (43, 33279), (58, 33396), (65, 33432), (73, 33510), (76, 33528), (79, 33552), (86, 33576), (88, 33585),

Gene: Heisenberger_47 Start: 31299, Stop: 31895, Start Num: 15
Candidate Starts for Heisenberger_47:
(Start: 15 @31299 has 90 MA's), (39, 31488), (43, 31515), (53, 31590), (54, 31614), (64, 31668), (66, 31683), (100, 31887),

Gene: Hemma_42 Start: 30335, Stop: 30985, Start Num: 15
Candidate Starts for Hemma_42:
(7, 30293), (9, 30299), (Start: 15 @30335 has 90 MA's), (23, 30404), (27, 30425), (28, 30428), (88, 30830), (98, 30881), (102, 30908),

Gene: HerbBucket_43 Start: 30696, Stop: 31256, Start Num: 15
Candidate Starts for HerbBucket_43:
(Start: 15 @30696 has 90 MA's), (26, 30783), (29, 30795), (34, 30825), (38, 30849), (50, 30939), (70, 31098),

Gene: Hoshi_48 Start: 32436, Stop: 32963, Start Num: 13
Candidate Starts for Hoshi_48:
(2, 32373), (4, 32391), (Start: 13 @32436 has 32 MA's), (25, 32523), (28, 32532), (31, 32547), (41, 32604), (43, 32625), (58, 32742), (65, 32778), (73, 32856), (86, 32922), (88, 32931), (93, 32946),

Gene: HotFries_35 Start: 26374, Stop: 26895, Start Num: 14
Candidate Starts for HotFries_35:
(Start: 14 @26374 has 11 MA's), (28, 26467), (64, 26710), (65, 26713), (66, 26725), (67, 26737), (86, 26863),

Gene: IceWarrior_48 Start: 32518, Stop: 33045, Start Num: 13
Candidate Starts for IceWarrior_48:
(2, 32455), (Start: 13 @32518 has 32 MA's), (25, 32605), (28, 32614), (31, 32629), (41, 32686), (43, 32707), (58, 32824), (65, 32860), (73, 32938), (86, 33004), (88, 33013), (93, 33028),

Gene: Indigenous_49 Start: 32833, Stop: 33360, Start Num: 13
Candidate Starts for Indigenous_49:
(2, 32770), (4, 32788), (Start: 13 @32833 has 32 MA's), (25, 32920), (28, 32929), (31, 32944), (41, 33001), (43, 33022), (58, 33139), (65, 33175), (73, 33253), (86, 33319), (88, 33328), (93, 33343),

Gene: Ingrid_46 Start: 33203, Stop: 33853, Start Num: 15
Candidate Starts for Ingrid_46:
(7, 33164), (9, 33170), (Start: 15 @33203 has 90 MA's), (23, 33272), (28, 33296), (71, 33608), (88, 33698), (98, 33749), (102, 33776),

Gene: Inked_48 Start: 34345, Stop: 34989, Start Num: 15
Candidate Starts for Inked_48:
(Start: 15 @34345 has 90 MA's), (23, 34414),

Gene: Issa_44 Start: 33364, Stop: 34023, Start Num: 15
Candidate Starts for Issa_44:
(Start: 15 @33364 has 90 MA's), (23, 33433), (28, 33457), (44, 33565), (66, 33733), (72, 33799), (103, 33952), (106, 33985),

Gene: JEGGS_47 Start: 31353, Stop: 31949, Start Num: 15
Candidate Starts for JEGGS_47:
(Start: 15 @31353 has 90 MA's), (39, 31542), (43, 31569), (53, 31644), (54, 31668), (64, 31722), (66, 31737), (100, 31941),

Gene: Jaylociraptor_49 Start: 32832, Stop: 33359, Start Num: 13
Candidate Starts for Jaylociraptor_49:
(2, 32769), (4, 32787), (Start: 13 @32832 has 32 MA's), (25, 32919), (28, 32928), (31, 32943), (41, 33000), (43, 33021), (58, 33138), (65, 33174), (73, 33252), (86, 33318), (88, 33327), (93, 33342),

Gene: Jazzy4900_49 Start: 33968, Stop: 34558, Start Num: 15
Candidate Starts for Jazzy4900_49:
(Start: 15 @33968 has 90 MA's), (16, 33971), (35, 34091), (40, 34133), (42, 34139), (55, 34265), (57, 34274), (76, 34376), (77, 34385), (87, 34427), (104, 34514),

