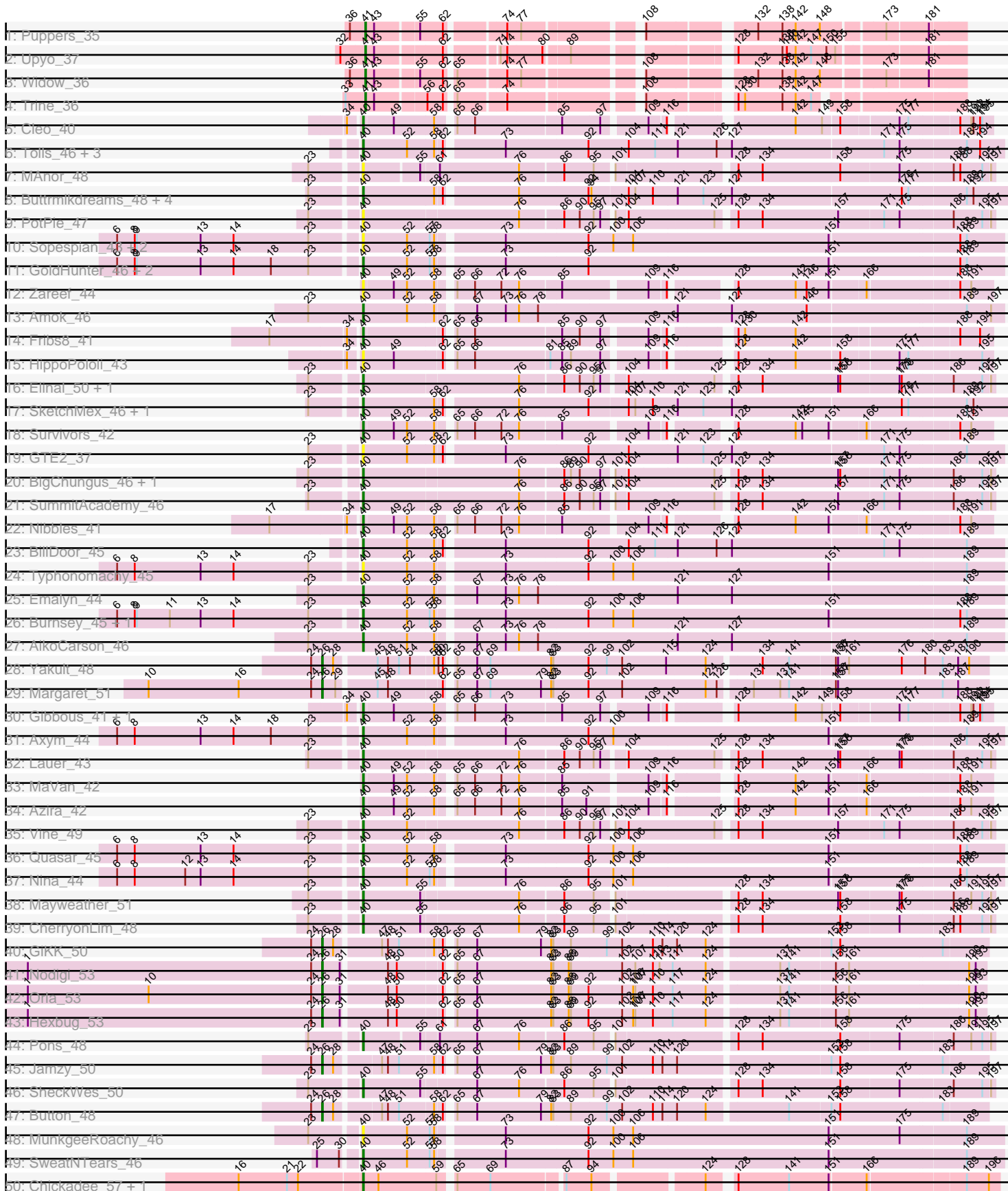


Pham 163509



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 163509 Report

This analysis was run 04/28/24 on database version 559.

Pham number 163509 has 92 members, 18 are drafts.

Phages represented in each track:

- Track 1 : Puppies_35
- Track 2 : Upyo_37
- Track 3 : Widow_36
- Track 4 : Trine_36
- Track 5 : Cleo_40
- Track 6 : Tolls_46, Yarn_42, SteamedHams_45, AndPeggy_42
- Track 7 : MAnor_48
- Track 8 : Buttrmilkdreams_48, Yummy_48, Troje_48, Horseradish_48, MScarn_50
- Track 9 : PotPie_47
- Track 10 : Sopespian_43, Elliott_45, PsychoKiller_44
- Track 11 : GoldHunter_46, Agatha_45, Cozz_43
- Track 12 : Zareef_44
- Track 13 : Amok_46
- Track 14 : Fribs8_41
- Track 15 : HippoPololi_43
- Track 16 : Elinal_50, KayGee_47
- Track 17 : SketchMex_46, Biskit_48
- Track 18 : Survivors_42
- Track 19 : GTE2_37
- Track 20 : BigChungus_46, Feastonyeet_46
- Track 21 : SummitAcademy_46
- Track 22 : Nibbles_41
- Track 23 : BillDoor_45
- Track 24 : Typhonomachy_45
- Track 25 : Emalyn_44
- Track 26 : Burnsey_45, RedBaron_47
- Track 27 : AikoCarson_46
- Track 28 : Yakult_48
- Track 29 : Margaret_51
- Track 30 : Gibbous_41, Dre3_41
- Track 31 : Axym_44
- Track 32 : Lauer_43
- Track 33 : MaVan_42
- Track 34 : Azira_42
- Track 35 : Vine_49
- Track 36 : Quasar_45
- Track 37 : Nina_44

- Track 38 : Mayweather_51
- Track 39 : CherryonLim_48
- Track 40 : GiKK_50
- Track 41 : Nodigi_53
- Track 42 : Orla_53
- Track 43 : Hexbug_53
- Track 44 : Pons_48
- Track 45 : Jamzy_50
- Track 46 : SheckWes_50
- Track 47 : Button_48
- Track 48 : MunkgeeRoachy_46
- Track 49 : SweatNTears_46
- Track 50 : Chickadee_57, Kwekel_57
- Track 51 : RoadKill_54
- Track 52 : Dxdert_58
- Track 53 : Twonlo_54
- Track 54 : Tiamoceli_57
- Track 55 : GTE6_58
- Track 56 : Djokovic_95, Madi_94, BiteSize_95, Terapin_96, Beyoncage_95
- Track 57 : LilyPad_89
- Track 58 : Sienna_96
- Track 59 : Suzy_95
- Track 60 : LittleFella_91
- Track 61 : Skog_9
- Track 62 : CherryTomatoes_185, Pupper_177, SCentae_176
- Track 63 : Mareelih_179, Forza_182, BlueNGold_178, Boopy_181
- Track 64 : GMA2_76
- Track 65 : Sixama_183
- Track 66 : TPA2_54

