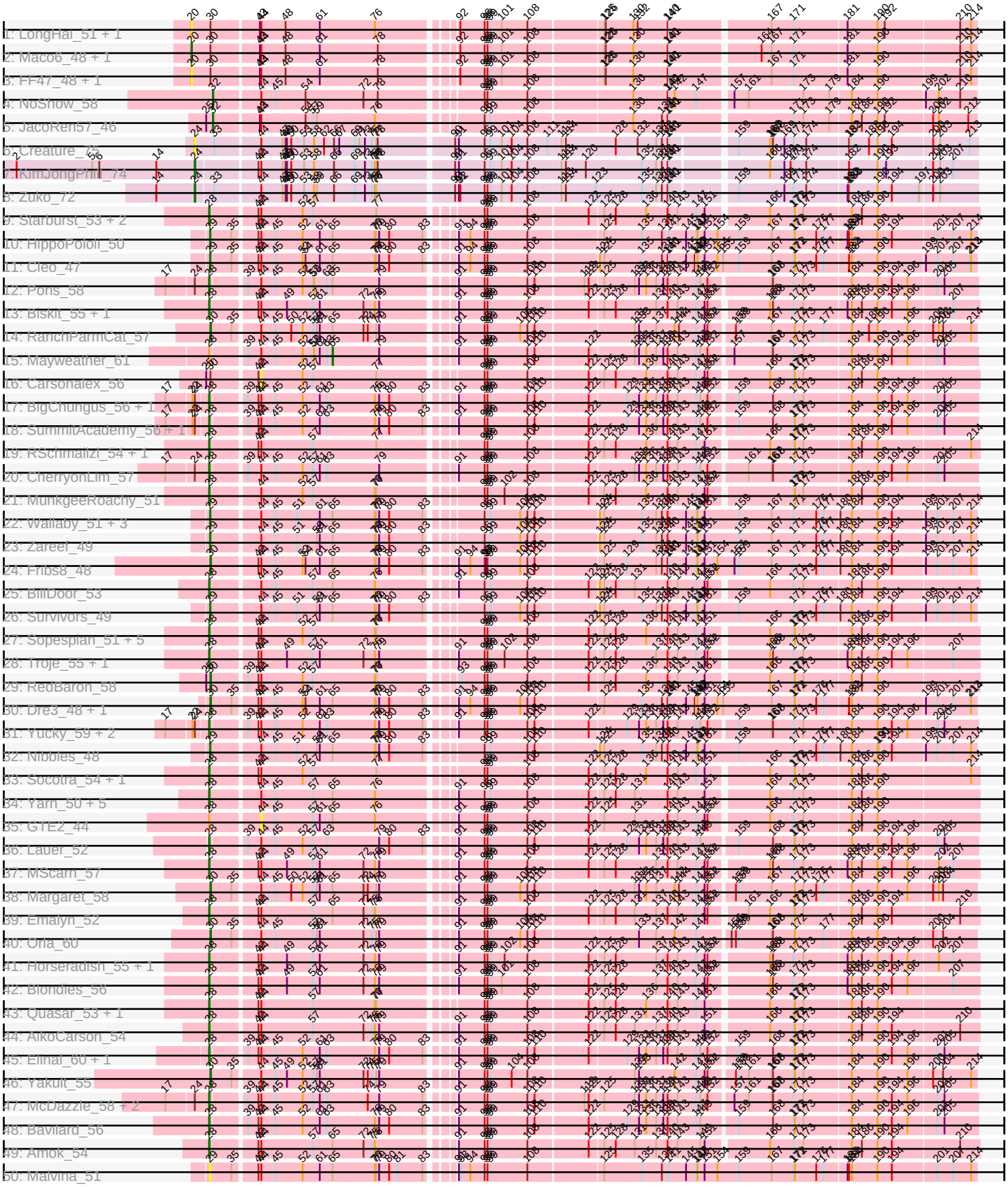
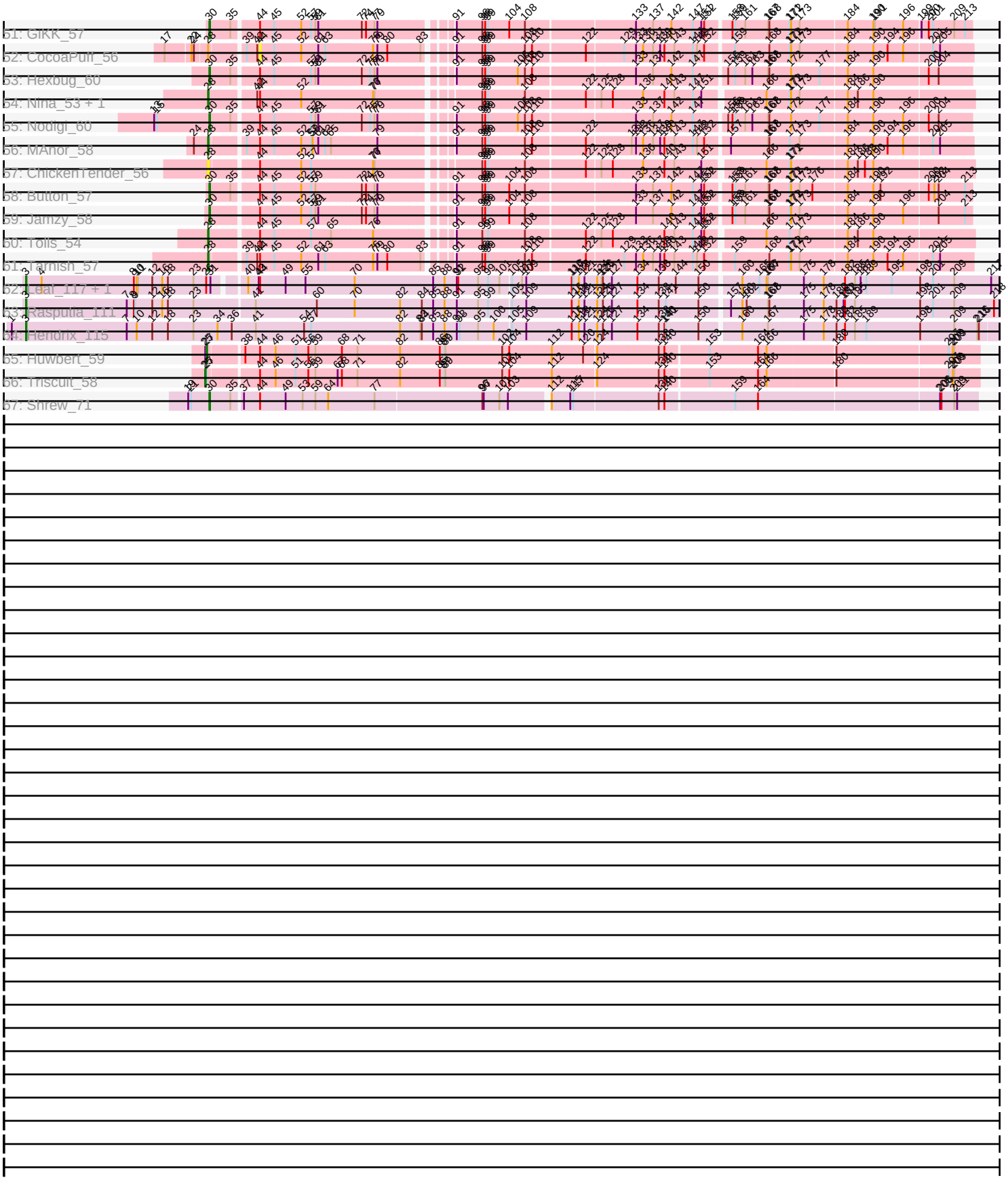
Pham 347455


1: LongHal_51 + 1
2: Maco6_48 + 1
3: FF47_48 + 1
4: NoShow_58
5: JacoRen57_46
6: Creature_55
7: KimJongPhil_74
8: Zuko_72
9: Starburst_53 + 2
10: HippoPolo11_50
11: Cleo_47
12: Pons_58
13: Biskit_55 + 1
14: RanchPartyCat_57
15: Mayweather_61
16: Carsonalex_56
17: BigChungus_56 + 1
18: SummitAcademy_56 + 1
19: RSchmalzl_54 + 1
20: CherryonLim_57
21: MunkgeeRoachy_51
22: Wallaby_51 + 3
23: Zareef_49
24: Fribs8_48
25: BillDoor_53
26: Survivors_49
27: Sopesplan_51 + 5
28: Troje_55 + 1
29: RedBaron_58
30: Dre3_48 + 1
31: Yucky_59 + 2
32: Nibbles_48
33: Socotra_54 + 1
34: Yarn_50 + 5
35: GTE2_44
36: Lauer_52
37: MScam_57
38: Margaret_58
39: Emalyn_52
40: Orla_60
41: Horseradish_55 + 1
42: Blondies_56
43: Quasar_53 + 1
44: AlkoCarson_54
45: Elinat_60 + 1
46: Yakult_55
47: McDazzle_58 + 2
48: Bavliard_56
49: Amok_54
50: Malvina_51

Pham 347455


51: GIKK_57
52: CocoaPuff_56
53: Hexbug_60
54: Nina_53 + 1
55: Nodigi_60
56: MAnor_58
57: ChickenTender_56
58: Button_57
59: Jamzy_58
60: Tolls_54
61: Tarnish_57
62: Leal_117 + 1
63: Rasputia_111
64: Hendrix_115
65: Huwbert_59
66: Triscuit_58
67: Shrew_71

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 347455 Report

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

Pham number 347455 has 101 members, 21 are drafts.

Phages represented in each track:
• Track 1 : LongHai_51, Salvus_51
• Track 2 : Maco6_48, Muddy_50
• Track 3 : FF47_48, 8UZL_50
• Track 4 : NoShow_58
• Track 5 : JacoRen57_46
• Track 6 : Creature_75
• Track 7 : KimJongPhill_74
• Track 8 : Zuko_72
• Track 9 : Starburst_53, Typhonomachy_52, RADical_54
• Track 10 : HippoPololi_50
• Track 11 : Cleo_47
• Track 12 : Pons_58
• Track 13 : Biskit_55, SketchMex_53
• Track 14 : RanchParmCat_57
• Track 15 : Mayweather_61
• Track 16 : Carsonalex_56
• Track 17 : BigChungus_56, Feastonyeet_56
• Track 18 : SummitAcademy_56, Balloona_55
• Track 19 : RSchmailzl_54, Bubble_51
• Track 20 : CherryonLim_57
• Track 21 : MunkgeeRoachy_51
• Track 22 : Wallaby_51, MaVan_49, Azira_49, Wolfwood_49
• Track 23 : Zareef_49
• Track 24 : Fribs8_48
• Track 25 : BillDoor_53
• Track 26 : Survivors_49
• Track 27 : Sopespian_51, GoldHunter_53, Eliott_53, Axym_52, Burnsey_53, PsychoKiller_52
• Track 28 : Troje_55, Buttrmlkdreams_55
• Track 29 : RedBaron_58
• Track 30 : Dre3_48, Gibbous_48
• Track 31 : Yucky_59, Vine_59, PotPie_56
• Track 32 : Nibbles_48
• Track 33 : Socotra_54, Cozz_51
• Track 34 : Yarn_50, CanesSauce_52, CaramelLatte_52, AndPeggy_50, SteamedHams_54, ChocoMunchkin_52
• Track 35 : GTE2_44

• Track 36 : Lauer_52
• Track 37 : MScarn_57
• Track 38 : Margaret_58
• Track 39 : Emalyn_52
• Track 40 : Orla_60
• Track 41 : Horseradish_55, Yummy_55
• Track 42 : Blondies_56
• Track 43 : Quasar_53, Agatha_53
• Track 44 : AikoCarson_54
• Track 45 : Elinal_60, KayGee_58
• Track 46 : Yakult_55
• Track 47 : McDazzle_58, ElJefes_58, SheckWes_60
• Track 48 : Bavilard_56
• Track 49 : Amok_54
• Track 50 : Malvina_51
• Track 51 : GiKK_57
• Track 52 : CocoaPuff_56
• Track 53 : Hexbug_60
• Track 54 : Nina_53, SweatNTears_55
• Track 55 : Nodigi_60
• Track 56 : MAnor_58
• Track 57 : ChickenTender_56
• Track 58 : Button_57
• Track 59 : Jamzy_58
• Track 60 : Tolls_54
• Track 61 : Tarnish_57
• Track 62 : Leaf_117, Dewdrop_117
• Track 63 : Rasputia_111
• Track 64 : Hendrix_115
• Track 65 : Huwbert_59
• Track 66 : Triscuit_58
• Track 67 : Shrew_71