Gene: JeNeSaisPas_89 Start: 52328, Stop: 52960, Start Num: 15
Candidate Starts for JeNeSaisPas_89:
(8, 52289), (Start: 15 @52328 has 90 MA's), (19, 52343), (52, 52580), (59, 52649), (65, 52676), (77, 52772), (104, 52916),

Gene: Jeremy4pt0_43 Start: 30694, Stop: 31254, Start Num: 15
Candidate Starts for Jeremy4pt0_43:

(Start: 15 @30694 has 90 MA's), (26, 30781), (29, 30793), (34, 30823), (38, 30847), (50, 30937), (70, 31096),

Gene: JoyLin_44 Start: 33794, Stop: 34435, Start Num: 15
Candidate Starts for JoyLin_44:
(Start: 15 @33794 has 90 MA's), (20, 33824), (24, 33872), (42, 33968), (55, 34088), (62, 34136), (75, 34223),

Gene: Kardashian_47 Start: 32934, Stop: 33467, Start Num: 13
Candidate Starts for Kardashian_47:
(Start: 13 @32934 has 32 MA's), (21, 32979), (28, 33033), (38, 33093), (43, 33138), (65, 33291), (73, 33360), (79, 33402), (82, 33411), (85, 33426), (88, 33438),

Gene: Kardesai_49 Start: 32007, Stop: 32576, Start Num: 15
Candidate Starts for Kardesai_49:
(Start: 15 @32007 has 90 MA's), (39, 32196), (43, 32223), (53, 32298), (54, 32322), (64, 32376),

Gene: KeaneyLin_47 Start: 31735, Stop: 32331, Start Num: 15
Candidate Starts for KeaneyLin_47:
(Start: 15 @31735 has 90 MA's), (39, 31924), (43, 31951), (54, 32050), (64, 32104), (66, 32119), (100, 32323),

Gene: KevinMinion_47 Start: 32975, Stop: 33508, Start Num: 15
Candidate Starts for KevinMinion_47:
(Start: 15 @32975 has 90 MA's), (32, 33089), (36, 33116), (42, 33146), (45, 33170), (62, 33308), (66, 33332), (78, 33428), (92, 33470), (95, 33488),

Gene: Kinny_50 Start: 34199, Stop: 34732, Start Num: 15
Candidate Starts for Kinny_50:
(Start: 15 @34199 has 90 MA's), (32, 34313), (36, 34340), (42, 34370), (62, 34532), (66, 34556), (92, 34694), (95, 34712),

Gene: Kureo_93 Start: 51908, Stop: 52540, Start Num: 15
Candidate Starts for Kureo_93:
(8, 51869), (Start: 15 @51908 has 90 MA's), (19, 51923), (52, 52160), (59, 52229), (65, 52256), (77, 52352), (104, 52496),

Gene: Leathea_47 Start: 31879, Stop: 32409, Start Num: 15
Candidate Starts for Leathea_47:
(Start: 15 @31879 has 90 MA's), (26, 31966), (32, 31993), (36, 32020), (42, 32050), (62, 32212), (66, 32236), (92, 32371), (95, 32389),

Gene: Lewando_49 Start: 33491, Stop: 34024, Start Num: 15
Candidate Starts for Lewando_49:
(Start: 15 @33491 has 90 MA's), (32, 33605), (36, 33632), (42, 33662), (62, 33824), (66, 33848), (92, 33986), (95, 34004),

Gene: LibertyBell_44 Start: 30077, Stop: 30595, Start Num: 13
Candidate Starts for LibertyBell_44:
(Start: 13 @30077 has 32 MA's), (25, 30164), (28, 30173), (30, 30182), (43, 30266), (51, 30308), (60, 30392), (73, 30485), (79, 30527), (82, 30536), (85, 30551),

Gene: LilHuddy_46 Start: 33411, Stop: 34067, Start Num: 15

Candidate Starts for LilHuddy_46:
(Start: 15 @33411 has 90 MA's), (23, 33480), (28, 33504),

Gene: Linda_43 Start: 30992, Stop: 31552, Start Num: 15
Candidate Starts for Linda_43:
(Start: 15 @30992 has 90 MA's), (26, 31079), (29, 31091), (34, 31121), (38, 31145), (50, 31235), (70, 31394),

Gene: Loretta_46 Start: 33203, Stop: 33853, Start Num: 15
Candidate Starts for Loretta_46:
(7, 33164), (9, 33170), (Start: 15 @33203 has 90 MA's), (23, 33272), (28, 33296), (71, 33608), (88, 33698), (98, 33749), (102, 33776),