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

The start number called the most often in the published annotations is 40, it was called in 50 of the 74 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• Agatha_45, AikoCarson_46, Amok_46, AndPeggy_42, Axym_44, Azira_42, BigChungus_46, BillDoor_45, Biskit_48, BlueNGold_178, Boopy_181, Burnsey_45, Buttrmilkdreams_48, CherryonLim_48, Chickadee_57, Cleo_40, Cozz_43, Dxdert_58, Dre3_41, Elinal_50, Elliott_45, Emalyn_44, Feastonyeet_46, Forza_182, Fribs8_41, GTE2_37, GTE6_58, Gibbous_41, GoldHunter_46, HippoPololi_43, Horseradish_48, KayGee_47, Kwekel_57, Lauer_43, MAnor_48, MScarn_50, MaVan_42, Mareelih_179, Mayweather_51, MunkgeeRoachy_46, Nibbles_41, Nina_44, Pons_48, PotPie_47, PsychoKiller_44, Quasar_45, RedBaron_47, RoadKill_54, SheckWes_50, Sienna_96, SketchMex_46, Sopespian_43, SteamedHams_45, SummitAcademy_46, Survivors_42, SweatNTears_46, Tiamoceli_57, Tolls_46, Troje_48, Twonlo_54, Typhonmarchy_45, Vine_49, Yarn_42, Yummy_48, Zareef_44,

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

- Sixama_183,

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

- Beyoncage_95, BiteSize_95, Button_48, CherryTomatoes_185, Djokovic_95, GMA2_76, GiKK_50, Hexbug_53, Jamzy_50, LilyPad_89, LittleFella_91, Madi_94, Margaret_51, Nodigi_53, Orla_53, Pupper_177, Puppies_35, SCentae_176, Skog_9, Suzy_95, TPA2_54, Terapin_96, Trine_36, Upyo_37, Widow_36, Yakult_48,

Summary by start number:

Start 19:

- Found in 1 of 92 (1.1%) of genes in pham
- Manual Annotations of this start: 1 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Sixama_183 (DS),

Start 26:

- Found in 8 of 92 (8.7%) of genes in pham
- Manual Annotations of this start: 8 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Button_48 (CT), GiKK_50 (CT), Hexbug_53 (CT), Jamzy_50 (CT), Margaret_51 (CT), Nodigi_53 (CT), Orla_53 (CT), Yakult_48 (CT),

Start 37:

- Found in 1 of 92 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: TPA2_54 (singleton),

Start 38:

- Found in 1 of 92 (1.1%) of genes in pham
- No Manual Annotations of this start.
- Called 100.0% of time when present
- Phage (with cluster) where this start called: GMA2_76 (DS),

Start 40:

- Found in 66 of 92 (71.7%) of genes in pham
- Manual Annotations of this start: 50 of 74
- Called 98.5% of time when present
- Phage (with cluster) where this start called: Agatha_45 (CT), AikoCarson_46 (CT), Amok_46 (CT), AndPeggy_42 (CT), Axym_44 (CT), Azira_42 (CT), BigChungus_46 (CT), BillDoor_45 (CT), Biskit_48 (CT), BlueNGold_178 (DS), Boopy_181 (DS), Burnsey_45 (CT), Buttrmlkdreams_48 (CT), CherryonLim_48 (CT), Chickadee_57 (DE3), Cleo_40 (CT), Cozz_43 (CT), Dextert_58 (DE3), Dre3_41 (CT), Elinal_50 (CT), Elliott_45 (CT), Emalyn_44 (CT), Feastonyeet_46 (CT), Forza_182 (DS), Fribs8_41 (CT), GTE2_37 (CT), GTE6_58 (DE3), Gibbous_41 (CT), GoldHunter_46 (CT), HippoPololi_43 (CT), Horseradish_48 (CT), KayGee_47 (CT), Kwekel_57 (DE3), Lauer_43 (CT), MAnor_48 (CT), MScarn_50 (CT), MaVan_42 (CT), Mareelih_179 (DS), Mayweather_51 (CT), MunkgeeRoachy_46 (CT), Nibbles_41 (CT), Nina_44 (CT), Pons_48 (CT), PotPie_47 (CT), PsychoKiller_44 (CT), Quasar_45 (CT), RedBaron_47 (CT), RoadKill_54 (DE3), SheckWes_50 (CT), Sienna_96 (DG1), SketchMex_46 (CT), Sopespian_43 (CT), SteamedHams_45 (CT),

SummitAcademy_46 (CT), Survivors_42 (CT), SweatNTears_46 (CT), Tiamoceli_57 (DE3), Tolls_46 (CT), Troje_48 (CT), Twonlo_54 (DE3), Typhonomachy_45 (CT), Vine_49 (CT), Yarn_42 (CT), Yummy_48 (CT), Zareef_44 (CT),

Start 41:

- Found in 16 of 92 (17.4%) of genes in pham
- Manual Annotations of this start: 15 of 74
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Beyoncage_95 (DG1), BiteSize_95 (DG1), CherryTomatoes_185 (DO), Djokovic_95 (DG1), LilyPad_89 (DG1), LittleFella_91 (DG2), Madi_94 (DG1), Pupper_177 (DO), Puppers_35 (CD), SCentae_176 (DO), Skog_9 (DO), Suzy_95 (DG1), Terapin_96 (DG1), Trine_36 (CD), Upyo_37 (CD), Widow_36 (CD),

Summary by clusters:

There are 8 clusters represented in this pham: DO, singleton, DE3, CD, DG2, DG1, DS, CT,

Info for manual annotations of cluster CD:

- Start number 41 was manually annotated 4 times for cluster CD.

Info for manual annotations of cluster CT:

- Start number 26 was manually annotated 8 times for cluster CT.
- Start number 40 was manually annotated 40 times for cluster CT.

Info for manual annotations of cluster DE3:

- Start number 40 was manually annotated 5 times for cluster DE3.

Info for manual annotations of cluster DG1:

- Start number 40 was manually annotated 1 time for cluster DG1.
- Start number 41 was manually annotated 7 times for cluster DG1.

Info for manual annotations of cluster DG2:

- Start number 41 was manually annotated 1 time for cluster DG2.

Info for manual annotations of cluster DO:

- Start number 41 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster DS:

- Start number 19 was manually annotated 1 time for cluster DS.
- Start number 40 was manually annotated 4 times for cluster DS.

