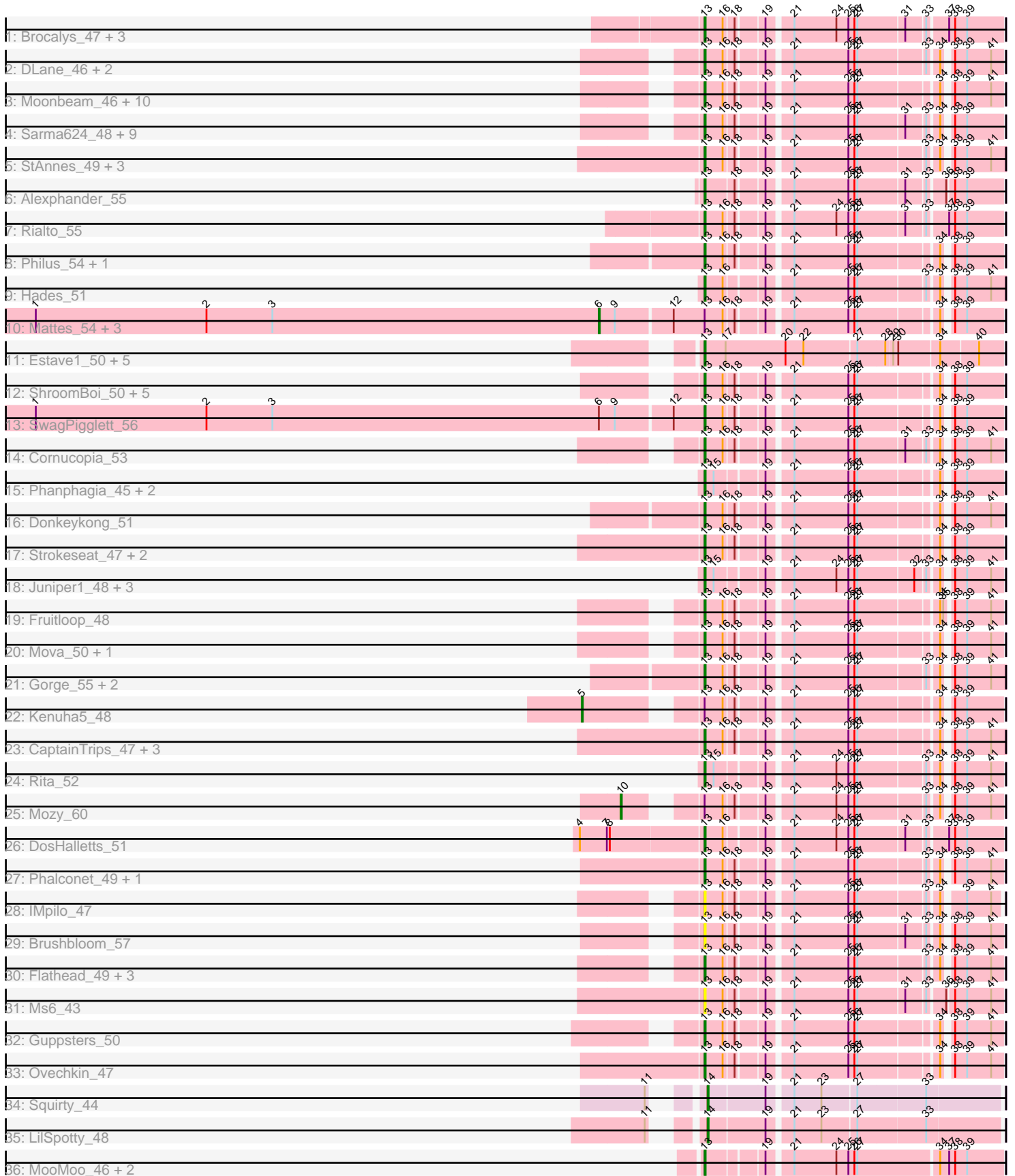


Pham 202837



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 202837 Report

This analysis was run 01/18/25 on database version 583.