Gene: LucySwiss_45 Start: 33166, Stop: 33825, Start Num: 15
Candidate Starts for LucySwiss_45:
(Start: 15 @33166 has 90 MA's), (23, 33235), (28, 33259), (66, 33535), (72, 33601), (103, 33754), (106, 33787),

Gene: Madamato_50 Start: 32898, Stop: 33428, Start Num: 13
Candidate Starts for Madamato_50:
(3, 32847), (8, 32865), (Start: 13 @32898 has 32 MA's), (22, 32946), (25, 32985), (28, 32994), (31, 33009), (38, 33042), (41, 33066), (42, 33069), (43, 33087), (65, 33240), (73, 33318), (86, 33384), (88, 33393), (93, 33408),

Gene: Makai_44 Start: 33397, Stop: 34047, Start Num: 15
Candidate Starts for Makai_44:
(Start: 15 @33397 has 90 MA's), (23, 33466), (28, 33490), (44, 33598),

Gene: Mardi_47 Start: 32309, Stop: 32842, Start Num: 15
Candidate Starts for Mardi_47:
(Start: 15 @32309 has 90 MA's), (32, 32423), (36, 32450), (42, 32480), (45, 32504), (62, 32642), (66, 32666), (78, 32762), (92, 32804), (95, 32822),

Gene: Marianna39_92 Start: 52323, Stop: 52955, Start Num: 15
Candidate Starts for Marianna39_92:
(8, 52284), (Start: 15 @52323 has 90 MA's), (19, 52338), (52, 52575), (59, 52644), (65, 52671), (77, 52767), (104, 52911),

Gene: Maya_49 Start: 32846, Stop: 33373, Start Num: 13
Candidate Starts for Maya_49:
(2, 32783), (4, 32801), (Start: 13 @32846 has 32 MA's), (25, 32933), (28, 32942), (31, 32957), (41, 33014), (43, 33035), (58, 33152), (65, 33188), (73, 33266), (86, 33332), (88, 33341), (93, 33356),

Gene: Meibysrarus_47 Start: 32209, Stop: 32736, Start Num: 13
Candidate Starts for Meibysrarus_47:
(2, 32146), (4, 32164), (Start: 13 @32209 has 32 MA's), (25, 32296), (28, 32305), (31, 32320), (41, 32377), (43, 32398), (58, 32515), (65, 32551), (73, 32629), (86, 32695), (88, 32704), (93, 32719),

Gene: Michelle_43 Start: 30994, Stop: 31554, Start Num: 15
Candidate Starts for Michelle_43:
(Start: 15 @30994 has 90 MA's), (26, 31081), (29, 31093), (34, 31123), (38, 31147), (50, 31237), (70, 31396),

Gene: Miek_44 Start: 30383, Stop: 30913, Start Num: 13
Candidate Starts for Miek_44:
(Start: 13 @30383 has 32 MA's), (25, 30473), (28, 30482), (37, 30521), (38, 30530), (44, 30578), (73, 30800), (82, 30848), (86, 30866),

Gene: MiniBagel_44 Start: 34052, Stop: 34711, Start Num: 15
Candidate Starts for MiniBagel_44:
(Start: 15 @34052 has 90 MA's), (23, 34121), (28, 34145), (66, 34421), (106, 34673),

Gene: Monse_35 Start: 26238, Stop: 26759, Start Num: 14
Candidate Starts for Monse_35:
(Start: 14 @26238 has 11 MA's), (28, 26331), (34, 26355), (66, 26589),

Gene: Mooshroom_50 Start: 32007, Stop: 32576, Start Num: 15
Candidate Starts for Mooshroom_50:
(Start: 15 @32007 has 90 MA's), (39, 32196), (43, 32223), (53, 32298), (54, 32322), (64, 32376),

Gene: Moozy_35 Start: 26330, Stop: 26851, Start Num: 14
Candidate Starts for Moozy_35:
(Start: 14 @26330 has 11 MA's), (28, 26423), (64, 26666), (65, 26669), (66, 26681), (67, 26693), (86, 26819),

Gene: MrAaronian_43 Start: 30994, Stop: 31554, Start Num: 15
Candidate Starts for MrAaronian_43:
(Start: 15 @30994 has 90 MA's), (26, 31081), (29, 31093), (34, 31123), (38, 31147), (50, 31237), (70, 31396),