Gene Information:

Gene: Agatha_45 Start: 33907, Stop: 33068, Start Num: 40

Candidate Starts for Agatha_45:

(6, 34228), (8, 34204), (9, 34201), (13, 34114), (14, 34069), (18, 34018), (23, 33967), (Start: 40 @33907 has 50 MA's), (52, 33847), (57, 33817), (58, 33811), (73, 33730), (92, 33622), (151, 33298), (188, 33127), (189, 33118),

Gene: AikoCarson_46 Start: 34085, Stop: 33246, Start Num: 40

Candidate Starts for AikoCarson_46:

(23, 34160), (Start: 40 @34085 has 50 MA's), (52, 34025), (58, 33989), (67, 33947), (73, 33908), (76, 33890), (78, 33866), (121, 33680), (127, 33608), (189, 33296),

Gene: Amok_46 Start: 34109, Stop: 33270, Start Num: 40

Candidate Starts for Amok_46:

(23, 34184), (Start: 40 @34109 has 50 MA's), (52, 34049), (58, 34013), (67, 33971), (73, 33932), (76, 33914), (78, 33890), (121, 33704), (127, 33632), (146, 33530), (189, 33320), (197, 33287),

Gene: AndPeggy_42 Start: 33440, Stop: 32601, Start Num: 40

Candidate Starts for AndPeggy_42:

(Start: 40 @33440 has 50 MA's), (52, 33380), (58, 33344), (62, 33335), (73, 33263), (92, 33155), (104, 33101), (111, 33065), (121, 33035), (126, 32984), (127, 32963), (171, 32759), (175, 32738), (189, 32651), (194, 32633),

Gene: Axym_44 Start: 33804, Stop: 32965, Start Num: 40

Candidate Starts for Axym_44:

(6, 34125), (8, 34101), (13, 34011), (14, 33966), (18, 33915), (23, 33864), (Start: 40 @33804 has 50 MA's), (52, 33744), (58, 33708), (73, 33627), (92, 33519), (100, 33486), (151, 33195), (189, 33015),

Gene: Azira_42 Start: 33186, Stop: 32428, Start Num: 40

Candidate Starts for Azira_42:

(Start: 40 @33186 has 50 MA's), (49, 33147), (52, 33129), (58, 33093), (65, 33078), (66, 33054), (72, 33018), (76, 32994), (85, 32940), (91, 32907), (109, 32835), (116, 32814), (128, 32754), (142, 32676), (151, 32631), (166, 32586), (188, 32472), (191, 32457),

Gene: Beyoncage_95 Start: 65472, Stop: 66188, Start Num: 41

Candidate Starts for Beyoncage_95:

(Start: 41 @65472 has 15 MA's), (93, 65754), (105, 65799), (129, 65910), (152, 66027), (154, 66033), (162, 66066), (165, 66075), (169, 66096), (174, 66114), (181, 66153), (182, 66156), (185, 66177),

Gene: BigChungus_46 Start: 35108, Stop: 34305, Start Num: 40

Candidate Starts for BigChungus_46:

(23, 35168), (Start: 40 @35108 has 50 MA's), (76, 34901), (86, 34847), (89, 34838), (90, 34826), (97, 34799), (101, 34787), (104, 34772), (125, 34661), (128, 34643), (134, 34610), (157, 34508), (158, 34505), (171, 34448), (175, 34427), (186, 34358), (195, 34319), (197, 34310),

Gene: BillDoor_45 Start: 33112, Stop: 32273, Start Num: 40

Candidate Starts for BillDoor_45:

(Start: 40 @33112 has 50 MA's), (52, 33052), (58, 33016), (62, 33007), (73, 32935), (92, 32827), (104, 32773), (111, 32737), (121, 32707), (126, 32656), (127, 32635), (171, 32431), (175, 32410), (189, 32323),

Gene: Biskit_48 Start: 34069, Stop: 33221, Start Num: 40

Candidate Starts for Biskit_48:

(23, 34129), (Start: 40 @34069 has 50 MA's), (58, 33973), (62, 33964), (76, 33874), (92, 33784), (104, 33733), (107, 33724), (110, 33700), (121, 33667), (123, 33634), (127, 33595), (176, 33367), (177, 33358), (189, 33283), (192, 33274),

Gene: BiteSize_95 Start: 65558, Stop: 66274, Start Num: 41

Candidate Starts for BiteSize_95:

(Start: 41 @65558 has 15 MA's), (93, 65840), (105, 65885), (129, 65996), (152, 66113), (154, 66119), (162, 66152), (165, 66161), (169, 66182), (174, 66200), (181, 66239), (182, 66242), (185, 66263),

Gene: BlueNGold_178 Start: 105490, Stop: 104774, Start Num: 40

Candidate Starts for BlueNGold_178:

(Start: 40 @105490 has 50 MA's), (53, 105433), (85, 105250), (98, 105190), (118, 105121), (122, 105103), (132, 105028), (135, 105016), (136, 105001), (137, 104998), (142, 104977), (144, 104971), (147, 104956), (169, 104869), (174, 104851), (178, 104833), (181, 104809), (185, 104785),

Gene: Boopy_181 Start: 105501, Stop: 104785, Start Num: 40

Candidate Starts for Boopy_181:

(Start: 40 @105501 has 50 MA's), (53, 105444), (85, 105261), (98, 105201), (118, 105132), (122, 105114), (132, 105039), (135, 105027), (136, 105012), (137, 105009), (142, 104988), (144, 104982), (147, 104967), (169, 104880), (174, 104862), (178, 104844), (181, 104820), (185, 104796),

Gene: Burnsey_45 Start: 33898, Stop: 33059, Start Num: 40

Candidate Starts for Burnsey_45:

(6, 34219), (8, 34195), (9, 34192), (11, 34147), (13, 34105), (14, 34060), (23, 33958), (Start: 40 @33898 has 50 MA's), (52, 33838), (57, 33808), (58, 33802), (73, 33721), (92, 33613), (100, 33580), (106, 33553), (151, 33289), (188, 33118), (189, 33109),

Gene: Button_48 Start: 34069, Stop: 33221, Start Num: 26

Candidate Starts for Button_48:

(24, 34084), (Start: 26 @34069 has 8 MA's), (28, 34054), (47, 34000), (48, 33994), (51, 33979), (58, 33934), (62, 33925), (65, 33919), (67, 33892), (79, 33805), (82, 33793), (83, 33790), (89, 33766), (99, 33718), (102, 33697), (110, 33655), (114, 33643), (120, 33625), (124, 33586), (141, 33484), (153, 33430), (158, 33418), (183, 33280),

Gene: Buttrmilkdreams_48 Start: 34516, Stop: 33668, Start Num: 40

Candidate Starts for Buttrmilkdreams_48:

(23, 34576), (Start: 40 @34516 has 50 MA's), (58, 34420), (62, 34411), (76, 34321), (92, 34231), (94, 34228), (104, 34180), (107, 34171), (110, 34147), (121, 34114), (123, 34081), (127, 34042), (176, 33814), (177, 33805), (189, 33730), (192, 33721),

Gene: CherryTomatoes_185 Start: 130016, Stop: 130726, Start Num: 41

Candidate Starts for CherryTomatoes_185:

(Start: 41 @130016 has 15 MA's), (43, 130028), (52, 130067), (64, 130118), (75, 130202), (80, 130235), (85, 130253), (112, 130358), (113, 130361), (129, 130451), (132, 130475), (144, 130532), (159, 130580), (167, 130619), (181, 130691),

Gene: CherryonLim_48 Start: 36692, Stop: 35889, Start Num: 40

Candidate Starts for CherryonLim_48:

(23, 36752), (Start: 40 @36692 has 50 MA's), (55, 36614), (76, 36485), (86, 36431), (95, 36392), (101, 36371), (128, 36227), (134, 36194), (158, 36089), (175, 36011), (186, 35942), (188, 35933), (195, 35903), (197, 35894),

Gene: Chickadee_57 Start: 43696, Stop: 44475, Start Num: 40

Candidate Starts for Chickadee_57:

(16, 43534), (21, 43600), (22, 43615), (Start: 40 @43696 has 50 MA's), (46, 43717), (59, 43795), (65, 43810), (69, 43855), (87, 43945), (94, 43978), (124, 44110), (128, 44137), (141, 44206), (151, 44260), (166, 44308), (189, 44431), (196, 44461),

Gene: Cleo_40 Start: 32906, Stop: 32142, Start Num: 40

Candidate Starts for Cleo_40:

(34, 32921), (Start: 40 @32906 has 50 MA's), (49, 32867), (58, 32813), (65, 32795), (66, 32771), (85, 32657), (97, 32606), (109, 32552), (116, 32531), (142, 32390), (149, 32354), (158, 32333), (175, 32261), (177, 32249), (188, 32186), (191, 32171), (192, 32168), (194, 32159), (195, 32156),

Gene: Cozz_43 Start: 33495, Stop: 32656, Start Num: 40

Candidate Starts for Cozz_43:

(6, 33816), (8, 33792), (9, 33789), (13, 33702), (14, 33657), (18, 33606), (23, 33555), (Start: 40 @33495 has 50 MA's), (52, 33435), (57, 33405), (58, 33399), (73, 33318), (92, 33210), (151, 32886), (188, 32715), (189, 32706),

Gene: Dextert_58 Start: 44000, Stop: 44779, Start Num: 40

Candidate Starts for Dextert_58:

(16, 43838), (21, 43904), (22, 43919), (Start: 40 @44000 has 50 MA's), (46, 44021), (59, 44099), (65, 44114), (69, 44159), (87, 44249), (94, 44282), (119, 44375), (128, 44441), (141, 44510), (151, 44564), (166, 44612), (196, 44765),

Gene: Djokovic_95 Start: 65471, Stop: 66187, Start Num: 41

Candidate Starts for Djokovic_95:

(Start: 41 @65471 has 15 MA's), (93, 65753), (105, 65798), (129, 65909), (152, 66026), (154, 66032), (162, 66065), (165, 66074), (169, 66095), (174, 66113), (181, 66152), (182, 66155), (185, 66176),

Gene: Dre3_41 Start: 32649, Stop: 31885, Start Num: 40

Candidate Starts for Dre3_41:

(34, 32664), (Start: 40 @32649 has 50 MA's), (49, 32610), (58, 32556), (65, 32538), (66, 32514), (73, 32472), (85, 32400), (97, 32349), (109, 32295), (116, 32274), (128, 32211), (142, 32133), (149, 32097), (158, 32076), (175, 32004), (177, 31992), (188, 31929), (191, 31914), (192, 31911), (194, 31902), (195, 31899),

Gene: Elinal_50 Start: 35490, Stop: 34687, Start Num: 40

Candidate Starts for Elinal_50:

(23, 35550), (Start: 40 @35490 has 50 MA's), (76, 35283), (86, 35229), (90, 35208), (95, 35190), (97, 35181), (104, 35154), (125, 35043), (128, 35025), (134, 34992), (157, 34890), (158, 34887), (175, 34809), (176, 34806), (186, 34740), (195, 34701), (197, 34692),

Gene: Elliott_45 Start: 33793, Stop: 32954, Start Num: 40

Candidate Starts for Elliott_45:

(6, 34114), (8, 34090), (9, 34087), (13, 34000), (14, 33955), (23, 33853), (Start: 40 @33793 has 50 MA's), (52, 33733), (57, 33703), (58, 33697), (73, 33616), (92, 33508), (100, 33475), (106, 33448), (151, 33184), (188, 33013), (189, 33004),

Gene: Emalyn_44 Start: 32901, Stop: 32062, Start Num: 40

Candidate Starts for Emalyn_44:

(23, 32976), (Start: 40 @32901 has 50 MA's), (52, 32841), (58, 32805), (67, 32763), (73, 32724), (76, 32706), (78, 32682), (121, 32496), (127, 32424), (189, 32112),

Gene: Feastonyeet_46 Start: 35108, Stop: 34305, Start Num: 40

Candidate Starts for Feastonyeet_46:

(23, 35168), (Start: 40 @35108 has 50 MA's), (76, 34901), (86, 34847), (89, 34838), (90, 34826), (97, 34799), (101, 34787), (104, 34772), (125, 34661), (128, 34643), (134, 34610), (157, 34508), (158, 34505), (171, 34448), (175, 34427), (186, 34358), (195, 34319), (197, 34310),

Gene: Forza_182 Start: 105418, Stop: 104702, Start Num: 40

Candidate Starts for Forza_182:

(Start: 40 @105418 has 50 MA's), (53, 105361), (85, 105178), (98, 105118), (118, 105049), (122, 105031), (132, 104956), (135, 104944), (136, 104929), (137, 104926), (142, 104905), (144, 104899), (147, 104884), (169, 104797), (174, 104779), (178, 104761), (181, 104737), (185, 104713),

Gene: Fribs8_41 Start: 32917, Stop: 32156, Start Num: 40

Candidate Starts for Fribs8_41:

(17, 33031), (34, 32932), (Start: 40 @32917 has 50 MA's), (62, 32815), (65, 32809), (66, 32785), (85, 32671), (90, 32647), (97, 32620), (109, 32566), (116, 32545), (128, 32482), (130, 32473), (142, 32404), (188, 32200), (194, 32173),

Gene: GMA2_76 Start: 77386, Stop: 76664, Start Num: 38

Candidate Starts for GMA2_76:

(38, 77386), (42, 77380), (44, 77371), (62, 77287), (68, 77242), (105, 77065), (129, 76936), (131, 76918), (163, 76777), (172, 76750), (185, 76675),

Gene: GTE2_37 Start: 33497, Stop: 32658, Start Num: 40

Candidate Starts for GTE2_37:

(23, 33557), (Start: 40 @33497 has 50 MA's), (52, 33437), (58, 33401), (62, 33392), (73, 33320), (92, 33212), (104, 33158), (121, 33092), (123, 33059), (127, 33020), (171, 32816), (175, 32795), (189, 32708),

Gene: GTE6_58 Start: 44409, Stop: 45188, Start Num: 40

Candidate Starts for GTE6_58:

(2, 43980), (3, 44022), (4, 44031), (5, 44073), (7, 44082), (16, 44247), (21, 44313), (22, 44328), (Start: 40 @44409 has 50 MA's), (59, 44508), (65, 44523), (69, 44568), (87, 44658), (94, 44691), (128, 44850), (141, 44919), (151, 44973), (196, 45174),

Gene: GiKK_50 Start: 34402, Stop: 33551, Start Num: 26

Candidate Starts for GiKK_50:

(24, 34417), (Start: 26 @34402 has 8 MA's), (28, 34387), (47, 34330), (48, 34324), (51, 34309), (58, 34264), (62, 34255), (65, 34249), (67, 34222), (79, 34135), (82, 34123), (83, 34120), (89, 34096), (99, 34048), (102, 34027), (110, 33985), (114, 33973), (120, 33955), (124, 33916), (153, 33760), (158, 33748), (183, 33610),

Gene: Gibbous_41 Start: 32649, Stop: 31885, Start Num: 40

Candidate Starts for Gibbous_41:

(34, 32664), (Start: 40 @32649 has 50 MA's), (49, 32610), (58, 32556), (65, 32538), (66, 32514), (73, 32472), (85, 32400), (97, 32349), (109, 32295), (116, 32274), (128, 32211), (142, 32133), (149, 32097), (158, 32076), (175, 32004), (177, 31992), (188, 31929), (191, 31914), (192, 31911), (194, 31902), (195, 31899),

Gene: GoldHunter_46 Start: 33907, Stop: 33068, Start Num: 40

Candidate Starts for GoldHunter_46:

(6, 34228), (8, 34204), (9, 34201), (13, 34114), (14, 34069), (18, 34018), (23, 33967), (Start: 40 @33907 has 50 MA's), (52, 33847), (57, 33817), (58, 33811), (73, 33730), (92, 33622), (151, 33298), (188, 33127), (189, 33118),

Gene: Hexbug_53 Start: 36488, Stop: 35637, Start Num: 26

Candidate Starts for Hexbug_53:

(1, 36890), (24, 36503), (Start: 26 @36488 has 8 MA's), (31, 36464), (48, 36410), (50, 36398), (62, 36341), (65, 36335), (67, 36308), (82, 36209), (83, 36206), (88, 36185), (89, 36182), (92, 36158), (102, 36113), (106, 36098), (107, 36095), (110, 36071), (117, 36044), (124, 35999), (137, 35909),

(141, 35897), (156, 35837), (161, 35819), (190, 35660), (193, 35651),

Gene: HippoPololi_43 Start: 33061, Stop: 32297, Start Num: 40

Candidate Starts for HippoPololi_43:

(34, 33076), (Start: 40 @33061 has 50 MA's), (49, 33019), (62, 32956), (65, 32950), (66, 32926), (81, 32827), (85, 32812), (89, 32800), (97, 32761), (109, 32707), (116, 32686), (128, 32623), (142, 32545), (158, 32488), (175, 32416), (177, 32404), (195, 32311),

Gene: Horseradish_48 Start: 34002, Stop: 33154, Start Num: 40

Candidate Starts for Horseradish_48:

(23, 34062), (Start: 40 @34002 has 50 MA's), (58, 33906), (62, 33897), (76, 33807), (92, 33717), (94, 33714), (104, 33666), (107, 33657), (110, 33633), (121, 33600), (123, 33567), (127, 33528), (176, 33300), (177, 33291), (189, 33216), (192, 33207),

Gene: Jamzy_50 Start: 34382, Stop: 33534, Start Num: 26

Candidate Starts for Jamzy_50:

(24, 34397), (Start: 26 @34382 has 8 MA's), (28, 34367), (47, 34313), (48, 34307), (51, 34292), (58, 34247), (62, 34238), (65, 34232), (67, 34205), (79, 34118), (82, 34106), (83, 34103), (89, 34079), (99, 34031), (102, 34010), (110, 33968), (114, 33956), (120, 33938), (153, 33743), (158, 33731), (183, 33593),

Gene: KayGee_47 Start: 35490, Stop: 34687, Start Num: 40

Candidate Starts for KayGee_47:

(23, 35550), (Start: 40 @35490 has 50 MA's), (76, 35283), (86, 35229), (90, 35208), (95, 35190), (97, 35181), (104, 35154), (125, 35043), (128, 35025), (134, 34992), (157, 34890), (158, 34887), (175, 34809), (176, 34806), (186, 34740), (195, 34701), (197, 34692),

Gene: Kwekel_57 Start: 43609, Stop: 44388, Start Num: 40

Candidate Starts for Kwekel_57:

(16, 43447), (21, 43513), (22, 43528), (Start: 40 @43609 has 50 MA's), (46, 43630), (59, 43708), (65, 43723), (69, 43768), (87, 43858), (94, 43891), (124, 44023), (128, 44050), (141, 44119), (151, 44173), (166, 44221), (189, 44344), (196, 44374),

Gene: Lauer_43 Start: 36512, Stop: 35706, Start Num: 40

Candidate Starts for Lauer_43:

(23, 36572), (Start: 40 @36512 has 50 MA's), (76, 36305), (86, 36251), (90, 36230), (95, 36212), (97, 36203), (104, 36176), (125, 36065), (128, 36047), (134, 36014), (157, 35912), (158, 35909), (175, 35831), (176, 35828), (186, 35762), (195, 35723), (197, 35711),

Gene: LilyPad_89 Start: 63022, Stop: 63735, Start Num: 41

Candidate Starts for LilyPad_89:

(Start: 41 @63022 has 15 MA's), (93, 63301), (98, 63322), (139, 63517), (154, 63580), (159, 63592), (169, 63643), (181, 63700), (182, 63703), (185, 63724),

Gene: LittleFella_91 Start: 63267, Stop: 63962, Start Num: 41

Candidate Starts for LittleFella_91:

(35, 63252), (39, 63258), (Start: 41 @63267 has 15 MA's), (43, 63279), (46, 63285), (53, 63321), (55, 63336), (56, 63345), (67, 63402), (75, 63450), (85, 63501), (89, 63513), (103, 63579), (128, 63687), (129, 63690), (137, 63744), (142, 63765), (160, 63825), (165, 63846), (167, 63855), (168, 63864), (170, 63870), (185, 63951),

Gene: MAnor_48 Start: 35832, Stop: 35035, Start Num: 40

Candidate Starts for MAnor_48:

(23, 35892), (Start: 40 @35832 has 50 MA's), (55, 35760), (61, 35739), (76, 35631), (86, 35577), (95, 35538), (101, 35517), (128, 35373), (134, 35340), (158, 35235), (175, 35157), (186, 35088), (188, 35079), (195, 35049), (197, 35040),

Gene: MScarn_50 Start: 34184, Stop: 33336, Start Num: 40

Candidate Starts for MScarn_50:

(23, 34244), (Start: 40 @34184 has 50 MA's), (58, 34088), (62, 34079), (76, 33989), (92, 33899), (94, 33896), (104, 33848), (107, 33839), (110, 33815), (121, 33782), (123, 33749), (127, 33710), (176, 33482), (177, 33473), (189, 33398), (192, 33389),

Gene: MaVan_42 Start: 33215, Stop: 32457, Start Num: 40

Candidate Starts for MaVan_42:

(Start: 40 @33215 has 50 MA's), (49, 33176), (52, 33158), (58, 33122), (65, 33107), (66, 33083), (72, 33047), (76, 33023), (85, 32969), (109, 32864), (116, 32843), (128, 32783), (142, 32705), (151, 32660), (166, 32615), (188, 32501), (191, 32486),

Gene: Madi_94 Start: 65302, Stop: 66018, Start Num: 41

Candidate Starts for Madi_94:

(Start: 41 @65302 has 15 MA's), (93, 65584), (105, 65629), (129, 65740), (152, 65857), (154, 65863), (162, 65896), (165, 65905), (169, 65926), (174, 65944), (181, 65983), (182, 65986), (185, 66007),

Gene: Mareelih_179 Start: 104936, Stop: 104220, Start Num: 40

Candidate Starts for Mareelih_179:

(Start: 40 @104936 has 50 MA's), (53, 104879), (85, 104696), (98, 104636), (118, 104567), (122, 104549), (132, 104474), (135, 104462), (136, 104447), (137, 104444), (142, 104423), (144, 104417), (147, 104402), (169, 104315), (174, 104297), (178, 104279), (181, 104255), (185, 104231),

Gene: Margaret_51 Start: 35131, Stop: 34277, Start Num: 26

Candidate Starts for Margaret_51:

(10, 35368), (16, 35245), (24, 35146), (Start: 26 @35131 has 8 MA's), (29, 35113), (45, 35065), (48, 35053), (62, 34984), (65, 34978), (67, 34951), (69, 34933), (79, 34864), (82, 34852), (83, 34849), (92, 34801), (102, 34756), (124, 34645), (126, 34630), (131, 34591), (137, 34555), (141, 34543), (156, 34483), (157, 34480), (183, 34339), (187, 34318),

Gene: Mayweather_51 Start: 36577, Stop: 35774, Start Num: 40

Candidate Starts for Mayweather_51:

(23, 36637), (Start: 40 @36577 has 50 MA's), (55, 36499), (76, 36370), (86, 36316), (95, 36277), (101, 36256), (128, 36112), (134, 36079), (157, 35977), (158, 35974), (175, 35896), (176, 35893), (186, 35827), (191, 35803), (195, 35788), (197, 35779),

Gene: MunkgeeRoachy_46 Start: 33256, Stop: 32417, Start Num: 40

Candidate Starts for MunkgeeRoachy_46:

(23, 33316), (Start: 40 @33256 has 50 MA's), (52, 33196), (57, 33166), (58, 33160), (73, 33079), (92, 32971), (100, 32938), (106, 32911), (151, 32647), (175, 32554), (189, 32467),

Gene: Nibbles_41 Start: 32902, Stop: 32144, Start Num: 40

Candidate Starts for Nibbles_41:

(17, 33016), (34, 32917), (Start: 40 @32902 has 50 MA's), (49, 32863), (52, 32845), (58, 32809), (65, 32794), (66, 32770), (72, 32734), (76, 32710), (85, 32656), (109, 32551), (116, 32530), (128, 32470), (142, 32392), (151, 32347), (166, 32302), (188, 32188), (191, 32173),

Gene: Nina_44 Start: 34031, Stop: 33192, Start Num: 40

Candidate Starts for Nina_44:

(6, 34352), (8, 34328), (12, 34259), (13, 34238), (14, 34193), (23, 34091), (Start: 40 @34031 has 50 MA's), (52, 33971), (57, 33941), (58, 33935), (73, 33854), (92, 33746), (100, 33713), (106, 33686), (151, 33422), (188, 33251), (189, 33242),

Gene: Nodigi_53 Start: 36539, Stop: 35688, Start Num: 26

Candidate Starts for Nodigi_53:

(1, 36941), (24, 36554), (Start: 26 @36539 has 8 MA's), (31, 36515), (48, 36461), (50, 36449), (62, 36392), (65, 36386), (67, 36359), (82, 36260), (83, 36257), (88, 36236), (89, 36233), (102, 36164), (107, 36146), (110, 36122), (113, 36113), (117, 36095), (124, 36050), (137, 35960), (141, 35948), (156, 35888), (161, 35870), (190, 35711), (193, 35702),

Gene: Orla_53 Start: 36447, Stop: 35596, Start Num: 26

Candidate Starts for Orla_53:

(1, 36849), (10, 36684), (24, 36462), (Start: 26 @36447 has 8 MA's), (31, 36423), (48, 36369), (50, 36357), (62, 36300), (65, 36294), (67, 36267), (82, 36168), (83, 36165), (88, 36144), (89, 36141), (92, 36117), (102, 36072), (106, 36057), (107, 36054), (110, 36030), (117, 36003), (124, 35958), (137, 35868), (141, 35856), (156, 35796), (161, 35778), (190, 35619), (193, 35610),

Gene: Pons_48 Start: 35462, Stop: 34665, Start Num: 40

Candidate Starts for Pons_48:

(23, 35522), (Start: 40 @35462 has 50 MA's), (55, 35390), (61, 35369), (67, 35318), (76, 35261), (86, 35207), (95, 35168), (101, 35147), (128, 35003), (134, 34970), (158, 34865), (175, 34787), (186, 34718), (191, 34694), (195, 34679), (197, 34670),

Gene: PotPie_47 Start: 36143, Stop: 35340, Start Num: 40

Candidate Starts for PotPie_47:

(23, 36203), (Start: 40 @36143 has 50 MA's), (76, 35936), (86, 35882), (90, 35861), (95, 35843), (97, 35834), (101, 35822), (104, 35807), (125, 35696), (128, 35678), (134, 35645), (157, 35543), (171, 35483), (175, 35462), (186, 35393), (195, 35354), (197, 35345),

Gene: PsychoKiller_44 Start: 33794, Stop: 32955, Start Num: 40

Candidate Starts for PsychoKiller_44:

(6, 34115), (8, 34091), (9, 34088), (13, 34001), (14, 33956), (23, 33854), (Start: 40 @33794 has 50 MA's), (52, 33734), (57, 33704), (58, 33698), (73, 33617), (92, 33509), (100, 33476), (106, 33449), (151, 33185), (188, 33014), (189, 33005),

Gene: Pupper_177 Start: 129600, Stop: 130310, Start Num: 41

Candidate Starts for Pupper_177:

(Start: 41 @129600 has 15 MA's), (43, 129612), (52, 129651), (64, 129702), (75, 129786), (80, 129819), (85, 129837), (112, 129942), (113, 129945), (129, 130035), (132, 130059), (144, 130116), (159, 130164), (167, 130203), (181, 130275),

Gene: Puppies_35 Start: 26921, Stop: 27625, Start Num: 41

Candidate Starts for Puppies_35:

(36, 26903), (Start: 41 @26921 has 15 MA's), (43, 26933), (55, 26987), (62, 27017), (74, 27086), (77, 27104), (108, 27239), (132, 27365), (138, 27398), (142, 27416), (148, 27449), (173, 27527), (181, 27578),

Gene: Quasar_45 Start: 34456, Stop: 33617, Start Num: 40

Candidate Starts for Quasar_45:

(6, 34777), (8, 34753), (13, 34663), (14, 34618), (23, 34516), (Start: 40 @34456 has 50 MA's), (52, 34396), (58, 34360), (73, 34279), (92, 34171), (100, 34138), (106, 34111), (151, 33847), (188, 33676), (189, 33667),

Gene: RedBaron_47 Start: 34123, Stop: 33284, Start Num: 40

Candidate Starts for RedBaron_47:

(6, 34444), (8, 34420), (9, 34417), (11, 34372), (13, 34330), (14, 34285), (23, 34183), (Start: 40 @34123 has 50 MA's), (52, 34063), (57, 34033), (58, 34027), (73, 33946), (92, 33838), (100, 33805), (106, 33778), (151, 33514), (188, 33343), (189, 33334),

Gene: RoadKill_54 Start: 43158, Stop: 43937, Start Num: 40

Candidate Starts for RoadKill_54:

(16, 42996), (21, 43062), (22, 43077), (Start: 40 @43158 has 50 MA's), (46, 43179), (59, 43257), (65, 43272), (69, 43317), (87, 43407), (94, 43440), (119, 43533), (128, 43599), (141, 43668), (151, 43722), (196, 43923),

Gene: SCentae_176 Start: 129792, Stop: 130502, Start Num: 41

Candidate Starts for SCentae_176:

(Start: 41 @129792 has 15 MA's), (43, 129804), (52, 129843), (64, 129894), (75, 129978), (80, 130011), (85, 130029), (112, 130134), (113, 130137), (129, 130227), (132, 130251), (144, 130308), (159, 130356), (167, 130395), (181, 130467),

Gene: SheckWes_50 Start: 35167, Stop: 34364, Start Num: 40

Candidate Starts for SheckWes_50:

(23, 35227), (Start: 40 @35167 has 50 MA's), (55, 35089), (67, 35017), (76, 34960), (86, 34906), (95, 34867), (101, 34846), (128, 34702), (134, 34669), (158, 34564), (175, 34486), (186, 34417), (195, 34378), (197, 34369),

Gene: Sienna_96 Start: 65667, Stop: 66386, Start Num: 40

Candidate Starts for Sienna_96:

(14, 65493), (15, 65496), (Start: 40 @65667 has 50 MA's), (93, 65952), (105, 65997), (129, 66108), (152, 66225), (154, 66231), (162, 66264), (165, 66273), (169, 66294), (174, 66312), (181, 66351), (182, 66354), (185, 66375),

Gene: Sixama_183 Start: 106329, Stop: 105496, Start Num: 19

Candidate Starts for Sixama_183:

(Start: 19 @106329 has 1 MA's), (20, 106317), (Start: 40 @106209 has 50 MA's), (52, 106155), (53, 106152), (62, 106107), (85, 105969), (96, 105918), (98, 105909), (131, 105753), (132, 105747), (136, 105720), (138, 105714), (142, 105696), (145, 105687), (148, 105663), (182, 105528),

Gene: SketchMex_46 Start: 34069, Stop: 33221, Start Num: 40

Candidate Starts for SketchMex_46:

(23, 34129), (Start: 40 @34069 has 50 MA's), (58, 33973), (62, 33964), (76, 33874), (92, 33784), (104, 33733), (107, 33724), (110, 33700), (121, 33667), (123, 33634), (127, 33595), (176, 33367), (177, 33358), (189, 33283), (192, 33274),

Gene: Skog_9 Start: 6153, Stop: 6860, Start Num: 41

Candidate Starts for Skog_9:

(Start: 41 @6153 has 15 MA's), (52, 6204), (64, 6255), (80, 6372), (85, 6390), (98, 6450), (111, 6492), (113, 6498), (129, 6585), (132, 6609), (144, 6666), (159, 6714), (167, 6753), (181, 6825),

Gene: Sopespian_43 Start: 33795, Stop: 32956, Start Num: 40

Candidate Starts for Sopespian_43:

(6, 34116), (8, 34092), (9, 34089), (13, 34002), (14, 33957), (23, 33855), (Start: 40 @33795 has 50 MA's), (52, 33735), (57, 33705), (58, 33699), (73, 33618), (92, 33510), (100, 33477), (106, 33450), (151, 33186), (188, 33015), (189, 33006),

Gene: SteamedHams_45 Start: 33292, Stop: 32453, Start Num: 40

Candidate Starts for SteamedHams_45:

(Start: 40 @33292 has 50 MA's), (52, 33232), (58, 33196), (62, 33187), (73, 33115), (92, 33007), (104, 32953), (111, 32917), (121, 32887), (126, 32836), (127, 32815), (171, 32611), (175, 32590), (189, 32503), (194, 32485),

Gene: SummitAcademy_46 Start: 35232, Stop: 34429, Start Num: 40

Candidate Starts for SummitAcademy_46:

(23, 35292), (Start: 40 @35232 has 50 MA's), (76, 35025), (86, 34971), (90, 34950), (95, 34932), (97, 34923), (101, 34911), (104, 34896), (125, 34785), (128, 34767), (134, 34734), (157, 34632), (171, 34572), (175, 34551), (186, 34482), (195, 34443), (197, 34434),

Gene: Survivors_42 Start: 33111, Stop: 32353, Start Num: 40

Candidate Starts for Survivors_42:

(Start: 40 @33111 has 50 MA's), (49, 33072), (52, 33054), (58, 33018), (65, 33003), (66, 32979), (72, 32943), (76, 32919), (85, 32865), (109, 32760), (116, 32739), (128, 32679), (142, 32601), (145, 32592), (151, 32556), (166, 32511), (188, 32397), (191, 32382),

Gene: Suzy_95 Start: 65979, Stop: 66695, Start Num: 41

Candidate Starts for Suzy_95:

(Start: 41 @65979 has 15 MA's), (70, 66147), (93, 66261), (112, 66327), (154, 66540), (162, 66573), (169, 66603), (182, 66663), (185, 66684),

Gene: SweatNTears_46 Start: 33738, Stop: 32899, Start Num: 40

Candidate Starts for SweatNTears_46:

(25, 33786), (30, 33756), (Start: 40 @33738 has 50 MA's), (52, 33678), (57, 33648), (58, 33642), (73, 33561), (92, 33453), (100, 33420), (106, 33393), (151, 33129), (189, 32949),