Pham number 202837 has 96 members, 6 are drafts.

Phages represented in each track:

- Track 1 : Brocalys_47, Pippy_50, Clifton_47, LastJedi_46
- Track 2 : DLane_46, Akhila_42, MilanaBonita_42
- Track 3 : Moonbeam_46, EleanorGeorge_48, Ardmore_41, Soul22_54, Mutaforma13_53, Whatsapiecost_49, Filuzino_48, Batiatus_48, Emma_50, Juice456_52, MilleniumForce_50
- Track 4 : Sarma624_48, Minnie_55, IrishSherpFalk_51, Kingsley_47, Velveteen_45, Spartacus_52, BigPhil_46, WillSterrel_51, Cerasum_46, Coco12_49
- Track 5 : StAnnes_49, XFactor_48, Melissauren88_48, Bobi_52
- Track 6 : Alexphander_55
- Track 7 : Rialto_55
- Track 8 : Philus_54, DRBy19_54
- Track 9 : Hades_51
- Track 10 : Mattes_54, Zizzle_56, BobaPhett_54, James_54
- Track 11 : Estave1_50, Renaud18_55, DeadP_55, Blarby_61, Taj_53, Wee_52
- Track 12 : ShroomBoi_50, LunaBlu_54, SuperGrey_50, Wachhund_52, KristaRAM_49, Galactic_51
- Track 13 : SwagPiggett_56
- Track 14 : Cornucopia_53
- Track 15 : Phanphagia_45, Shauna1_45, Bipolar_47
- Track 16 : Donkeykong_51
- Track 17 : Strokeseat_47, Mandlovu_47, Hlubikazi_47
- Track 18 : Juniper1_48, SimranZ1_49, Byougenkin_48, DoRead_52
- Track 19 : Fruitloop_48
- Track 20 : Mova_50, VRedHorse_50
- Track 21 : Gorge_55, Saal_53, ByChance_42
- Track 22 : Kenuha5_48
- Track 23 : CaptainTrips_47, Beakin_52, MinionDave_49, Hegedechwinu_50
- Track 24 : Rita_52
- Track 25 : Mozy_60
- Track 26 : DosHalletts_51
- Track 27 : Phalconet_49, PhesterPhotato_52
- Track 28 : IMpilo_47
- Track 29 : Brushbloom_57
- Track 30 : Flathead_49, SG4_47, Enby_51, Lorde_51
- Track 31 : Ms6_43
- Track 32 : Guppsters_50
- Track 33 : Ovechkin_47

- Track 34 : Squirty_44
- Track 35 : LilSpotty_48
- Track 36 : MooMoo_46, TChen_50, LunaStella_48

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

The start number called the most often in the published annotations is 13, it was called in 82 of the 90 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Akhila_42, Alexphander_55, Ardmore_41, Batiatus_48, Beakin_52, BigPhil_46, Bipolar_47, Blarby_61, Bobi_52, Brocalys_47, Brushbloom_57, ByChance_42, Byougenkin_48, CaptainTrips_47, Cerasum_46, Clifton_47, Coco12_49, Cornucopia_53, DLane_46, DRBy19_54, DeadP_55, DoRead_52, Donkeykong_51, DosHalletts_51, EleanorGeorge_48, Emma_50, Enby_51, Estave1_50, Filuzino_48, Flathead_49, Fruitloop_48, Galactic_51, Gorge_55, Guppsters_50, Hades_51, Hegedechwinu_50, Hlubikazi_47, IMpilo_47, IrishSherpFalk_51, Juice456_52, Juniper1_48, Kingsley_47, KristaRAM_49, LastJedi_46, Lorde_51, LunaBlu_54, LunaStella_48, Mandlovu_47, Melissauren88_48, MilanaBonita_42, MilleniumForce_50, MinionDave_49, Minnie_55, MooMoo_46, Moonbeam_46, Mova_50, Ms6_43, Mutaforma13_53, Ovechkin_47, Phalconet_49, Phanphagia_45, PhesterPhotato_52, Philus_54, Pippy_50, Renaud18_55, Rialto_55, Rita_52, SG4_47, Saal_53, Sarma624_48, Shauna1_45, ShroomBoi_50, SimranZ1_49, Soul22_54, Spartacus_52, StAnnes_49, Strokeseat_47, SuperGrey_50, SwagPiggett_56, TChen_50, Taj_53, VRedHorse_50, Velveteen_45, Wachhund_52, Wee_52, Whatsapiecost_49, WillSterrel_51, XFactor_48,