Gene: Mudcat_45 Start: 32712, Stop: 33308, Start Num: 15
Candidate Starts for Mudcat_45:
(Start: 15 @32712 has 90 MA's), (39, 32901), (43, 32928), (53, 33003), (54, 33027), (64, 33081), (66, 33096), (100, 33300),

Gene: Muglass_49 Start: 33261, Stop: 33794, Start Num: 15
Candidate Starts for Muglass_49:
(Start: 15 @33261 has 90 MA's), (32, 33375), (36, 33402), (42, 33432), (62, 33594), (66, 33618), (92, 33756),

Gene: Namo_50 Start: 33177, Stop: 33704, Start Num: 13
Candidate Starts for Namo_50:
(2, 33114), (4, 33132), (Start: 13 @33177 has 32 MA's), (25, 33264), (28, 33273), (31, 33288), (41, 33345), (43, 33366), (58, 33483), (65, 33519), (73, 33597), (86, 33663), (88, 33672), (93, 33687),

Gene: NapoleonB_48 Start: 31823, Stop: 32392, Start Num: 15
Candidate Starts for NapoleonB_48:
(Start: 15 @31823 has 90 MA's), (39, 32012), (43, 32039), (53, 32114), (54, 32138), (64, 32192),

Gene: Nason_48 Start: 31859, Stop: 32455, Start Num: 15
Candidate Starts for Nason_48:
(Start: 15 @31859 has 90 MA's), (39, 32048), (43, 32075), (54, 32174), (64, 32228), (66, 32243), (100, 32447),

Gene: Natasha_44 Start: 30712, Stop: 31287, Start Num: 15
Candidate Starts for Natasha_44:

(Start: 15 @30712 has 90 MA's), (26, 30799), (28, 30805), (34, 30841), (35, 30844), (43, 30910), (65, 31069), (81, 31147),

Gene: Navi1117_49 Start: 32920, Stop: 33453, Start Num: 15
Candidate Starts for Navi1117_49:
(Start: 15 @32920 has 90 MA's), (23, 32989), (32, 33034), (36, 33061), (42, 33091), (45, 33115), (62, 33253), (66, 33277), (78, 33373), (92, 33415), (95, 33433),

Gene: Nightmare_46 Start: 34312, Stop: 34971, Start Num: 15
Candidate Starts for Nightmare_46:
(Start: 15 @34312 has 90 MA's), (23, 34381), (28, 34405), (66, 34681), (69, 34699), (72, 34747), (106, 34933),

Gene: Niktson_44 Start: 33745, Stop: 34404, Start Num: 15
Candidate Starts for Niktson_44:
(Start: 15 @33745 has 90 MA's), (23, 33814), (28, 33838), (72, 34180), (106, 34366),

Gene: Nivinsha_45 Start: 33292, Stop: 33951, Start Num: 15
Candidate Starts for Nivinsha_45:
(8, 33253), (12, 33268), (Start: 15 @33292 has 90 MA's), (23, 33361), (28, 33385), (41, 33469), (44, 33493), (98, 33847),

Gene: OlympicHelado_49 Start: 32860, Stop: 33387, Start Num: 13
Candidate Starts for OlympicHelado_49:
(2, 32797), (4, 32815), (Start: 13 @32860 has 32 MA's), (25, 32947), (28, 32956), (31, 32971), (41, 33028), (43, 33049), (58, 33166), (65, 33202), (73, 33280), (86, 33346), (88, 33355), (93, 33370),

Gene: Onestar_43 Start: 30682, Stop: 31287, Start Num: 15
Candidate Starts for Onestar_43:
(7, 30643), (9, 30649), (Start: 15 @30682 has 90 MA's), (27, 30772), (28, 30775), (29, 30781), (33, 30802), (34, 30811), (38, 30835), (50, 30925), (70, 31084),

Gene: Phaby_46 Start: 33645, Stop: 34295, Start Num: 15
Candidate Starts for Phaby_46:
(Start: 15 @33645 has 90 MA's), (23, 33714), (28, 33738),

Gene: Phaila_49 Start: 32107, Stop: 32637, Start Num: 15
Candidate Starts for Phaila_49:
(Start: 15 @32107 has 90 MA's), (23, 32176), (32, 32221), (36, 32248), (42, 32278), (45, 32302), (62, 32440), (66, 32464), (78, 32560), (92, 32602),