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

The start number called the most often in the published annotations is 28, it was called in 45 of the 80 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Agatha_53, AikoCarson_54, Amok_54, AndPeggy_50, Axym_52, Balloona_55, Bavilard_56, BigChungus_56, BillDoor_53, Biskit_55, Blondies_56, Bubble_51, Burnsey_53, Buttrmlkdreams_55, CanesSauce_52, CaramelLatte_52, CherryonLim_57, ChickenTender_56, ChocoMunchkin_52, Cozz_51, ElJefes_58, Elinal_60, Eliott_53, Emalyn_52, Feastonyeet_56, GoldHunter_53, Horseradish_55, KayGee_58, Lauer_52, MAnor_58, MScarn_57, McDazzle_58, MunkgeeRoachy_51, Nina_53, Pons_58, PotPie_56, PsychoKiller_52, Quasar_53, RADical_54, RSchmailzl_54, SheckWes_60, SketchMex_53, Socotra_54, Sopespian_51, Starburst_53, SteamedHams_54, SummitAcademy_56, SweatNTears_55, Tarnish_57, Tolls_54, Troje_55, Typhonomachy_52, Vine_59, Yarn_50, Yucky_59, Yummy_55,

Genes that have the "Most Annotated" start but do not call it:
• CocoaPuff_56, GTE2_44, Mayweather_61,

Genes that do not have the "Most Annotated" start:
• 8UZL_50, Azira_49, Button_57, Carsonalex_56, Cleo_47, Creature_75, Dewdrop_117, Dre3_48, FF47_48, Fribs8_48, GiKK_57, Gibbous_48, Hendrix_115, Hexbug_60, HippoPololi_50, Huwbert_59, JacoRen57_46, Jamzy_58, KimJongPhill_74, Leaf_117, LongHai_51, MaVan_49, Maco6_48, Malvina_51, Margaret_58, Muddy_50, Nibbles_48, NoShow_58, Nodigi_60, Orla_60, RanchParmCat_57, Rasputia_111, RedBaron_58, Salvus_51, Shrew_71, Survivors_49, Triscuit_58, Wallaby_51, Wolfwood_49, Yakult_55, Zareef_49, Zuko_72,

Summary by start number:

Start 3:
• Found in 4 of 101 (4.0%) of genes in pham
• Manual Annotations of this start: 4 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Dewdrop_117 (GC), Hendrix_115 (GC), Leaf_117 (GC), Rasputia_111 (GC),

Start 20:
• Found in 6 of 101 (5.9%) of genes in pham
• Manual Annotations of this start: 2 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 8UZL_50 (AB), FF47_48 (AB), LongHai_51 (AB), Maco6_48 (AB), Muddy_50 (AB), Salvus_51 (AB),

Start 24:
• Found in 17 of 101 (16.8%) of genes in pham
• Manual Annotations of this start: 2 of 80
• Called 17.6% of time when present
• Phage (with cluster) where this start called: Creature_75 (BR), KimJongPhill_74 (BR), Zuko_72 (BR),

Start 25:
• Found in 5 of 101 (5.0%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Triscuit_58 (GG),

Start 27:
• Found in 2 of 101 (2.0%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Huwbert_59 (GG),

Start 28:
• Found in 59 of 101 (58.4%) of genes in pham
• Manual Annotations of this start: 45 of 80
• Called 94.9% of time when present

• Phage (with cluster) where this start called: Agatha_53 (CT), AikoCarson_54 (CT), Amok_54 (CT), AndPeggy_50 (CT), Axym_52 (CT), Balloona_55 (CT), Bavilard_56 (CT), BigChungus_56 (CT), BillDoor_53 (CT), Biskit_55 (CT), Blondies_56 (CT), Bubble_51 (CT), Burnsey_53 (CT), Buttrmlkdreams_55 (CT), CanesSauce_52 (CT), CaramelLatte_52 (CT), CherryonLim_57 (CT), ChickenTender_56 (CT), ChocoMunchkin_52 (CT), Cozz_51 (CT), ElJefes_58 (CT), Elinal_60 (CT), Eliott_53 (CT), Emalyn_52 (CT), Feastonyeet_56 (CT), GoldHunter_53 (CT), Horseradish_55 (CT), KayGee_58 (CT), Lauer_52 (CT), MAnor_58 (CT), MScarn_57 (CT), McDazzle_58 (CT), MunkgeeRoachy_51 (CT), Nina_53 (CT), Pons_58 (CT), PotPie_56 (CT), PsychoKiller_52 (CT), Quasar_53 (CT), RADical_54 (CT), RSchmailzl_54 (CT), SheckWes_60 (CT), SketchMex_53 (CT), Socotra_54 (CT), Sopespian_51 (CT), Starburst_53 (CT), SteamedHams_54 (CT), SummitAcademy_56 (CT), SweatNTears_55 (CT), Tarnish_57 (CT), Tolls_54 (CT), Troje_55 (CT), Typhonomachy_52 (CT), Vine_59 (CT), Yarn_50 (CT), Yucky_59 (CT), Yummy_55 (CT),

Start 29:
• Found in 10 of 101 (9.9%) of genes in pham
• Manual Annotations of this start: 8 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Azira_49 (CT), Cleo_47 (CT), HippoPololi_50 (CT), MaVan_49 (CT), Malvina_51 (CT), Nibbles_48 (CT), Survivors_49 (CT), Wallaby_51 (CT), Wolfwood_49 (CT), Zareef_49 (CT),

Start 30:
• Found in 21 of 101 (20.8%) of genes in pham
• Manual Annotations of this start: 14 of 80
• Called 66.7% of time when present
• Phage (with cluster) where this start called: Button_57 (CT), Dre3_48 (CT), Fribs8_48 (CT), GiKK_57 (CT), Gibbous_48 (CT), Hexbug_60 (CT), Jamzy_58 (CT), Margaret_58 (CT), Nodigi_60 (CT), Orla_60 (CT), RanchParmCat_57 (CT), RedBaron_58 (CT), Shrew_71 (singleton), Yakult_55 (CT),

Start 32:
• Found in 2 of 101 (2.0%) of genes in pham
• Manual Annotations of this start: 2 of 80
• Called 100.0% of time when present
• Phage (with cluster) where this start called: JacoRen57_46 (AB), NoShow_58 (AB),

Start 44:
• Found in 99 of 101 (98.0%) of genes in pham
• No Manual Annotations of this start.
• Called 3.0% of time when present
• Phage (with cluster) where this start called: Carsonalex_56 (CT), CocoaPuff_56 (CT), GTE2_44 (CT),

Start 65:
• Found in 29 of 101 (28.7%) of genes in pham
• Manual Annotations of this start: 1 of 80
• Called 3.4% of time when present
• Phage (with cluster) where this start called: Mayweather_61 (CT),

Summary by clusters:

There are 6 clusters represented in this pham: singleton, AB, GG, GC, BR, CT,

Info for manual annotations of cluster AB:
•Start number 20 was manually annotated 2 times for cluster AB.
•Start number 32 was manually annotated 2 times for cluster AB.

Info for manual annotations of cluster BR:
•Start number 24 was manually annotated 2 times for cluster BR.

Info for manual annotations of cluster CT:
•Start number 28 was manually annotated 45 times for cluster CT.
•Start number 29 was manually annotated 8 times for cluster CT.
•Start number 30 was manually annotated 13 times for cluster CT.
•Start number 65 was manually annotated 1 time for cluster CT.

Info for manual annotations of cluster GC:
•Start number 3 was manually annotated 4 times for cluster GC.

Info for manual annotations of cluster GG:
•Start number 25 was manually annotated 1 time for cluster GG.
•Start number 27 was manually annotated 1 time for cluster GG.

Gene Information:

Gene: 8UZL_50 Start: 38971, Stop: 37460, Start Num: 20
Candidate Starts for 8UZL_50:
(Start: 20 @38971 has 2 MA's), (Start: 30 @38935 has 14 MA's), (43, 38845), (44, 38842), (48, 38794), (61, 38725), (78, 38611), (92, 38482), (96, 38431), (98, 38425), (99, 38419), (101, 38395), (108, 38341), (125, 38200), (126, 38197), (130, 38140), (140, 38068), (141, 38065), (167, 37870), (171, 37825), (181, 37720), (190, 37660), (210, 37492), (214, 37471),

Gene: Agatha_53 Start: 38842, Stop: 37364, Start Num: 28
Candidate Starts for Agatha_53:
(Start: 28 @38842 has 45 MA's), (42, 38755), (44, 38749), (57, 38647), (76, 38524), (77, 38521), (96, 38338), (98, 38332), (99, 38326), (108, 38248), (122, 38134), (125, 38107), (128, 38083), (136, 38023), (140, 37978), (143, 37957), (147, 37918), (151, 37900), (166, 37783), (171, 37735), (172, 37732), (173, 37717), (184, 37621), (186, 37600), (190, 37570),

Gene: AikoCarson_54 Start: 39107, Stop: 37629, Start Num: 28
Candidate Starts for AikoCarson_54:
(Start: 28 @39107 has 45 MA's), (42, 39020), (44, 39014), (57, 38912), (72, 38813), (75, 38795), (76, 38789), (79, 38780), (91, 38657), (96, 38603), (98, 38597), (99, 38591), (108, 38513), (122, 38399), (125, 38372), (128, 38348), (131, 38309), (137, 38267), (140, 38243), (143, 38222), (151, 38165), (166, 38048), (171, 38000), (172, 37997), (173, 37982), (184, 37886), (186, 37865), (190, 37835), (194, 37805), (210, 37667),

Gene: Amok_54 Start: 39035, Stop: 37557, Start Num: 28
Candidate Starts for Amok_54:
(Start: 28 @39035 has 45 MA's), (42, 38948), (44, 38942), (57, 38840), (Start: 65 @38798 has 1 MA's), (72, 38741), (75, 38723), (76, 38717), (91, 38585), (96, 38531), (98, 38525), (99, 38519), (108, 38441),

(122, 38327), (125, 38300), (128, 38276), (131, 38237), (137, 38195), (140, 38171), (143, 38150), (149, 38102), (151, 38093), (166, 37976), (171, 37928), (173, 37910), (184, 37814), (186, 37793), (190, 37763), (194, 37733), (210, 37595),

Gene: AndPeggy_50 Start: 38315, Stop: 36837, Start Num: 28
Candidate Starts for AndPeggy_50:
(Start: 28 @38315 has 45 MA's), (44, 38222), (45, 38195), (57, 38120), (Start: 65 @38078 has 1 MA's), (76, 37997), (91, 37865), (96, 37811), (99, 37799), (108, 37721), (122, 37607), (125, 37580), (128, 37556), (131, 37517), (140, 37451), (143, 37430), (151, 37373), (166, 37256), (171, 37208), (173, 37190), (184, 37094), (186, 37073), (190, 37043),

Gene: Axym_52 Start: 38739, Stop: 37261, Start Num: 28
Candidate Starts for Axym_52:
(Start: 28 @38739 has 45 MA's), (42, 38652), (44, 38646), (52, 38565), (57, 38544), (76, 38421), (77, 38418), (96, 38235), (98, 38229), (99, 38223), (108, 38145), (122, 38031), (125, 38004), (128, 37980), (136, 37920), (140, 37875), (143, 37854), (147, 37815), (151, 37797), (166, 37680), (171, 37632), (172, 37629), (173, 37614), (184, 37518), (186, 37497), (190, 37467),