Gene: TPA2_54 Start: 40199, Stop: 41080, Start Num: 37

Candidate Starts for TPA2_54:

(27, 40160), (37, 40199), (52, 40265), (61, 40310), (63, 40316), (65, 40325), (66, 40349), (84, 40463), (101, 40541), (115, 40610), (125, 40676), (127, 40700), (132, 40733), (133, 40736), (143, 40787), (149, 40820), (153, 40832), (164, 40874), (166, 40880), (179, 40949), (184, 40985), (189, 41012),

Gene: Terapin_96 Start: 65473, Stop: 66189, Start Num: 41

Candidate Starts for Terapin_96:

(Start: 41 @65473 has 15 MA's), (93, 65755), (105, 65800), (129, 65911), (152, 66028), (154, 66034), (162, 66067), (165, 66076), (169, 66097), (174, 66115), (181, 66154), (182, 66157), (185, 66178),

Gene: Tiamoceli_57 Start: 44584, Stop: 45363, Start Num: 40

Candidate Starts for Tiamoceli_57:

(21, 44488), (22, 44503), (Start: 40 @44584 has 50 MA's), (46, 44605), (59, 44683), (65, 44698), (69, 44743), (87, 44833), (94, 44866), (119, 44959), (128, 45025), (141, 45094), (151, 45148), (189, 45319), (196, 45349),

Gene: Tolls_46 Start: 33685, Stop: 32846, Start Num: 40

Candidate Starts for Tolls_46:

(Start: 40 @33685 has 50 MA's), (52, 33625), (58, 33589), (62, 33580), (73, 33508), (92, 33400), (104, 33346), (111, 33310), (121, 33280), (126, 33229), (127, 33208), (171, 33004), (175, 32983), (189, 32896), (194, 32878),

Gene: Trine_36 Start: 27342, Stop: 28031, Start Num: 41

Candidate Starts for Trine_36:

(33, 27315), (Start: 41 @27342 has 15 MA's), (43, 27354), (56, 27417), (62, 27438), (65, 27447), (74, 27504), (108, 27657), (128, 27753), (130, 27762), (138, 27813), (142, 27831), (147, 27852),

Gene: Troje_48 Start: 34407, Stop: 33559, Start Num: 40

Candidate Starts for Troje_48:

(23, 34467), (Start: 40 @34407 has 50 MA's), (58, 34311), (62, 34302), (76, 34212), (92, 34122), (94, 34119), (104, 34071), (107, 34062), (110, 34038), (121, 34005), (123, 33972), (127, 33933), (176, 33705), (177, 33696), (189, 33621), (192, 33612),

Gene: Twonlo_54 Start: 43079, Stop: 43858, Start Num: 40

Candidate Starts for Twonlo_54:

(16, 42917), (21, 42983), (22, 42998), (Start: 40 @43079 has 50 MA's), (46, 43100), (59, 43178), (65, 43193), (69, 43238), (87, 43328), (94, 43361), (119, 43454), (128, 43520), (141, 43589), (151, 43643), (189, 43814), (196, 43844),

Gene: Typhonomachy_45 Start: 33617, Stop: 32778, Start Num: 40

Candidate Starts for Typhonomachy_45:

(6, 33938), (8, 33914), (13, 33824), (14, 33779), (23, 33677), (Start: 40 @33617 has 50 MA's), (52, 33557), (58, 33521), (73, 33440), (92, 33332), (100, 33299), (106, 33272), (151, 33008), (189, 32828),

Gene: Upyo_37 Start: 28484, Stop: 29182, Start Num: 41

Candidate Starts for Upyo_37:

(32, 28451), (Start: 41 @28484 has 15 MA's), (43, 28496), (62, 28580), (71, 28637), (74, 28646), (80, 28691), (89, 28721), (128, 28895), (138, 28955), (140, 28961), (142, 28973), (147, 28994), (150, 29015), (155, 29027), (181, 29135),

Gene: Vine_49 Start: 35909, Stop: 35106, Start Num: 40

Candidate Starts for Vine_49:

(23, 35969), (Start: 40 @35909 has 50 MA's), (52, 35849), (76, 35702), (86, 35648), (90, 35627), (95, 35609), (97, 35600), (101, 35588), (104, 35573), (125, 35462), (128, 35444), (134, 35411), (157, 35309), (171, 35249), (175, 35228), (186, 35159), (195, 35120), (197, 35111),

Gene: Widow_36 Start: 28002, Stop: 28706, Start Num: 41

Candidate Starts for Widow_36:

(36, 27984), (Start: 41 @28002 has 15 MA's), (43, 28014), (55, 28068), (62, 28098), (65, 28107), (74, 28167), (77, 28185), (108, 28320), (132, 28446), (138, 28479), (142, 28497), (148, 28530), (173, 28608), (181, 28659),

Gene: Yakult_48 Start: 35205, Stop: 34351, Start Num: 26

Candidate Starts for Yakult_48:

(24, 35220), (Start: 26 @35205 has 8 MA's), (28, 35190), (45, 35139), (48, 35127), (51, 35112), (54, 35097), (58, 35067), (60, 35064), (62, 35058), (65, 35052), (67, 35025), (69, 35007), (82, 34926), (83, 34923), (92, 34875), (99, 34851), (102, 34830), (115, 34770), (124, 34719), (134, 34653), (141, 34617), (156, 34557), (157, 34554), (161, 34539), (176, 34467), (180, 34437), (183, 34413), (187, 34392), (190, 34377),

Gene: Yarn_42 Start: 33445, Stop: 32606, Start Num: 40

Candidate Starts for Yarn_42:

(Start: 40 @33445 has 50 MA's), (52, 33385), (58, 33349), (62, 33340), (73, 33268), (92, 33160), (104, 33106), (111, 33070), (121, 33040), (126, 32989), (127, 32968), (171, 32764), (175, 32743), (189, 32656), (194, 32638),

Gene: Yummy_48 Start: 34116, Stop: 33268, Start Num: 40

Candidate Starts for Yummy_48:

(23, 34176), (Start: 40 @34116 has 50 MA's), (58, 34020), (62, 34011), (76, 33921), (92, 33831), (94, 33828), (104, 33780), (107, 33771), (110, 33747), (121, 33714), (123, 33681), (127, 33642), (176, 33414), (177, 33405), (189, 33330), (192, 33321),

Gene: Zareef_44 Start: 33205, Stop: 32447, Start Num: 40

Candidate Starts for Zareef_44:

(Start: 40 @33205 has 50 MA's), (49, 33166), (52, 33148), (58, 33112), (65, 33097), (66, 33073), (72, 33037), (76, 33013), (85, 32959), (109, 32854), (116, 32833), (128, 32773), (142, 32695), (146, 32680), (151, 32650), (166, 32605), (188, 32491), (191, 32476),