Gene: PherryCruz_35 Start: 26326, Stop: 26847, Start Num: 14
Candidate Starts for PherryCruz_35:
(Start: 14 @26326 has 11 MA's), (28, 26419), (64, 26662), (65, 26665), (66, 26677), (67, 26689), (73, 26746),

Gene: Pippin15_44 Start: 30581, Stop: 31216, Start Num: 15
Candidate Starts for Pippin15_44:
(Start: 15 @30581 has 90 MA's), (24, 30659), (42, 30755), (55, 30875), (61, 30917), (62, 30923), (75, 31010), (87, 31058),

Gene: PoeMe_47 Start: 32476, Stop: 33009, Start Num: 15
Candidate Starts for PoeMe_47:

(Start: 15 @32476 has 90 MA's), (23, 32545), (32, 32590), (36, 32617), (42, 32647), (45, 32671), (62, 32809), (66, 32833), (78, 32929), (92, 32971), (95, 32989),

Gene: Popy_49 Start: 33490, Stop: 34014, Start Num: 13
Candidate Starts for Popy_49:
(Start: 13 @33490 has 32 MA's), (25, 33577), (28, 33586), (31, 33601), (41, 33658), (43, 33679), (58, 33796), (65, 33832), (73, 33910), (76, 33928), (79, 33952), (86, 33976), (88, 33985),

Gene: Powelldog_47 Start: 31692, Stop: 32306, Start Num: 15
Candidate Starts for Powelldog_47:
(Start: 15 @31692 has 90 MA's), (26, 31779), (28, 31785), (29, 31791), (34, 31821), (44, 31893), (65, 32049), (66, 32061), (67, 32073), (96, 32217), (101, 32241), (107, 32289),

Gene: ProfFrink_43 Start: 30995, Stop: 31555, Start Num: 15
Candidate Starts for ProfFrink_43:
(Start: 15 @30995 has 90 MA's), (26, 31082), (29, 31094), (34, 31124), (38, 31148), (50, 31238), (70, 31397),

Gene: Rainydai_44 Start: 30767, Stop: 31297, Start Num: 13
Candidate Starts for Rainydai_44:
(Start: 13 @30767 has 32 MA's), (25, 30857), (28, 30866), (37, 30905), (38, 30914), (44, 30962), (73, 31184), (82, 31232), (86, 31250),

Gene: Raunak_46 Start: 30692, Stop: 31252, Start Num: 15
Candidate Starts for Raunak_46:
(Start: 15 @30692 has 90 MA's), (26, 30779), (29, 30791), (34, 30821), (38, 30845), (50, 30935), (70, 31094),

Gene: RavenPuff_35 Start: 26326, Stop: 26847, Start Num: 14
Candidate Starts for RavenPuff_35:
(Start: 14 @26326 has 11 MA's), (28, 26419), (64, 26662), (65, 26665), (66, 26677), (67, 26689), (73, 26746),

Gene: Regigigas_46 Start: 30768, Stop: 31298, Start Num: 13
Candidate Starts for Regigigas_46:
(Start: 13 @30768 has 32 MA's), (25, 30858), (28, 30867), (37, 30906), (38, 30915), (44, 30963), (73, 31185), (82, 31233), (86, 31251),

Gene: Renaldo_52 Start: 33800, Stop: 34333, Start Num: 15
Candidate Starts for Renaldo_52:
(Start: 15 @33800 has 90 MA's), (32, 33914), (36, 33941), (42, 33971), (62, 34133), (66, 34157), (92, 34295),

Gene: Rima_50 Start: 33177, Stop: 33704, Start Num: 13
Candidate Starts for Rima_50:
(2, 33114), (4, 33132), (Start: 13 @33177 has 32 MA's), (25, 33264), (28, 33273), (31, 33288), (41, 33345), (43, 33366), (58, 33483), (65, 33519), (73, 33597), (86, 33663), (88, 33672), (93, 33687),

Gene: RosaAsantewaa_32 Start: 25470, Stop: 25979, Start Num: 14
Candidate Starts for RosaAsantewaa_32:
(1, 25332), (Start: 14 @25470 has 11 MA's), (29, 25569), (45, 25662), (55, 25758), (64, 25806), (73, 25884), (77, 25911), (88, 25959),

Gene: RustyBoy_44 Start: 30693, Stop: 31268, Start Num: 15
Candidate Starts for RustyBoy_44:
(Start: 15 @30693 has 90 MA's), (26, 30780), (28, 30786), (34, 30822), (35, 30825), (43, 30891), (48, 30921), (65, 31050), (81, 31128),