Gene: Azira_49 Start: 37909, Stop: 36419, Start Num: 29
Candidate Starts for Azira_49:
(Start: 29 @37909 has 8 MA's), (44, 37819), (45, 37792), (51, 37750), (61, 37702), (Start: 65 @37675 has 1 MA's), (76, 37594), (77, 37591), (79, 37585), (80, 37564), (83, 37498), (96, 37408), (99, 37396), (106, 37333), (108, 37318), (110, 37303), (124, 37186), (125, 37177), (135, 37099), (137, 37072), (138, 37060), (140, 37048), (145, 37009), (147, 36988), (148, 36985), (151, 36970), (159, 36898), (167, 36829), (171, 36784), (176, 36739), (177, 36724), (180, 36694), (184, 36670), (190, 36619), (194, 36589), (199, 36523), (201, 36499), (207, 36466), (214, 36430),

Gene: Balloona_55 Start: 40742, Stop: 39264, Start Num: 28
Candidate Starts for Balloona_55:
(17, 40820), (22, 40769), (Start: 24 @40766 has 2 MA's), (Start: 28 @40742 has 45 MA's), (39, 40679), (42, 40658), (44, 40652), (45, 40625), (52, 40571), (61, 40535), (63, 40520), (76, 40424), (79, 40415), (80, 40394), (83, 40328), (91, 40292), (96, 40238), (98, 40232), (99, 40226), (108, 40148), (110, 40133), (122, 40034), (129, 39959), (133, 39935), (136, 39923), (137, 39902), (139, 39887), (140, 39878), (143, 39857), (147, 39818), (149, 39809), (152, 39794), (159, 39743), (168, 39671), (171, 39629), (172, 39626), (173, 39611), (184, 39515), (190, 39464), (194, 39434), (196, 39401), (201, 39344), (205, 39329),

Gene: Bavilard_56 Start: 40156, Stop: 38678, Start Num: 28
Candidate Starts for Bavilard_56:
(Start: 28 @40156 has 45 MA's), (39, 40093), (42, 40072), (44, 40066), (45, 40039), (52, 39985), (61, 39949), (63, 39934), (76, 39838), (79, 39829), (80, 39808), (83, 39742), (91, 39706), (96, 39652), (98, 39646), (99, 39640), (108, 39562), (110, 39547), (122, 39448), (129, 39373), (133, 39349), (136, 39337), (137, 39316), (139, 39301), (140, 39292), (143, 39271), (147, 39232), (149, 39223), (159, 39157), (168, 39085), (171, 39043), (172, 39040), (173, 39025), (184, 38929), (190, 38878), (194, 38848), (196, 38815), (201, 38758), (205, 38743),

Gene: BigChungus_56 Start: 40283, Stop: 38805, Start Num: 28
Candidate Starts for BigChungus_56:
(17, 40361), (22, 40310), (Start: 24 @40307 has 2 MA's), (Start: 28 @40283 has 45 MA's), (39, 40220), (42, 40199), (44, 40193), (45, 40166), (52, 40112), (61, 40076), (63, 40061), (76, 39965), (79, 39956), (80, 39935), (83, 39869), (91, 39833), (96, 39779), (98, 39773), (99, 39767), (108, 39689), (110, 39674), (122, 39575), (129, 39500), (133, 39476), (136, 39464), (137, 39443), (139, 39428), (140, 39419), (143, 39398), (147, 39359), (149, 39350), (152, 39335), (159, 39284), (168, 39212), (171,

39170), (173, 39152), (184, 39056), (190, 39005), (194, 38975), (196, 38942), (201, 38885), (205, 38870),

Gene: BillDoor_53 Start: 37991, Stop: 36513, Start Num: 28
Candidate Starts for BillDoor_53:
(Start: 28 @37991 has 45 MA's), (44, 37898), (45, 37871), (57, 37796), (Start: 65 @37754 has 1 MA's), (76, 37673), (91, 37541), (96, 37487), (99, 37475), (108, 37397), (122, 37283), (124, 37265), (125, 37256), (128, 37232), (131, 37193), (140, 37127), (143, 37106), (147, 37067), (151, 37049), (152, 37043), (166, 36932), (171, 36884), (173, 36866), (184, 36770), (186, 36749), (190, 36719),

Gene: Biskit_55 Start: 38648, Stop: 37170, Start Num: 28
Candidate Starts for Biskit_55:
(Start: 28 @38648 has 45 MA's), (42, 38561), (44, 38555), (49, 38504), (57, 38453), (61, 38438), (72, 38354), (76, 38330), (79, 38321), (91, 38198), (96, 38144), (98, 38138), (99, 38132), (108, 38054), (122, 37940), (125, 37913), (128, 37889), (137, 37808), (140, 37784), (143, 37763), (147, 37724), (151, 37706), (152, 37700), (166, 37589), (168, 37583), (171, 37541), (173, 37523), (181, 37436), (184, 37427), (186, 37406), (190, 37376), (194, 37346), (196, 37313), (207, 37223),

Gene: Blondies_56 Start: 38965, Stop: 37487, Start Num: 28
Candidate Starts for Blondies_56:
(Start: 28 @38965 has 45 MA's), (42, 38878), (44, 38872), (49, 38821), (57, 38770), (61, 38755), (72, 38671), (76, 38647), (79, 38638), (91, 38515), (96, 38461), (98, 38455), (99, 38449), (101, 38425), (108, 38371), (122, 38257), (125, 38230), (128, 38206), (137, 38125), (140, 38101), (143, 38080), (147, 38041), (151, 38023), (152, 38017), (166, 37906), (168, 37900), (171, 37858), (173, 37840), (181, 37753), (184, 37744), (186, 37723), (190, 37693), (194, 37663), (196, 37630), (207, 37540),

Gene: Bubble_51 Start: 38427, Stop: 36949, Start Num: 28
Candidate Starts for Bubble_51:
(Start: 28 @38427 has 45 MA's), (42, 38340), (44, 38334), (57, 38232), (77, 38106), (96, 37923), (98, 37917), (99, 37911), (108, 37833), (122, 37719), (125, 37692), (128, 37668), (136, 37608), (140, 37563), (143, 37542), (147, 37503), (151, 37485), (166, 37368), (171, 37320), (172, 37317), (173, 37302), (184, 37206), (186, 37185), (190, 37155), (214, 36966),

Gene: Burnsey_53 Start: 38833, Stop: 37355, Start Num: 28
Candidate Starts for Burnsey_53:
(Start: 28 @38833 has 45 MA's), (42, 38746), (44, 38740), (52, 38659), (57, 38638), (76, 38515), (77, 38512), (96, 38329), (98, 38323), (99, 38317), (108, 38239), (122, 38125), (125, 38098), (128, 38074), (136, 38014), (140, 37969), (143, 37948), (147, 37909), (151, 37891), (166, 37774), (171, 37726), (172, 37723), (173, 37708), (184, 37612), (186, 37591), (190, 37561),

Gene: Button_57 Start: 39117, Stop: 37642, Start Num: 30
Candidate Starts for Button_57:
(Start: 30 @39117 has 14 MA's), (35, 39075), (44, 39027), (45, 39000), (52, 38946), (57, 38925), (59, 38916), (72, 38826), (74, 38817), (77, 38799), (79, 38793), (91, 38670), (96, 38616), (98, 38610), (99, 38604), (104, 38559), (108, 38526), (133, 38313), (137, 38280), (142, 38241), (147, 38196), (151, 38178), (152, 38172), (158, 38127), (159, 38121), (161, 38100), (167, 38052), (168, 38049), (171, 38007), (172, 38004), (173, 37989), (176, 37962), (184, 37893), (190, 37842), (192, 37827), (200, 37731), (202, 37719), (204, 37710), (213, 37656),

Gene: Buttrmlkdreams_55 Start: 39095, Stop: 37617, Start Num: 28
Candidate Starts for Buttrmlkdreams_55:
(Start: 28 @39095 has 45 MA's), (42, 39008), (44, 39002), (49, 38951), (57, 38900), (61, 38885), (72, 38801), (76, 38777), (79, 38768), (91, 38645), (96, 38591), (98, 38585), (99, 38579), (102, 38549),

(108, 38501), (122, 38387), (125, 38360), (128, 38336), (137, 38255), (140, 38231), (143, 38210), (147, 38171), (151, 38153), (152, 38147), (166, 38036), (168, 38030), (171, 37988), (173, 37970), (181, 37883), (184, 37874), (186, 37853), (190, 37823), (194, 37793), (196, 37760), (207, 37670),

Gene: CanesSauce_52 Start: 38485, Stop: 37007, Start Num: 28
Candidate Starts for CanesSauce_52:
(Start: 28 @38485 has 45 MA's), (44, 38392), (45, 38365), (57, 38290), (Start: 65 @38248 has 1 MA's), (76, 38167), (91, 38035), (96, 37981), (99, 37969), (108, 37891), (122, 37777), (125, 37750), (128, 37726), (131, 37687), (140, 37621), (143, 37600), (151, 37543), (166, 37426), (171, 37378), (173, 37360), (184, 37264), (186, 37243), (190, 37213),

Gene: CaramelLatte_52 Start: 38485, Stop: 37007, Start Num: 28
Candidate Starts for CaramelLatte_52:
(Start: 28 @38485 has 45 MA's), (44, 38392), (45, 38365), (57, 38290), (Start: 65 @38248 has 1 MA's), (76, 38167), (91, 38035), (96, 37981), (99, 37969), (108, 37891), (122, 37777), (125, 37750), (128, 37726), (131, 37687), (140, 37621), (143, 37600), (151, 37543), (166, 37426), (171, 37378), (173, 37360), (184, 37264), (186, 37243), (190, 37213),

Gene: Carsonalex_56 Start: 38706, Stop: 37321, Start Num: 44
Candidate Starts for Carsonalex_56:
(Start: 25 @38805 has 1 MA's), (Start: 30 @38796 has 14 MA's), (42, 38712), (44, 38706), (52, 38625), (57, 38604), (77, 38478), (96, 38295), (98, 38289), (99, 38283), (108, 38205), (122, 38091), (125, 38064), (128, 38040), (136, 37980), (140, 37935), (143, 37914), (147, 37875), (151, 37857), (152, 37851), (166, 37740), (171, 37692), (172, 37689), (173, 37674), (184, 37578), (186, 37557), (190, 37527),

Gene: CherryonLim_57 Start: 41741, Stop: 40263, Start Num: 28
Candidate Starts for CherryonLim_57:
(17, 41822), (Start: 24 @41768 has 2 MA's), (Start: 28 @41741 has 45 MA's), (39, 41678), (44, 41651), (45, 41624), (52, 41570), (57, 41549), (61, 41534), (63, 41519), (79, 41414), (91, 41291), (96, 41237), (98, 41231), (99, 41225), (108, 41147), (122, 41033), (131, 40943), (133, 40934), (136, 40922), (137, 40901), (139, 40886), (140, 40877), (143, 40856), (147, 40817), (149, 40808), (152, 40793), (161, 40721), (167, 40673), (168, 40670), (171, 40628), (173, 40610), (184, 40514), (190, 40463), (194, 40433), (196, 40400), (201, 40343), (205, 40328),

Gene: ChickenTender_56 Start: 38517, Stop: 37042, Start Num: 28
Candidate Starts for ChickenTender_56:
(Start: 28 @38517 has 45 MA's), (44, 38427), (52, 38346), (57, 38325), (76, 38202), (77, 38199), (96, 38016), (98, 38010), (99, 38004), (108, 37926), (122, 37812), (125, 37785), (128, 37761), (136, 37701), (140, 37656), (143, 37635), (151, 37578), (166, 37461), (171, 37413), (172, 37410), (184, 37299), (186, 37278), (188, 37266), (190, 37248),

Gene: ChocoMunchkin_52 Start: 38485, Stop: 37007, Start Num: 28
Candidate Starts for ChocoMunchkin_52:
(Start: 28 @38485 has 45 MA's), (44, 38392), (45, 38365), (57, 38290), (Start: 65 @38248 has 1 MA's), (76, 38167), (91, 38035), (96, 37981), (99, 37969), (108, 37891), (122, 37777), (125, 37750), (128, 37726), (131, 37687), (140, 37621), (143, 37600), (151, 37543), (166, 37426), (171, 37378), (173, 37360), (184, 37264), (186, 37243), (190, 37213),

Gene: Cleo_47 Start: 37658, Stop: 36168, Start Num: 29
Candidate Starts for Cleo_47:
(Start: 29 @37658 has 8 MA's), (35, 37616), (42, 37574), (44, 37568), (45, 37541), (52, 37487), (54, 37481), (61, 37451), (Start: 65 @37424 has 1 MA's), (76, 37343), (77, 37340), (79, 37334), (80,

37313), (83, 37247), (91, 37211), (94, 37187), (96, 37157), (98, 37151), (99, 37145), (108, 37067), (124, 36935), (125, 36926), (135, 36848), (138, 36809), (140, 36797), (141, 36794), (145, 36758), (146, 36740), (147, 36737), (148, 36734), (151, 36719), (154, 36692), (155, 36680), (159, 36647), (167, 36578), (171, 36533), (172, 36530), (176, 36488), (177, 36473), (182, 36425), (184, 36419), (190, 36368), (199, 36272), (201, 36248), (207, 36215), (213, 36182), (214, 36179),

Gene: CocoaPuff_56 Start: 40198, Stop: 38810, Start Num: 44
Candidate Starts for CocoaPuff_56:
(17, 40366), (22, 40315), (Start: 24 @40312 has 2 MA's), (Start: 28 @40288 has 45 MA's), (39, 40225), (42, 40204), (44, 40198), (45, 40171), (52, 40117), (61, 40081), (63, 40066), (76, 39970), (79, 39961), (80, 39940), (83, 39874), (91, 39838), (96, 39784), (98, 39778), (99, 39772), (108, 39694), (110, 39679), (122, 39580), (129, 39505), (133, 39481), (136, 39469), (137, 39448), (139, 39433), (140, 39424), (143, 39403), (147, 39364), (149, 39355), (152, 39340), (159, 39289), (168, 39217), (171, 39175), (172, 39172), (173, 39157), (184, 39061), (190, 39010), (194, 38980), (196, 38947), (201, 38890), (205, 38875),

Gene: Cozz_51 Start: 38430, Stop: 36952, Start Num: 28
Candidate Starts for Cozz_51:
(Start: 28 @38430 has 45 MA's), (42, 38343), (44, 38337), (52, 38256), (57, 38235), (77, 38109), (96, 37926), (98, 37920), (99, 37914), (108, 37836), (122, 37722), (125, 37695), (128, 37671), (136, 37611), (140, 37566), (143, 37545), (147, 37506), (151, 37488), (166, 37371), (171, 37323), (172, 37320), (173, 37305), (184, 37209), (186, 37188), (190, 37158), (214, 36969),

Gene: Creature_75 Start: 51532, Stop: 53070, Start Num: 24
Candidate Starts for Creature_75:
(Start: 24 @51532 has 2 MA's), (33, 51571), (44, 51658), (47, 51700), (48, 51706), (49, 51709), (50, 51715), (53, 51742), (58, 51763), (62, 51784), (66, 51805), (67, 51814), (69, 51847), (71, 51856), (73, 51868), (75, 51883), (77, 51892), (78, 51895), (90, 52036), (91, 52042), (96, 52096), (99, 52108), (101, 52132), (104, 52153), (108, 52186), (111, 52225), (113, 52249), (114, 52258), (128, 52363), (132, 52408), (137, 52444), (138, 52456), (140, 52468), (141, 52471), (159, 52588), (166, 52654), (167, 52657), (168, 52660), (169, 52684), (171, 52702), (174, 52726), (182, 52810), (183, 52813), (188, 52849), (190, 52867), (194, 52897), (200, 52978), (203, 52993), (213, 53053),

Gene: Dewdrop_117 Start: 70672, Stop: 72663, Start Num: 3
Candidate Starts for Dewdrop_117:
(Start: 3 @70672 has 4 MA's), (4, 70705), (8, 70900), (10, 70906), (11, 70909), (12, 70939), (16, 70960), (18, 70972), (23, 71026), (26, 71053), (31, 71062), (40, 71116), (43, 71134), (44, 71137), (49, 71188), (55, 71230), (70, 71332), (85, 71494), (88, 71518), (91, 71542), (92, 71545), (95, 71587), (99, 71608), (101, 71632), (105, 71653), (107, 71674), (109, 71683), (116, 71779), (117, 71782), (118, 71794), (121, 71806), (124, 71833), (125, 71842), (126, 71845), (127, 71863), (134, 71917), (138, 71962), (144, 71998), (150, 72046), (160, 72124), (165, 72160), (166, 72175), (167, 72178), (175, 72250), (178, 72292), (182, 72337), (185, 72358), (187, 72370), (189, 72382), (195, 72436), (198, 72496), (201, 72523), (209, 72568), (217, 72646),

Gene: Dre3_48 Start: 37401, Stop: 35911, Start Num: 30
Candidate Starts for Dre3_48:
(Start: 30 @37401 has 14 MA's), (35, 37359), (42, 37317), (44, 37311), (45, 37284), (52, 37230), (54, 37224), (61, 37194), (Start: 65 @37167 has 1 MA's), (76, 37086), (77, 37083), (79, 37077), (80, 37056), (83, 36990), (91, 36954), (94, 36930), (96, 36900), (98, 36894), (99, 36888), (106, 36825), (108, 36810), (110, 36795), (125, 36669), (135, 36591), (138, 36552), (140, 36540), (141, 36537), (145, 36501), (146, 36483), (147, 36480), (148, 36477), (151, 36462), (154, 36435), (155, 36423), (167, 36321), (171, 36276), (172, 36273), (176, 36231), (177, 36216), (182, 36168), (184, 36162), (190, 36111), (199, 36015), (201, 35991), (207, 35958), (213, 35925), (214, 35922),

Gene: ElJefes_58 Start: 40827, Stop: 39349, Start Num: 28
Candidate Starts for ElJefes_58:
(17, 40908), (Start: 24 @40854 has 2 MA's), (Start: 28 @40827 has 45 MA's), (39, 40764), (42, 40743), (44, 40737), (45, 40710), (52, 40656), (57, 40635), (61, 40620), (63, 40605), (74, 40524), (79, 40500), (83, 40413), (91, 40377), (96, 40323), (98, 40317), (99, 40311), (108, 40233), (110, 40218), (119, 40128), (122, 40119), (125, 40092), (131, 40029), (133, 40020), (136, 40008), (137, 39987), (139, 39972), (140, 39963), (143, 39942), (147, 39903), (149, 39894), (152, 39879), (157, 39837), (161, 39807), (167, 39759), (168, 39756), (171, 39714), (173, 39696), (184, 39600), (190, 39549), (194, 39519), (196, 39486), (201, 39429), (205, 39414),

Gene: Elinal_60 Start: 40792, Stop: 39314, Start Num: 28
Candidate Starts for Elinal_60:
(Start: 28 @40792 has 45 MA's), (39, 40729), (42, 40708), (44, 40702), (45, 40675), (52, 40621), (61, 40585), (63, 40570), (76, 40474), (79, 40465), (80, 40444), (83, 40378), (91, 40342), (96, 40288), (98, 40282), (99, 40276), (108, 40198), (110, 40183), (122, 40084), (129, 40009), (133, 39985), (136, 39973), (137, 39952), (139, 39937), (140, 39928), (143, 39907), (147, 39868), (149, 39859), (152, 39844), (159, 39793), (168, 39721), (171, 39679), (172, 39676), (173, 39661), (184, 39565), (190, 39514), (194, 39484), (196, 39451), (201, 39394), (205, 39379),

Gene: Eliott_53 Start: 38726, Stop: 37248, Start Num: 28
Candidate Starts for Eliott_53:
(Start: 28 @38726 has 45 MA's), (42, 38639), (44, 38633), (52, 38552), (57, 38531), (76, 38408), (77, 38405), (96, 38222), (98, 38216), (99, 38210), (108, 38132), (122, 38018), (125, 37991), (128, 37967), (136, 37907), (140, 37862), (143, 37841), (147, 37802), (151, 37784), (166, 37667), (171, 37619), (172, 37616), (173, 37601), (184, 37505), (186, 37484), (190, 37454),

Gene: Emalyn_52 Start: 37827, Stop: 36349, Start Num: 28
Candidate Starts for Emalyn_52:
(Start: 28 @37827 has 45 MA's), (42, 37740), (44, 37734), (57, 37632), (Start: 65 @37590 has 1 MA's), (72, 37533), (75, 37515), (76, 37509), (91, 37377), (96, 37323), (98, 37317), (99, 37311), (108, 37233), (122, 37119), (125, 37092), (128, 37068), (131, 37029), (137, 36987), (140, 36963), (143, 36942), (147, 36903), (151, 36885), (152, 36879), (161, 36813), (166, 36768), (171, 36720), (172, 36717), (173, 36702), (184, 36606), (186, 36585), (190, 36555), (194, 36525), (210, 36387),

Gene: FF47_48 Start: 38882, Stop: 37371, Start Num: 20
Candidate Starts for FF47_48:
(Start: 20 @38882 has 2 MA's), (Start: 30 @38846 has 14 MA's), (43, 38756), (44, 38753), (48, 38705), (61, 38636), (78, 38522), (92, 38393), (96, 38342), (98, 38336), (99, 38330), (101, 38306), (108, 38252), (125, 38111), (126, 38108), (130, 38051), (140, 37979), (141, 37976), (167, 37781), (171, 37736), (181, 37631), (190, 37571), (210, 37403), (214, 37382),

Gene: Feastonyeet_56 Start: 40283, Stop: 38805, Start Num: 28
Candidate Starts for Feastonyeet_56:
(17, 40361), (22, 40310), (Start: 24 @40307 has 2 MA's), (Start: 28 @40283 has 45 MA's), (39, 40220), (42, 40199), (44, 40193), (45, 40166), (52, 40112), (61, 40076), (63, 40061), (76, 39965), (79, 39956), (80, 39935), (83, 39869), (91, 39833), (96, 39779), (98, 39773), (99, 39767), (108, 39689), (110, 39674), (122, 39575), (129, 39500), (133, 39476), (136, 39464), (137, 39443), (139, 39428), (140, 39419), (143, 39398), (147, 39359), (149, 39350), (152, 39335), (159, 39284), (168, 39212), (171, 39170), (173, 39152), (184, 39056), (190, 39005), (194, 38975), (196, 38942), (201, 38885), (205, 38870),

Gene: Fribs8_48 Start: 37679, Stop: 36189, Start Num: 30

Candidate Starts for Fribs8_48:
(Start: 30 @37679 has 14 MA's), (42, 37595), (44, 37589), (45, 37562), (52, 37508), (54, 37502), (61, 37472), (Start: 65 @37445 has 1 MA's), (76, 37364), (77, 37361), (79, 37355), (80, 37334), (83, 37268), (91, 37232), (94, 37208), (96, 37178), (97, 37175), (98, 37172), (99, 37166), (106, 37103), (108, 37088), (110, 37073), (125, 36947), (129, 36899), (137, 36842), (138, 36830), (140, 36818), (141, 36815), (145, 36779), (147, 36758), (148, 36755), (151, 36740), (154, 36713), (157, 36677), (159, 36668), (167, 36599), (171, 36554), (176, 36509), (177, 36494), (180, 36464), (184, 36440), (190, 36389), (194, 36359), (199, 36293), (201, 36269), (207, 36236), (214, 36200),

Gene: GTE2_44 Start: 38337, Stop: 36952, Start Num: 44
Candidate Starts for GTE2_44:
(Start: 28 @38430 has 45 MA's), (44, 38337), (45, 38310), (57, 38235), (61, 38220), (Start: 65 @38193 has 1 MA's), (76, 38112), (91, 37980), (96, 37926), (98, 37920), (99, 37914), (108, 37836), (122, 37722), (125, 37695), (131, 37632), (140, 37566), (143, 37545), (147, 37506), (151, 37488), (152, 37482), (166, 37371), (171, 37323), (173, 37305), (184, 37209), (186, 37188), (190, 37158),

Gene: GiKK_57 Start: 39360, Stop: 37885, Start Num: 30
Candidate Starts for GiKK_57:
(Start: 30 @39360 has 14 MA's), (35, 39318), (44, 39270), (45, 39243), (52, 39189), (57, 39168), (59, 39159), (61, 39153), (72, 39069), (74, 39060), (77, 39042), (79, 39036), (91, 38913), (96, 38859), (98, 38853), (99, 38847), (104, 38802), (108, 38769), (133, 38556), (137, 38523), (142, 38484), (147, 38439), (151, 38421), (152, 38415), (158, 38370), (159, 38364), (161, 38343), (167, 38295), (168, 38292), (171, 38250), (172, 38247), (173, 38232), (184, 38136), (190, 38085), (191, 38082), (196, 38022), (199, 37989), (200, 37974), (201, 37965), (209, 37920), (213, 37899),