Gene: Salk_43 Start: 30992, Stop: 31552, Start Num: 15
Candidate Starts for Salk_43:
(Start: 15 @30992 has 90 MA's), (26, 31079), (29, 31091), (34, 31121), (38, 31145), (50, 31235), (70, 31394),

Gene: Sangak_34 Start: 25884, Stop: 26405, Start Num: 14
Candidate Starts for Sangak_34:
(Start: 14 @25884 has 11 MA's), (28, 25977), (64, 26220), (65, 26223), (66, 26235), (67, 26247), (73, 26304),

Gene: Scap1_35 Start: 26203, Stop: 26724, Start Num: 14
Candidate Starts for Scap1_35:
(Start: 14 @26203 has 11 MA's), (21, 26242), (28, 26296), (65, 26542), (66, 26554),

Gene: ScienceWizSam_45 Start: 33402, Stop: 34061, Start Num: 15
Candidate Starts for ScienceWizSam_45:
(Start: 15 @33402 has 90 MA's), (23, 33471), (28, 33495), (41, 33579), (98, 33957), (99, 33969),

Gene: SendItCS_43 Start: 30371, Stop: 30901, Start Num: 13
Candidate Starts for SendItCS_43:
(Start: 13 @30371 has 32 MA's), (25, 30461), (28, 30470), (37, 30509), (38, 30518), (44, 30566), (73, 30788), (82, 30836), (86, 30854),

Gene: Serenabean_42 Start: 30574, Stop: 31215, Start Num: 15
Candidate Starts for Serenabean_42:
(Start: 15 @30574 has 90 MA's), (26, 30658), (55, 30865), (62, 30913), (68, 30952), (75, 31006),

Gene: SheRa_36 Start: 26372, Stop: 26893, Start Num: 14
Candidate Starts for SheRa_36:
(Start: 14 @26372 has 11 MA's), (28, 26465), (64, 26708), (65, 26711), (66, 26723), (67, 26735), (86, 26861),

Gene: Shepard_48 Start: 33483, Stop: 34139, Start Num: 15
Candidate Starts for Shepard_48:
(Start: 15 @33483 has 90 MA's), (23, 33552), (28, 33576), (46, 33702),

Gene: Shiba_42 Start: 30692, Stop: 31252, Start Num: 15
Candidate Starts for Shiba_42:
(Start: 15 @30692 has 90 MA's), (26, 30779), (29, 30791), (34, 30821), (38, 30845), (50, 30935), (70, 31094),

Gene: Sloopyjoe_43 Start: 30996, Stop: 31556, Start Num: 15
Candidate Starts for Sloopyjoe_43:
(Start: 15 @30996 has 90 MA's), (26, 31083), (29, 31095), (34, 31125), (38, 31149), (50, 31239), (70, 31398),

Gene: Soshi_48 Start: 33109, Stop: 33633, Start Num: 13
Candidate Starts for Soshi_48:

(2, 33046), (4, 33064), (Start: 13 @33109 has 32 MA's), (25, 33196), (28, 33205), (31, 33220), (41, 33277), (43, 33298), (58, 33415), (65, 33451), (73, 33529), (76, 33547), (79, 33571), (86, 33595), (88, 33604),

Gene: Spain_46 Start: 30994, Stop: 31554, Start Num: 15
Candidate Starts for Spain_46:
(Start: 15 @30994 has 90 MA's), (26, 31081), (29, 31093), (34, 31123), (38, 31147), (50, 31237), (70, 31396),

Gene: Spectropatronm_49 Start: 32839, Stop: 33366, Start Num: 13
Candidate Starts for Spectropatronm_49:
(2, 32776), (4, 32794), (Start: 13 @32839 has 32 MA's), (25, 32926), (28, 32935), (31, 32950), (41, 33007), (43, 33028), (58, 33145), (65, 33181), (73, 33259), (86, 33325), (88, 33334), (93, 33349),

Gene: Sporto_44 Start: 32458, Stop: 33057, Start Num: 15
Candidate Starts for Sporto_44:
(5, 32404), (Start: 15 @32458 has 90 MA's), (25, 32542), (27, 32548), (28, 32551), (29, 32557), (38, 32611), (44, 32659), (50, 32701), (65, 32824), (66, 32836), (67, 32848),