Gene: Gibbous_48 Start: 37401, Stop: 35911, Start Num: 30
Candidate Starts for Gibbous_48:
(Start: 30 @37401 has 14 MA's), (35, 37359), (42, 37317), (44, 37311), (45, 37284), (52, 37230), (54, 37224), (61, 37194), (Start: 65 @37167 has 1 MA's), (76, 37086), (77, 37083), (79, 37077), (80, 37056), (83, 36990), (91, 36954), (94, 36930), (96, 36900), (98, 36894), (99, 36888), (106, 36825), (108, 36810), (110, 36795), (125, 36669), (135, 36591), (138, 36552), (140, 36540), (141, 36537), (145, 36501), (146, 36483), (147, 36480), (148, 36477), (151, 36462), (154, 36435), (155, 36423), (167, 36321), (171, 36276), (172, 36273), (176, 36231), (177, 36216), (182, 36168), (184, 36162), (190, 36111), (199, 36015), (201, 35991), (207, 35958), (213, 35925), (214, 35922),

Gene: GoldHunter_53 Start: 38843, Stop: 37365, Start Num: 28
Candidate Starts for GoldHunter_53:
(Start: 28 @38843 has 45 MA's), (42, 38756), (44, 38750), (52, 38669), (57, 38648), (76, 38525), (77, 38522), (96, 38339), (98, 38333), (99, 38327), (108, 38249), (122, 38135), (125, 38108), (128, 38084), (136, 38024), (140, 37979), (143, 37958), (147, 37919), (151, 37901), (166, 37784), (171, 37736), (172, 37733), (173, 37718), (184, 37622), (186, 37601), (190, 37571),

Gene: Hendrix_115 Start: 71918, Stop: 73936, Start Num: 3
Candidate Starts for Hendrix_115:
(1, 71888), (Start: 3 @71918 has 4 MA's), (7, 72131), (10, 72152), (12, 72185), (18, 72218), (23, 72272), (34, 72323), (36, 72353), (41, 72404), (54, 72506), (57, 72521), (82, 72707), (83, 72749), (84, 72752), (85, 72773), (88, 72797), (91, 72821), (93, 72827), (95, 72866), (100, 72899), (105, 72932), (109, 72962), (116, 73058), (118, 73073), (121, 73085), (124, 73112), (126, 73124), (127, 73142), (134, 73196), (138, 73241), (140, 73253), (141, 73256), (150, 73325), (160, 73403), (167, 73457), (175, 73529), (178, 73571), (180, 73598), (182, 73616), (185, 73637), (189, 73661), (198, 73775), (209, 73847), (215, 73895), (216, 73898),

Gene: Hexbug_60 Start: 41082, Stop: 39607, Start Num: 30

Candidate Starts for Hexbug_60:
(Start: 30 @41082 has 14 MA's), (35, 41040), (44, 40992), (45, 40965), (57, 40890), (59, 40881), (61, 40875), (72, 40791), (75, 40773), (77, 40764), (79, 40758), (91, 40635), (96, 40581), (98, 40575), (99, 40569), (106, 40506), (108, 40491), (110, 40476), (133, 40278), (137, 40245), (142, 40206), (147, 40161), (156, 40098), (159, 40086), (161, 40065), (163, 40050), (167, 40017), (168, 40014), (172, 39969), (177, 39912), (184, 39858), (190, 39807), (200, 39696), (204, 39675),

Gene: HippoPololi_50 Start: 37814, Stop: 36324, Start Num: 29
Candidate Starts for HippoPololi_50:
(Start: 29 @37814 has 8 MA's), (35, 37772), (42, 37730), (44, 37724), (45, 37697), (52, 37643), (61, 37607), (Start: 65 @37580 has 1 MA's), (76, 37499), (77, 37496), (79, 37490), (80, 37469), (83, 37403), (91, 37367), (94, 37343), (96, 37313), (98, 37307), (99, 37301), (108, 37223), (125, 37082), (135, 37004), (138, 36965), (141, 36950), (145, 36914), (147, 36893), (148, 36890), (151, 36875), (154, 36848), (159, 36803), (167, 36734), (171, 36689), (172, 36686), (176, 36644), (177, 36629), (181, 36584), (182, 36581), (184, 36575), (190, 36524), (194, 36494), (201, 36404), (207, 36371), (214, 36335),

Gene: Horseradish_55 Start: 38581, Stop: 37103, Start Num: 28
Candidate Starts for Horseradish_55:
(Start: 28 @38581 has 45 MA's), (42, 38494), (44, 38488), (49, 38437), (57, 38386), (61, 38371), (72, 38287), (76, 38263), (79, 38254), (91, 38131), (96, 38077), (98, 38071), (99, 38065), (102, 38035), (108, 37987), (122, 37873), (125, 37846), (128, 37822), (137, 37741), (140, 37717), (143, 37696), (147, 37657), (151, 37639), (152, 37633), (166, 37522), (168, 37516), (171, 37474), (173, 37456), (181, 37369), (184, 37360), (186, 37339), (190, 37309), (194, 37279), (196, 37246), (202, 37186), (207, 37156),

Gene: Huwbert_59 Start: 36808, Stop: 38358, Start Num: 27
Candidate Starts for Huwbert_59:
(Start: 25 @36805 has 1 MA's), (Start: 27 @36808 has 1 MA's), (38, 36874), (44, 36904), (46, 36934), (51, 36973), (56, 37000), (59, 37015), (68, 37069), (71, 37099), (82, 37183), (86, 37267), (87, 37276), (89, 37279), (102, 37399), (104, 37414), (112, 37501), (120, 37567), (124, 37591), (138, 37714), (140, 37726), (153, 37813), (164, 37912), (166, 37930), (180, 38068), (207, 38296), (208, 38305), (209, 38308),

Gene: JacoRen57_46 Start: 39673, Stop: 38201, Start Num: 32
Candidate Starts for JacoRen57_46:
(Start: 25 @39685 has 1 MA's), (Start: 32 @39673 has 2 MA's), (43, 39586), (44, 39583), (54, 39496), (57, 39481), (59, 39472), (76, 39358), (96, 39172), (99, 39160), (108, 39082), (130, 38881), (138, 38821), (140, 38809), (141, 38806), (171, 38566), (173, 38548), (179, 38494), (184, 38452), (186, 38431), (190, 38401), (192, 38386), (200, 38290), (202, 38278), (212, 38218),

Gene: Jamzy_58 Start: 39427, Stop: 37952, Start Num: 30
Candidate Starts for Jamzy_58:
(Start: 30 @39427 has 14 MA's), (44, 39337), (45, 39310), (52, 39256), (57, 39235), (59, 39226), (61, 39220), (72, 39136), (74, 39127), (77, 39109), (79, 39103), (91, 38980), (96, 38926), (98, 38920), (99, 38914), (104, 38869), (108, 38836), (133, 38623), (137, 38590), (142, 38551), (147, 38506), (151, 38488), (152, 38482), (158, 38437), (159, 38431), (161, 38410), (167, 38362), (168, 38359), (171, 38317), (172, 38314), (173, 38299), (184, 38203), (190, 38152), (196, 38089), (204, 38020), (213, 37966),

Gene: KayGee_58 Start: 40792, Stop: 39314, Start Num: 28
Candidate Starts for KayGee_58:

(Start: 28 @40792 has 45 MA's), (39, 40729), (42, 40708), (44, 40702), (45, 40675), (52, 40621), (61, 40585), (63, 40570), (76, 40474), (79, 40465), (80, 40444), (83, 40378), (91, 40342), (96, 40288), (98, 40282), (99, 40276), (108, 40198), (110, 40183), (122, 40084), (129, 40009), (133, 39985), (136, 39973), (137, 39952), (139, 39937), (140, 39928), (143, 39907), (147, 39868), (149, 39859), (152, 39844), (159, 39793), (168, 39721), (171, 39679), (172, 39676), (173, 39661), (184, 39565), (190, 39514), (194, 39484), (196, 39451), (201, 39394), (205, 39379),

Gene: KimJongPhill_74 Start: 51796, Stop: 53328, Start Num: 24
Candidate Starts for KimJongPhill_74:
(2, 51421), (5, 51580), (6, 51595), (14, 51715), (Start: 24 @51796 has 2 MA's), (42, 51910), (44, 51916), (47, 51958), (48, 51964), (49, 51967), (50, 51973), (53, 52000), (58, 52021), (66, 52063), (69, 52105), (73, 52126), (75, 52141), (76, 52147), (77, 52150), (78, 52153), (90, 52294), (91, 52300), (96, 52354), (99, 52366), (101, 52390), (104, 52411), (108, 52444), (113, 52507), (114, 52516), (120, 52558), (135, 52675), (137, 52702), (138, 52714), (140, 52726), (141, 52729), (166, 52912), (169, 52942), (170, 52954), (171, 52960), (174, 52984), (182, 53068), (190, 53125), (193, 53143), (200, 53236), (203, 53251), (207, 53278),

Gene: Lauer_52 Start: 41675, Stop: 40197, Start Num: 28
Candidate Starts for Lauer_52:
(Start: 28 @41675 has 45 MA's), (39, 41612), (44, 41585), (45, 41558), (52, 41504), (57, 41483), (63, 41453), (79, 41348), (80, 41327), (83, 41261), (91, 41225), (96, 41171), (98, 41165), (99, 41159), (108, 41081), (110, 41066), (122, 40967), (129, 40892), (133, 40868), (136, 40856), (137, 40835), (139, 40820), (140, 40811), (143, 40790), (147, 40751), (149, 40742), (159, 40676), (168, 40604), (171, 40562), (172, 40559), (173, 40544), (184, 40448), (190, 40397), (194, 40367), (196, 40334), (201, 40277), (205, 40262),

Gene: Leaf_117 Start: 70672, Stop: 72663, Start Num: 3
Candidate Starts for Leaf_117:
(Start: 3 @70672 has 4 MA's), (4, 70705), (8, 70900), (10, 70906), (11, 70909), (12, 70939), (16, 70960), (18, 70972), (23, 71026), (26, 71053), (31, 71062), (40, 71116), (43, 71134), (44, 71137), (49, 71188), (55, 71230), (70, 71332), (85, 71494), (88, 71518), (91, 71542), (92, 71545), (95, 71587), (99, 71608), (101, 71632), (105, 71653), (107, 71674), (109, 71683), (116, 71779), (117, 71782), (118, 71794), (121, 71806), (124, 71833), (125, 71842), (126, 71845), (127, 71863), (134, 71917), (138, 71962), (144, 71998), (150, 72046), (160, 72124), (165, 72160), (166, 72175), (167, 72178), (175, 72250), (178, 72292), (182, 72337), (185, 72358), (187, 72370), (189, 72382), (195, 72436), (198, 72496), (201, 72523), (209, 72568), (217, 72646),

Gene: LongHai_51 Start: 39283, Stop: 37772, Start Num: 20
Candidate Starts for LongHai_51:
(Start: 20 @39283 has 2 MA's), (Start: 30 @39247 has 14 MA's), (43, 39157), (44, 39154), (48, 39106), (61, 39037), (76, 38929), (92, 38794), (96, 38743), (98, 38737), (99, 38731), (101, 38707), (108, 38653), (125, 38512), (126, 38509), (130, 38452), (132, 38443), (140, 38380), (141, 38377), (167, 38182), (171, 38137), (181, 38032), (190, 37972), (192, 37957), (210, 37804), (214, 37783),

Gene: MAnor_58 Start: 41147, Stop: 39669, Start Num: 28
Candidate Starts for MAnor_58:
(Start: 24 @41174 has 2 MA's), (Start: 28 @41147 has 45 MA's), (39, 41084), (44, 41057), (45, 41030), (52, 40976), (57, 40955), (58, 40952), (61, 40940), (63, 40925), (Start: 65 @40913 has 1 MA's), (79, 40820), (91, 40697), (96, 40643), (98, 40637), (99, 40631), (108, 40553), (110, 40538), (122, 40439), (131, 40349), (133, 40340), (136, 40328), (137, 40307), (139, 40292), (140, 40283), (143, 40262), (147, 40223), (149, 40214), (152, 40199), (157, 40157), (167, 40079), (168, 40076), (171, 40034), (173, 40016), (184, 39920), (190, 39869), (194, 39839), (196, 39806), (201, 39749), (205, 39734),

Gene: MScarn_57 Start: 38763, Stop: 37285, Start Num: 28
Candidate Starts for MScarn_57:
(Start: 28 @38763 has 45 MA's), (42, 38676), (44, 38670), (49, 38619), (57, 38568), (61, 38553), (72, 38469), (76, 38445), (79, 38436), (91, 38313), (96, 38259), (98, 38253), (99, 38247), (108, 38169), (122, 38055), (125, 38028), (128, 38004), (137, 37923), (140, 37899), (143, 37878), (147, 37839), (151, 37821), (152, 37815), (166, 37704), (168, 37698), (171, 37656), (173, 37638), (181, 37551), (184, 37542), (186, 37521), (190, 37491), (194, 37461), (196, 37428), (202, 37368), (207, 37338),

Gene: MaVan_49 Start: 37938, Stop: 36448, Start Num: 29
Candidate Starts for MaVan_49:
(Start: 29 @37938 has 8 MA's), (44, 37848), (45, 37821), (51, 37779), (61, 37731), (Start: 65 @37704 has 1 MA's), (76, 37623), (77, 37620), (79, 37614), (80, 37593), (83, 37527), (96, 37437), (99, 37425), (106, 37362), (108, 37347), (110, 37332), (124, 37215), (125, 37206), (135, 37128), (137, 37101), (138, 37089), (140, 37077), (145, 37038), (147, 37017), (148, 37014), (151, 36999), (159, 36927), (167, 36858), (171, 36813), (176, 36768), (177, 36753), (180, 36723), (184, 36699), (190, 36648), (194, 36618), (199, 36552), (201, 36528), (207, 36495), (214, 36459),

Gene: Maco6_48 Start: 38222, Stop: 36711, Start Num: 20
Candidate Starts for Maco6_48:
(Start: 20 @38222 has 2 MA's), (Start: 30 @38186 has 14 MA's), (43, 38096), (44, 38093), (48, 38045), (61, 37976), (78, 37862), (92, 37733), (96, 37682), (98, 37676), (99, 37670), (101, 37646), (108, 37592), (125, 37451), (126, 37448), (130, 37391), (140, 37319), (141, 37316), (164, 37142), (167, 37121), (171, 37076), (181, 36971), (190, 36911), (210, 36743), (214, 36722),

Gene: Malvina_51 Start: 37812, Stop: 36322, Start Num: 29
Candidate Starts for Malvina_51:
(Start: 29 @37812 has 8 MA's), (35, 37770), (42, 37728), (44, 37722), (45, 37695), (52, 37641), (61, 37605), (Start: 65 @37578 has 1 MA's), (76, 37497), (77, 37494), (79, 37488), (80, 37467), (81, 37452), (83, 37401), (91, 37365), (93, 37359), (94, 37341), (96, 37311), (98, 37305), (99, 37299), (108, 37221), (125, 37080), (135, 37002), (138, 36963), (141, 36948), (145, 36912), (147, 36891), (148, 36888), (151, 36873), (154, 36846), (159, 36801), (167, 36732), (171, 36687), (172, 36684), (176, 36642), (177, 36627), (181, 36582), (182, 36579), (184, 36573), (190, 36522), (194, 36492), (201, 36402), (207, 36369), (214, 36333),

Gene: Margaret_58 Start: 39745, Stop: 38270, Start Num: 30
Candidate Starts for Margaret_58:
(Start: 30 @39745 has 14 MA's), (35, 39703), (44, 39655), (45, 39628), (50, 39598), (52, 39574), (57, 39553), (59, 39544), (61, 39538), (Start: 65 @39511 has 1 MA's), (72, 39454), (74, 39445), (77, 39427), (79, 39421), (91, 39298), (96, 39244), (98, 39238), (99, 39232), (106, 39169), (108, 39154), (110, 39139), (131, 38950), (133, 38941), (136, 38929), (137, 38908), (142, 38869), (144, 38860), (147, 38824), (151, 38806), (152, 38800), (158, 38755), (159, 38749), (167, 38680), (172, 38632), (173, 38617), (176, 38590), (177, 38575), (184, 38521), (190, 38470), (196, 38407), (200, 38359), (202, 38347), (204, 38338),

Gene: Mayweather_61 Start: 41658, Stop: 40414, Start Num: 65
Candidate Starts for Mayweather_61:
(Start: 28 @41892 has 45 MA's), (39, 41829), (44, 41802), (45, 41775), (52, 41721), (57, 41700), (58, 41697), (61, 41685), (63, 41670), (Start: 65 @41658 has 1 MA's), (79, 41565), (91, 41442), (96, 41388), (98, 41382), (99, 41376), (108, 41298), (110, 41283), (122, 41184), (131, 41094), (133, 41085), (136, 41073), (137, 41052), (139, 41037), (140, 41028), (143, 41007), (147, 40968), (149, 40959), (152, 40944), (157, 40902), (167, 40824), (168, 40821), (171, 40779), (173, 40761), (184, 40665), (190, 40614), (194, 40584), (196, 40551), (201, 40494), (205, 40479),

Gene: McDazzle_58 Start: 40821, Stop: 39343, Start Num: 28
Candidate Starts for McDazzle_58:
(17, 40902), (Start: 24 @40848 has 2 MA's), (Start: 28 @40821 has 45 MA's), (39, 40758), (42, 40737), (44, 40731), (45, 40704), (52, 40650), (57, 40629), (61, 40614), (63, 40599), (74, 40518), (79, 40494), (83, 40407), (91, 40371), (96, 40317), (98, 40311), (99, 40305), (108, 40227), (110, 40212), (119, 40122), (122, 40113), (125, 40086), (131, 40023), (133, 40014), (136, 40002), (137, 39981), (139, 39966), (140, 39957), (143, 39936), (147, 39897), (149, 39888), (152, 39873), (157, 39831), (161, 39801), (167, 39753), (168, 39750), (171, 39708), (173, 39690), (184, 39594), (190, 39543), (194, 39513), (196, 39480), (201, 39423), (205, 39408),

Gene: Muddy_50 Start: 39454, Stop: 37943, Start Num: 20
Candidate Starts for Muddy_50:
(Start: 20 @39454 has 2 MA's), (Start: 30 @39418 has 14 MA's), (43, 39328), (44, 39325), (48, 39277), (61, 39208), (78, 39094), (92, 38965), (96, 38914), (98, 38908), (99, 38902), (101, 38878), (108, 38824), (125, 38683), (126, 38680), (130, 38623), (140, 38551), (141, 38548), (164, 38374), (167, 38353), (171, 38308), (181, 38203), (190, 38143), (210, 37975), (214, 37954),

Gene: MunkgeeRoachy_51 Start: 38189, Stop: 36711, Start Num: 28
Candidate Starts for MunkgeeRoachy_51:
(Start: 28 @38189 has 45 MA's), (44, 38096), (52, 38015), (57, 37994), (76, 37871), (77, 37868), (96, 37685), (98, 37679), (99, 37673), (102, 37643), (108, 37595), (122, 37481), (125, 37454), (128, 37430), (136, 37370), (140, 37325), (143, 37304), (147, 37265), (151, 37247), (152, 37241), (171, 37082), (172, 37079), (173, 37064), (184, 36968), (186, 36947), (190, 36917),

Gene: Nibbles_48 Start: 37634, Stop: 36144, Start Num: 29
Candidate Starts for Nibbles_48:
(Start: 29 @37634 has 8 MA's), (44, 37544), (45, 37517), (51, 37475), (59, 37433), (61, 37427), (Start: 65 @37400 has 1 MA's), (76, 37319), (77, 37316), (79, 37310), (80, 37289), (83, 37223), (96, 37133), (99, 37121), (108, 37043), (110, 37028), (124, 36911), (125, 36902), (135, 36824), (137, 36797), (138, 36785), (140, 36773), (145, 36734), (147, 36713), (148, 36710), (151, 36695), (159, 36623), (171, 36509), (176, 36464), (177, 36449), (180, 36419), (184, 36395), (190, 36344), (191, 36341), (194, 36314), (199, 36248), (201, 36224), (207, 36191), (214, 36155),

Gene: Nina_53 Start: 39329, Stop: 37851, Start Num: 28
Candidate Starts for Nina_53:
(Start: 28 @39329 has 45 MA's), (42, 39242), (44, 39236), (52, 39155), (76, 39011), (77, 39008), (96, 38825), (98, 38819), (99, 38813), (108, 38735), (122, 38621), (125, 38594), (128, 38570), (136, 38510), (140, 38465), (143, 38444), (147, 38405), (151, 38387), (166, 38270), (171, 38222), (172, 38219), (173, 38204), (184, 38108), (186, 38087), (190, 38057),

Gene: NoShow_58 Start: 42406, Stop: 40934, Start Num: 32
Candidate Starts for NoShow_58:
(Start: 32 @42406 has 2 MA's), (44, 42316), (45, 42289), (54, 42229), (72, 42115), (78, 42085), (96, 41905), (98, 41899), (99, 41893), (108, 41815), (130, 41614), (140, 41542), (141, 41539), (142, 41527), (147, 41482), (157, 41422), (161, 41392), (173, 41281), (179, 41227), (184, 41185), (190, 41134), (199, 41038), (202, 41011), (210, 40966),

Gene: Nodigi_60 Start: 41112, Stop: 39637, Start Num: 30
Candidate Starts for Nodigi_60:
(13, 41229), (15, 41223), (Start: 30 @41112 has 14 MA's), (35, 41070), (44, 41022), (45, 40995), (57, 40920), (59, 40911), (61, 40905), (72, 40821), (75, 40803), (77, 40794), (79, 40788), (91, 40665), (96, 40611), (98, 40605), (99, 40599), (106, 40536), (108, 40521), (110, 40506), (133, 40308), (137, 40275), (142, 40236), (147, 40191), (156, 40128), (158, 40122), (159, 40116), (161, 40095), (163,

40080), (167, 40047), (168, 40044), (172, 39999), (177, 39942), (184, 39888), (190, 39837), (196, 39774), (200, 39726), (204, 39705),

Gene: Orla_60 Start: 41041, Stop: 39566, Start Num: 30
Candidate Starts for Orla_60:
(Start: 30 @41041 has 14 MA's), (35, 40999), (44, 40951), (45, 40924), (57, 40849), (59, 40840), (61, 40834), (72, 40750), (75, 40732), (77, 40723), (79, 40717), (91, 40594), (96, 40540), (98, 40534), (99, 40528), (106, 40465), (108, 40450), (110, 40435), (133, 40237), (137, 40204), (142, 40165), (147, 40120), (156, 40057), (158, 40051), (159, 40045), (167, 39976), (168, 39973), (172, 39928), (177, 39871), (184, 39817), (190, 39766), (200, 39655), (204, 39634),

Gene: Pons_58 Start: 40779, Stop: 39301, Start Num: 28
Candidate Starts for Pons_58:
(17, 40860), (Start: 24 @40806 has 2 MA's), (Start: 28 @40779 has 45 MA's), (39, 40716), (44, 40689), (45, 40662), (52, 40608), (57, 40587), (58, 40584), (63, 40557), (Start: 65 @40545 has 1 MA's), (79, 40452), (91, 40329), (96, 40275), (98, 40269), (99, 40263), (108, 40185), (110, 40170), (119, 40080), (122, 40071), (125, 40044), (131, 39981), (133, 39972), (136, 39960), (137, 39939), (139, 39924), (140, 39915), (143, 39894), (147, 39855), (149, 39846), (152, 39831), (167, 39711), (168, 39708), (171, 39666), (173, 39648), (184, 39552), (190, 39501), (194, 39471), (196, 39438), (201, 39381), (205, 39366),