Gene: Sprinkle_41 Start: 30831, Stop: 31406, Start Num: 15
Candidate Starts for Sprinkle_41:
(Start: 15 @30831 has 90 MA's), (26, 30918), (28, 30924), (34, 30960), (35, 30963), (43, 31029), (46, 31050), (56, 31143), (65, 31188), (70, 31224), (81, 31266), (100, 31341),

Gene: StarLord_43 Start: 30995, Stop: 31555, Start Num: 15
Candidate Starts for StarLord_43:
(Start: 15 @30995 has 90 MA's), (26, 31082), (29, 31094), (34, 31124), (38, 31148), (50, 31238), (70, 31397),

Gene: Stardrop_51 Start: 32669, Stop: 33202, Start Num: 15
Candidate Starts for Stardrop_51:
(Start: 15 @32669 has 90 MA's), (32, 32783), (36, 32810), (42, 32840), (45, 32864), (62, 33002), (66, 33026), (78, 33122), (92, 33164), (95, 33182),

Gene: Stayer_43 Start: 30992, Stop: 31552, Start Num: 15
Candidate Starts for Stayer_43:
(Start: 15 @30992 has 90 MA's), (26, 31079), (29, 31091), (34, 31121), (38, 31145), (50, 31235), (70, 31394),

Gene: Sunny4976_48 Start: 33968, Stop: 34558, Start Num: 15
Candidate Starts for Sunny4976_48:
(Start: 15 @33968 has 90 MA's), (16, 33971), (35, 34091), (40, 34133), (42, 34139), (55, 34265), (57, 34274), (76, 34376), (77, 34385), (87, 34427), (104, 34514),

Gene: Sweetclover_41 Start: 29341, Stop: 30015, Start Num: 15
Candidate Starts for Sweetclover_41:
(Start: 15 @29341 has 90 MA's), (26, 29425), (42, 29512), (55, 29632), (57, 29641), (62, 29680), (68, 29719), (83, 29824), (84, 29830), (97, 29887),

Gene: Synepsis_43 Start: 33411, Stop: 34073, Start Num: 15
Candidate Starts for Synepsis_43:
(Start: 15 @33411 has 90 MA's), (23, 33480), (28, 33504), (44, 33612), (66, 33780), (72, 33846), (106, 34035),

Gene: TaidaOne_49 Start: 33344, Stop: 33871, Start Num: 13
Candidate Starts for TaidaOne_49:
(2, 33281), (Start: 13 @33344 has 32 MA's), (25, 33431), (28, 33440), (31, 33455), (41, 33512), (43, 33533), (58, 33650), (65, 33686), (73, 33764), (86, 33830), (88, 33839), (93, 33854),

Gene: Tatanka_43 Start: 33581, Stop: 34243, Start Num: 15
Candidate Starts for Tatanka_43:
(Start: 15 @33581 has 90 MA's), (23, 33650), (28, 33674), (72, 34016), (106, 34205),

Gene: Teacup_45 Start: 33771, Stop: 34433, Start Num: 15
Candidate Starts for Teacup_45:
(Start: 15 @33771 has 90 MA's), (23, 33840), (28, 33864), (66, 34140), (72, 34206), (106, 34395),

Gene: Tenney120_48 Start: 32517, Stop: 33050, Start Num: 15
Candidate Starts for Tenney120_48:
(Start: 15 @32517 has 90 MA's), (32, 32631), (36, 32658), (42, 32688), (45, 32712), (62, 32850), (66, 32874), (78, 32970), (92, 33012), (95, 33030),

Gene: Tenno_45 Start: 34060, Stop: 34719, Start Num: 15
Candidate Starts for Tenno_45:
(Start: 15 @34060 has 90 MA's), (23, 34129), (28, 34153), (66, 34429), (106, 34681),

Gene: Thiqqums_45 Start: 30767, Stop: 31297, Start Num: 13
Candidate Starts for Thiqqums_45:
(Start: 13 @30767 has 32 MA's), (25, 30857), (28, 30866), (37, 30905), (38, 30914), (44, 30962), (73, 31184), (82, 31232), (86, 31250),

Gene: TieDye_48 Start: 32432, Stop: 32959, Start Num: 13
Candidate Starts for TieDye_48:
(2, 32369), (4, 32387), (Start: 13 @32432 has 32 MA's), (25, 32519), (28, 32528), (31, 32543), (41, 32600), (43, 32621), (58, 32738), (65, 32774), (73, 32852), (86, 32918), (88, 32927), (93, 32942),