Gene: PotPie_56 Start: 41318, Stop: 39840, Start Num: 28
Candidate Starts for PotPie_56:
(17, 41396), (22, 41345), (Start: 24 @41342 has 2 MA's), (Start: 28 @41318 has 45 MA's), (39, 41255), (42, 41234), (44, 41228), (45, 41201), (52, 41147), (61, 41111), (63, 41096), (76, 41000), (79, 40991), (80, 40970), (83, 40904), (91, 40868), (96, 40814), (98, 40808), (99, 40802), (108, 40724), (110, 40709), (122, 40610), (129, 40535), (133, 40511), (136, 40499), (137, 40478), (139, 40463), (140, 40454), (143, 40433), (147, 40394), (149, 40385), (152, 40370), (159, 40319), (167, 40250), (168, 40247), (171, 40205), (173, 40187), (184, 40091), (190, 40040), (194, 40010), (196, 39977), (201, 39920), (205, 39905),

Gene: PsychoKiller_52 Start: 38727, Stop: 37249, Start Num: 28
Candidate Starts for PsychoKiller_52:
(Start: 28 @38727 has 45 MA's), (42, 38640), (44, 38634), (52, 38553), (57, 38532), (76, 38409), (77, 38406), (96, 38223), (98, 38217), (99, 38211), (108, 38133), (122, 38019), (125, 37992), (128, 37968), (136, 37908), (140, 37863), (143, 37842), (147, 37803), (151, 37785), (166, 37668), (171, 37620), (172, 37617), (173, 37602), (184, 37506), (186, 37485), (190, 37455),

Gene: Quasar_53 Start: 39431, Stop: 37953, Start Num: 28
Candidate Starts for Quasar_53:
(Start: 28 @39431 has 45 MA's), (42, 39344), (44, 39338), (57, 39236), (76, 39113), (77, 39110), (96, 38927), (98, 38921), (99, 38915), (108, 38837), (122, 38723), (125, 38696), (128, 38672), (136, 38612), (140, 38567), (143, 38546), (147, 38507), (151, 38489), (166, 38372), (171, 38324), (172, 38321), (173, 38306), (184, 38210), (186, 38189), (190, 38159),

Gene: RADical_54 Start: 38721, Stop: 37243, Start Num: 28
Candidate Starts for RADical_54:
(Start: 28 @38721 has 45 MA's), (42, 38634), (44, 38628), (52, 38547), (57, 38526), (77, 38400), (96, 38217), (98, 38211), (99, 38205), (108, 38127), (122, 38013), (125, 37986), (128, 37962), (136, 37902), (140, 37857), (143, 37836), (147, 37797), (151, 37779), (166, 37662), (171, 37614), (172, 37611), (173, 37596), (184, 37500), (186, 37479), (190, 37449),

Gene: RSchmailzl_54 Start: 38877, Stop: 37399, Start Num: 28

Candidate Starts for RSchmailzl_54:
(Start: 28 @38877 has 45 MA's), (42, 38790), (44, 38784), (57, 38682), (77, 38556), (96, 38373), (98, 38367), (99, 38361), (108, 38283), (122, 38169), (125, 38142), (128, 38118), (136, 38058), (140, 38013), (143, 37992), (147, 37953), (151, 37935), (166, 37818), (171, 37770), (172, 37767), (173, 37752), (184, 37656), (186, 37635), (190, 37605), (214, 37416),

Gene: RanchParmCat_57 Start: 39886, Stop: 38411, Start Num: 30
Candidate Starts for RanchParmCat_57:
(Start: 30 @39886 has 14 MA's), (35, 39844), (44, 39796), (45, 39769), (50, 39739), (52, 39715), (57, 39694), (59, 39685), (61, 39679), (Start: 65 @39652 has 1 MA's), (72, 39595), (74, 39586), (77, 39568), (79, 39562), (91, 39439), (96, 39385), (98, 39379), (99, 39373), (106, 39310), (108, 39295), (110, 39280), (131, 39091), (133, 39082), (137, 39049), (142, 39010), (144, 39001), (147, 38965), (151, 38947), (152, 38941), (158, 38896), (159, 38890), (167, 38821), (172, 38773), (173, 38758), (177, 38716), (184, 38662), (188, 38629), (190, 38611), (196, 38548), (200, 38500), (202, 38488), (204, 38479), (214, 38422),

Gene: Rasputia_111 Start: 69328, Stop: 71340, Start Num: 3
Candidate Starts for Rasputia_111:
(Start: 3 @69328 has 4 MA's), (7, 69541), (8, 69556), (9, 69559), (12, 69595), (16, 69616), (18, 69628), (23, 69682), (41, 69802), (60, 69931), (70, 70009), (82, 70105), (84, 70150), (85, 70171), (88, 70195), (91, 70219), (95, 70264), (99, 70285), (105, 70330), (109, 70360), (116, 70456), (118, 70471), (121, 70483), (124, 70510), (126, 70522), (127, 70540), (134, 70594), (138, 70639), (141, 70654), (150, 70723), (157, 70777), (160, 70801), (162, 70810), (167, 70855), (168, 70858), (175, 70930), (178, 70972), (180, 70999), (181, 71014), (182, 71017), (185, 71038), (198, 71176), (201, 71203), (209, 71248), (218, 71329),

Gene: RedBaron_58 Start: 39379, Stop: 37904, Start Num: 30
Candidate Starts for RedBaron_58:
(Start: 25 @39388 has 1 MA's), (Start: 30 @39379 has 14 MA's), (39, 39316), (42, 39295), (44, 39289), (52, 39208), (57, 39187), (76, 39064), (77, 39061), (93, 38926), (96, 38878), (98, 38872), (99, 38866), (108, 38788), (122, 38674), (125, 38647), (128, 38623), (136, 38563), (140, 38518), (143, 38497), (147, 38458), (151, 38440), (166, 38323), (171, 38275), (172, 38272), (173, 38257), (184, 38161), (186, 38140), (190, 38110),

Gene: Salvus_51 Start: 39283, Stop: 37772, Start Num: 20
Candidate Starts for Salvus_51:
(Start: 20 @39283 has 2 MA's), (Start: 30 @39247 has 14 MA's), (43, 39157), (44, 39154), (48, 39106), (61, 39037), (76, 38929), (92, 38794), (96, 38743), (98, 38737), (99, 38731), (101, 38707), (108, 38653), (125, 38512), (126, 38509), (130, 38452), (132, 38443), (140, 38380), (141, 38377), (167, 38182), (171, 38137), (181, 38032), (190, 37972), (192, 37957), (210, 37804), (214, 37783),

Gene: SheckWes_60 Start: 40367, Stop: 38889, Start Num: 28
Candidate Starts for SheckWes_60:
(17, 40448), (Start: 24 @40394 has 2 MA's), (Start: 28 @40367 has 45 MA's), (39, 40304), (42, 40283), (44, 40277), (45, 40250), (52, 40196), (57, 40175), (61, 40160), (63, 40145), (74, 40064), (79, 40040), (83, 39953), (91, 39917), (96, 39863), (98, 39857), (99, 39851), (108, 39773), (110, 39758), (119, 39668), (122, 39659), (125, 39632), (131, 39569), (133, 39560), (136, 39548), (137, 39527), (139, 39512), (140, 39503), (143, 39482), (147, 39443), (149, 39434), (152, 39419), (157, 39377), (161, 39347), (167, 39299), (168, 39296), (171, 39254), (173, 39236), (184, 39140), (190, 39089), (194, 39059), (196, 39026), (201, 38969), (205, 38954),

Gene: Shrew_71 Start: 40994, Stop: 42517, Start Num: 30
Candidate Starts for Shrew_71:

(19, 40949), (21, 40955), (Start: 30 @40994 has 14 MA's), (35, 41036), (37, 41054), (44, 41087), (49, 41138), (53, 41171), (59, 41198), (64, 41225), (77, 41315), (96, 41531), (97, 41534), (101, 41567), (103, 41585), (112, 41660), (115, 41699), (117, 41705), (138, 41873), (140, 41885), (159, 42023), (164, 42071), (205, 42440), (206, 42443), (209, 42470), (211, 42476),

Gene: SketchMex_53 Start: 38648, Stop: 37170, Start Num: 28
Candidate Starts for SketchMex_53:
(Start: 28 @38648 has 45 MA's), (42, 38561), (44, 38555), (49, 38504), (57, 38453), (61, 38438), (72, 38354), (76, 38330), (79, 38321), (91, 38198), (96, 38144), (98, 38138), (99, 38132), (108, 38054), (122, 37940), (125, 37913), (128, 37889), (137, 37808), (140, 37784), (143, 37763), (147, 37724), (151, 37706), (152, 37700), (166, 37589), (168, 37583), (171, 37541), (173, 37523), (181, 37436), (184, 37427), (186, 37406), (190, 37376), (194, 37346), (196, 37313), (207, 37223),

Gene: Socotra_54 Start: 38839, Stop: 37361, Start Num: 28
Candidate Starts for Socotra_54:
(Start: 28 @38839 has 45 MA's), (42, 38752), (44, 38746), (52, 38665), (57, 38644), (77, 38518), (96, 38335), (98, 38329), (99, 38323), (108, 38245), (122, 38131), (125, 38104), (128, 38080), (136, 38020), (140, 37975), (143, 37954), (147, 37915), (151, 37897), (166, 37780), (171, 37732), (172, 37729), (173, 37714), (184, 37618), (186, 37597), (190, 37567), (214, 37378),

Gene: Sopespian_51 Start: 38728, Stop: 37250, Start Num: 28
Candidate Starts for Sopespian_51:
(Start: 28 @38728 has 45 MA's), (42, 38641), (44, 38635), (52, 38554), (57, 38533), (76, 38410), (77, 38407), (96, 38224), (98, 38218), (99, 38212), (108, 38134), (122, 38020), (125, 37993), (128, 37969), (136, 37909), (140, 37864), (143, 37843), (147, 37804), (151, 37786), (166, 37669), (171, 37621), (172, 37618), (173, 37603), (184, 37507), (186, 37486), (190, 37456),

Gene: Starburst_53 Start: 38723, Stop: 37245, Start Num: 28
Candidate Starts for Starburst_53:
(Start: 28 @38723 has 45 MA's), (42, 38636), (44, 38630), (52, 38549), (57, 38528), (77, 38402), (96, 38219), (98, 38213), (99, 38207), (108, 38129), (122, 38015), (125, 37988), (128, 37964), (136, 37904), (140, 37859), (143, 37838), (147, 37799), (151, 37781), (166, 37664), (171, 37616), (172, 37613), (173, 37598), (184, 37502), (186, 37481), (190, 37451),

Gene: SteamedHams_54 Start: 38292, Stop: 36814, Start Num: 28
Candidate Starts for SteamedHams_54:
(Start: 28 @38292 has 45 MA's), (44, 38199), (45, 38172), (57, 38097), (Start: 65 @38055 has 1 MA's), (76, 37974), (91, 37842), (96, 37788), (99, 37776), (108, 37698), (122, 37584), (125, 37557), (128, 37533), (131, 37494), (140, 37428), (143, 37407), (151, 37350), (166, 37233), (171, 37185), (173, 37167), (184, 37071), (186, 37050), (190, 37020),

Gene: SummitAcademy_56 Start: 40461, Stop: 38983, Start Num: 28
Candidate Starts for SummitAcademy_56:
(17, 40539), (22, 40488), (Start: 24 @40485 has 2 MA's), (Start: 28 @40461 has 45 MA's), (39, 40398), (42, 40377), (44, 40371), (45, 40344), (52, 40290), (61, 40254), (63, 40239), (76, 40143), (79, 40134), (80, 40113), (83, 40047), (91, 40011), (96, 39957), (98, 39951), (99, 39945), (108, 39867), (110, 39852), (122, 39753), (129, 39678), (133, 39654), (136, 39642), (137, 39621), (139, 39606), (140, 39597), (143, 39576), (147, 39537), (149, 39528), (152, 39513), (159, 39462), (168, 39390), (171, 39348), (172, 39345), (173, 39330), (184, 39234), (190, 39183), (194, 39153), (196, 39120), (201, 39063), (205, 39048),

Gene: Survivors_49 Start: 37834, Stop: 36344, Start Num: 29
Candidate Starts for Survivors_49:

(Start: 29 @37834 has 8 MA's), (44, 37744), (45, 37717), (51, 37675), (59, 37633), (61, 37627), (Start: 65 @37600 has 1 MA's), (76, 37519), (77, 37516), (79, 37510), (80, 37489), (83, 37423), (96, 37333), (99, 37321), (106, 37258), (108, 37243), (110, 37228), (124, 37111), (125, 37102), (135, 37024), (137, 36997), (138, 36985), (140, 36973), (145, 36934), (147, 36913), (148, 36910), (151, 36895), (159, 36823), (171, 36709), (176, 36664), (177, 36649), (180, 36619), (184, 36595), (190, 36544), (194, 36514), (199, 36448), (201, 36424), (207, 36391), (214, 36355),

Gene: SweatNTears_55 Start: 38970, Stop: 37492, Start Num: 28
Candidate Starts for SweatNTears_55:
(Start: 28 @38970 has 45 MA's), (42, 38883), (44, 38877), (52, 38796), (76, 38652), (77, 38649), (96, 38466), (98, 38460), (99, 38454), (108, 38376), (122, 38262), (125, 38235), (128, 38211), (136, 38151), (140, 38106), (143, 38085), (147, 38046), (151, 38028), (166, 37911), (171, 37863), (172, 37860), (173, 37845), (184, 37749), (186, 37728), (190, 37698),

Gene: Tarnish_57 Start: 41046, Stop: 39568, Start Num: 28
Candidate Starts for Tarnish_57:
(Start: 28 @41046 has 45 MA's), (39, 40983), (42, 40962), (44, 40956), (45, 40929), (52, 40875), (61, 40839), (63, 40824), (76, 40728), (79, 40719), (80, 40698), (83, 40632), (91, 40596), (96, 40542), (98, 40536), (99, 40530), (108, 40452), (110, 40437), (122, 40338), (129, 40263), (133, 40239), (136, 40227), (137, 40206), (139, 40191), (140, 40182), (143, 40161), (147, 40122), (149, 40113), (152, 40098), (159, 40047), (168, 39975), (171, 39933), (172, 39930), (173, 39915), (184, 39819), (190, 39768), (194, 39738), (196, 39705), (201, 39648), (205, 39633),

Gene: Tolls_54 Start: 38563, Stop: 37085, Start Num: 28
Candidate Starts for Tolls_54:
(Start: 28 @38563 has 45 MA's), (44, 38470), (45, 38443), (57, 38368), (Start: 65 @38326 has 1 MA's), (76, 38245), (91, 38113), (96, 38059), (99, 38047), (108, 37969), (122, 37855), (125, 37828), (128, 37804), (140, 37699), (143, 37678), (147, 37639), (151, 37621), (152, 37615), (166, 37504), (171, 37456), (173, 37438), (184, 37342), (186, 37321), (190, 37291),

Gene: Triscuit_58 Start: 36727, Stop: 38280, Start Num: 25
Candidate Starts for Triscuit_58:
(Start: 25 @36727 has 1 MA's), (Start: 27 @36730 has 1 MA's), (44, 36826), (46, 36856), (51, 36895), (56, 36922), (59, 36937), (67, 36982), (68, 36991), (71, 37021), (82, 37105), (86, 37189), (87, 37198), (89, 37201), (102, 37321), (104, 37336), (112, 37423), (124, 37513), (138, 37636), (140, 37648), (153, 37735), (164, 37834), (166, 37852), (180, 37990), (207, 38218), (208, 38227), (209, 38230),

Gene: Troje_55 Start: 38986, Stop: 37508, Start Num: 28
Candidate Starts for Troje_55:
(Start: 28 @38986 has 45 MA's), (42, 38899), (44, 38893), (49, 38842), (57, 38791), (61, 38776), (72, 38692), (76, 38668), (79, 38659), (91, 38536), (96, 38482), (98, 38476), (99, 38470), (102, 38440), (108, 38392), (122, 38278), (125, 38251), (128, 38227), (137, 38146), (140, 38122), (143, 38101), (147, 38062), (151, 38044), (152, 38038), (166, 37927), (168, 37921), (171, 37879), (173, 37861), (181, 37774), (184, 37765), (186, 37744), (190, 37714), (194, 37684), (196, 37651), (207, 37561),

Gene: Typhonomachy_52 Start: 38552, Stop: 37074, Start Num: 28
Candidate Starts for Typhonomachy_52:
(Start: 28 @38552 has 45 MA's), (42, 38465), (44, 38459), (52, 38378), (57, 38357), (77, 38231), (96, 38048), (98, 38042), (99, 38036), (108, 37958), (122, 37844), (125, 37817), (128, 37793), (136, 37733), (140, 37688), (143, 37667), (147, 37628), (151, 37610), (166, 37493), (171, 37445), (172, 37442), (173, 37427), (184, 37331), (186, 37310), (190, 37280),

Gene: Vine_59 Start: 41084, Stop: 39606, Start Num: 28

Candidate Starts for Vine_59:
(17, 41162), (22, 41111), (Start: 24 @41108 has 2 MA's), (Start: 28 @41084 has 45 MA's), (39, 41021), (42, 41000), (44, 40994), (45, 40967), (52, 40913), (61, 40877), (63, 40862), (76, 40766), (79, 40757), (80, 40736), (83, 40670), (91, 40634), (96, 40580), (98, 40574), (99, 40568), (108, 40490), (110, 40475), (122, 40376), (129, 40301), (133, 40277), (136, 40265), (137, 40244), (139, 40229), (140, 40220), (143, 40199), (147, 40160), (149, 40151), (152, 40136), (159, 40085), (167, 40016), (168, 40013), (171, 39971), (173, 39953), (184, 39857), (190, 39806), (194, 39776), (196, 39743), (201, 39686), (205, 39671),

Gene: Wallaby_51 Start: 37932, Stop: 36442, Start Num: 29
Candidate Starts for Wallaby_51:
(Start: 29 @37932 has 8 MA's), (44, 37842), (45, 37815), (51, 37773), (61, 37725), (Start: 65 @37698 has 1 MA's), (76, 37617), (77, 37614), (79, 37608), (80, 37587), (83, 37521), (96, 37431), (99, 37419), (106, 37356), (108, 37341), (110, 37326), (124, 37209), (125, 37200), (135, 37122), (137, 37095), (138, 37083), (140, 37071), (145, 37032), (147, 37011), (148, 37008), (151, 36993), (159, 36921), (167, 36852), (171, 36807), (176, 36762), (177, 36747), (180, 36717), (184, 36693), (190, 36642), (194, 36612), (199, 36546), (201, 36522), (207, 36489), (214, 36453),

Gene: Wolfwood_49 Start: 37906, Stop: 36416, Start Num: 29
Candidate Starts for Wolfwood_49:
(Start: 29 @37906 has 8 MA's), (44, 37816), (45, 37789), (51, 37747), (61, 37699), (Start: 65 @37672 has 1 MA's), (76, 37591), (77, 37588), (79, 37582), (80, 37561), (83, 37495), (96, 37405), (99, 37393), (106, 37330), (108, 37315), (110, 37300), (124, 37183), (125, 37174), (135, 37096), (137, 37069), (138, 37057), (140, 37045), (145, 37006), (147, 36985), (148, 36982), (151, 36967), (159, 36895), (167, 36826), (171, 36781), (176, 36736), (177, 36721), (180, 36691), (184, 36667), (190, 36616), (194, 36586), (199, 36520), (201, 36496), (207, 36463), (214, 36427),

Gene: Yakult_55 Start: 39767, Stop: 38292, Start Num: 30
Candidate Starts for Yakult_55:
(Start: 30 @39767 has 14 MA's), (35, 39725), (44, 39677), (45, 39650), (49, 39626), (52, 39596), (57, 39575), (59, 39566), (61, 39560), (72, 39476), (74, 39467), (75, 39458), (77, 39449), (79, 39443), (91, 39320), (96, 39266), (98, 39260), (99, 39254), (104, 39209), (108, 39176), (131, 38972), (133, 38963), (142, 38891), (147, 38846), (151, 38828), (152, 38822), (158, 38777), (159, 38771), (161, 38750), (167, 38702), (168, 38699), (171, 38657), (172, 38654), (173, 38639), (184, 38543), (190, 38492), (196, 38429), (200, 38381), (204, 38360), (214, 38303),

Gene: Yarn_50 Start: 38320, Stop: 36842, Start Num: 28
Candidate Starts for Yarn_50:
(Start: 28 @38320 has 45 MA's), (44, 38227), (45, 38200), (57, 38125), (Start: 65 @38083 has 1 MA's), (76, 38002), (91, 37870), (96, 37816), (99, 37804), (108, 37726), (122, 37612), (125, 37585), (128, 37561), (131, 37522), (140, 37456), (143, 37435), (151, 37378), (166, 37261), (171, 37213), (173, 37195), (184, 37099), (186, 37078), (190, 37048),

Gene: Yucky_59 Start: 40876, Stop: 39398, Start Num: 28
Candidate Starts for Yucky_59:
(17, 40954), (22, 40903), (Start: 24 @40900 has 2 MA's), (Start: 28 @40876 has 45 MA's), (39, 40813), (42, 40792), (44, 40786), (45, 40759), (52, 40705), (61, 40669), (63, 40654), (76, 40558), (79, 40549), (80, 40528), (83, 40462), (91, 40426), (96, 40372), (98, 40366), (99, 40360), (108, 40282), (110, 40267), (122, 40168), (129, 40093), (133, 40069), (136, 40057), (137, 40036), (139, 40021), (140, 40012), (143, 39991), (147, 39952), (149, 39943), (152, 39928), (159, 39877), (167, 39808), (168, 39805), (171, 39763), (173, 39745), (184, 39649), (190, 39598), (194, 39568), (196, 39535), (201, 39478), (205, 39463),

Gene: Yummy_55 Start: 38695, Stop: 37217, Start Num: 28
Candidate Starts for Yummy_55:
(Start: 28 @38695 has 45 MA's), (42, 38608), (44, 38602), (49, 38551), (57, 38500), (61, 38485), (72, 38401), (76, 38377), (79, 38368), (91, 38245), (96, 38191), (98, 38185), (99, 38179), (102, 38149), (108, 38101), (122, 37987), (125, 37960), (128, 37936), (137, 37855), (140, 37831), (143, 37810), (147, 37771), (151, 37753), (152, 37747), (166, 37636), (168, 37630), (171, 37588), (173, 37570), (181, 37483), (184, 37474), (186, 37453), (190, 37423), (194, 37393), (196, 37360), (202, 37300), (207, 37270),

Gene: Zareef_49 Start: 37928, Stop: 36438, Start Num: 29
Candidate Starts for Zareef_49:
(Start: 29 @37928 has 8 MA's), (44, 37838), (45, 37811), (51, 37769), (59, 37727), (61, 37721), (Start: 65 @37694 has 1 MA's), (76, 37613), (77, 37610), (79, 37604), (80, 37583), (83, 37517), (96, 37427), (99, 37415), (106, 37352), (108, 37337), (110, 37322), (124, 37205), (125, 37196), (135, 37118), (137, 37091), (138, 37079), (140, 37067), (145, 37028), (147, 37007), (148, 37004), (151, 36989), (159, 36917), (167, 36848), (171, 36803), (176, 36758), (177, 36743), (180, 36713), (184, 36689), (190, 36638), (194, 36608), (199, 36542), (201, 36518), (207, 36485), (214, 36449),

Gene: Zuko_72 Start: 51866, Stop: 53398, Start Num: 24
Candidate Starts for Zuko_72:
(14, 51788), (Start: 24 @51866 has 2 MA's), (33, 51899), (44, 51986), (47, 52028), (48, 52034), (49, 52037), (50, 52043), (53, 52070), (58, 52091), (59, 52097), (66, 52133), (69, 52175), (73, 52196), (75, 52211), (76, 52217), (77, 52220), (90, 52364), (91, 52370), (92, 52373), (96, 52424), (98, 52430), (99, 52436), (101, 52460), (104, 52481), (108, 52514), (113, 52577), (114, 52586), (123, 52649), (135, 52745), (137, 52772), (138, 52784), (140, 52796), (141, 52799), (159, 52916), (169, 53012), (171, 53030), (174, 53054), (181, 53135), (182, 53138), (183, 53141), (190, 53195), (194, 53225), (197, 53282), (200, 53306), (203, 53321),