Gene: Tipton_46 Start: 33617, Stop: 34267, Start Num: 15
Candidate Starts for Tipton_46:
(Start: 15 @33617 has 90 MA's), (23, 33686), (28, 33710),

Gene: Tokki_48 Start: 33269, Stop: 33919, Start Num: 15
Candidate Starts for Tokki_48:
(6, 33224), (11, 33239), (Start: 15 @33269 has 90 MA's), (23, 33338), (28, 33362),

Gene: TonyStarch_48 Start: 32553, Stop: 33080, Start Num: 13
Candidate Starts for TonyStarch_48:
(2, 32490), (4, 32508), (Start: 13 @32553 has 32 MA's), (25, 32640), (28, 32649), (31, 32664), (41, 32721), (43, 32742), (58, 32859), (65, 32895), (73, 32973), (86, 33039), (88, 33048), (93, 33063),

Gene: Tribby_48 Start: 31560, Stop: 32129, Start Num: 15
Candidate Starts for Tribby_48:
(Start: 15 @31560 has 90 MA's), (39, 31749), (43, 31776), (53, 31851), (54, 31875), (64, 31929), (66, 31944),

Gene: TrixiePhattel_48 Start: 32174, Stop: 32704, Start Num: 15
Candidate Starts for TrixiePhattel_48:

(Start: 15 @32174 has 90 MA's), (26, 32261), (32, 32288), (36, 32315), (42, 32345), (62, 32507), (66, 32531), (74, 32600),

Gene: Truckee_42 Start: 33185, Stop: 33835, Start Num: 15
Candidate Starts for Truckee_42:
(Start: 15 @33185 has 90 MA's), (23, 33254), (28, 33278), (44, 33386),

Gene: Trustiboi_44 Start: 33620, Stop: 34279, Start Num: 15
Candidate Starts for Trustiboi_44:
(Start: 15 @33620 has 90 MA's), (23, 33689), (28, 33713), (41, 33797), (44, 33821), (98, 34175), (99, 34187), (103, 34208),

Gene: Uzumaki_45 Start: 32211, Stop: 32744, Start Num: 15
Candidate Starts for Uzumaki_45:
(Start: 15 @32211 has 90 MA's), (32, 32325), (36, 32352), (42, 32382), (45, 32406), (62, 32544), (66, 32568), (78, 32664), (92, 32706), (95, 32724),

Gene: Westerlin_44 Start: 34882, Stop: 35541, Start Num: 15
Candidate Starts for Westerlin_44:
(Start: 15 @34882 has 90 MA's), (23, 34951), (28, 34975), (44, 35083), (66, 35251), (72, 35317), (103, 35470), (106, 35503),

Gene: Wigberry_50 Start: 32190, Stop: 32729, Start Num: 13
Candidate Starts for Wigberry_50:
(7, 32154), (Start: 13 @32190 has 32 MA's), (17, 32202), (42, 32364), (43, 32382), (51, 32424), (63, 32526), (65, 32535), (73, 32616), (82, 32667), (85, 32682), (94, 32718),

Gene: Xenomorph_44 Start: 31272, Stop: 31862, Start Num: 15
Candidate Starts for Xenomorph_44:
(Start: 15 @31272 has 90 MA's), (39, 31461), (43, 31488), (53, 31563), (54, 31587), (64, 31641), (66, 31656), (78, 31755),

Gene: YoshiYama_48 Start: 31854, Stop: 32450, Start Num: 15
Candidate Starts for YoshiYama_48:
(Start: 15 @31854 has 90 MA's), (39, 32043), (43, 32070), (54, 32169), (64, 32223), (66, 32238), (100, 32442),

Gene: Yotsuba_44 Start: 33812, Stop: 34453, Start Num: 15
Candidate Starts for Yotsuba_44:
(Start: 15 @33812 has 90 MA's), (20, 33842), (24, 33890), (42, 33986), (55, 34106), (61, 34148), (62, 34154), (75, 34241),

Gene: Zeina_48 Start: 32530, Stop: 33063, Start Num: 15
Candidate Starts for Zeina_48:
(Start: 15 @32530 has 90 MA's), (32, 32644), (36, 32671), (42, 32701), (45, 32725), (62, 32863), (66, 32887), (78, 32983), (92, 33025), (95, 33043),

Gene: Zippen_46 Start: 34044, Stop: 34688, Start Num: 15
Candidate Starts for Zippen_46:
(Start: 15 @34044 has 90 MA's), (23, 34113),