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

- BobaPhett_54, James_54, Kenuha5_48, Mattes_54, Mozy_60, Zizzle_56,

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

- LilSpotty_48, Squirty_44,

Summary by start number:

Start 5:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 90
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Kenuha5_48 (F1),

Start 6:

- Found in 5 of 96 (5.2%) of genes in pham
- Manual Annotations of this start: 4 of 90
- Called 80.0% of time when present
- Phage (with cluster) where this start called: BobaPhett_54 (F1), James_54 (F1), Mattes_54 (F1), Zizzle_56 (F1),

Start 10:

- Found in 1 of 96 (1.0%) of genes in pham

- Manual Annotations of this start: 1 of 90
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Mozy_60 (F1),

Start 13:

- Found in 94 of 96 (97.9%) of genes in pham
- Manual Annotations of this start: 82 of 90
- Called 93.6% of time when present
- Phage (with cluster) where this start called: Akhila_42 (F1), Alexphander_55 (F1), Ardmore_41 (F1), Batiatus_48 (F1), Beakin_52 (F1), BigPhil_46 (F1), Bipolar_47 (F1), Blarby_61 (F), Bobi_52 (F1), Brocalys_47 (F1), Brushbloom_57 (F1), ByChance_42 (F1), Byougenkin_48 (F1), CaptainTrips_47 (F1), Cerasum_46 (F1), Clifton_47 (F1), Coco12_49 (F1), Cornucopia_53 (F1), DLane_46 (F1), DRBy19_54 (F1), DeadP_55 (F1), DoRead_52 (F1), Donkeykong_51 (F1), DosHalletts_51 (F1), EleanorGeorge_48 (F1), Emma_50 (F1), Enby_51 (F1), Estave1_50 (F1), Filuzino_48 (F1), Flathead_49 (F1), Fruitloop_48 (F1), Galactic_51 (F1), Gorge_55 (F1), Guppsters_50 (F1), Hades_51 (F1), Hegedechwinu_50 (F1), Hlubikazi_47 (F1), IMpilo_47 (F1), IrishSherpFalk_51 (F1), Juice456_52 (F1), Juniper1_48 (F1), Kingsley_47 (F1), KristaRAM_49 (F1), LastJedi_46 (F1), Lorde_51 (F1), LunaBlu_54 (F1), LunaStella_48 (F4), Mandlovu_47 (F1), Melissauren88_48 (F1), MilanaBonita_42 (F1), MilleniumForce_50 (F1), MinionDave_49 (F1), Minnie_55 (F1), MooMoo_46 (singleton), Moonbeam_46 (F1), Mova_50 (F1), Ms6_43 (F1), Mutaforma13_53 (F1), Ovechkin_47 (F1), Phalconet_49 (F1), Phanphagia_45 (F1), PhesterPhotato_52 (F1), Philus_54 (F1), Pippy_50 (F1), Renaud18_55 (F4), Rialto_55 (F1), Rita_52 (F1), SG4_47 (F1), Saal_53 (F1), Sarma624_48 (F1), Shauna1_45 (F1), ShroomBoi_50 (F1), SimranZ1_49 (F1), Soul22_54 (F2), Spartacus_52 (F1), StAnnes_49 (F1), Strokeseat_47 (F1), SuperGrey_50 (F1), SwagPiggett_56 (F1), TChen_50 (F4), Taj_53 (F1), VRedHorse_50 (F1), Velveteen_45 (F1), Wachhund_52 (F1), Wee_52 (F1), Whatsapiecost_49 (F1), WillSterrel_51 (F1), XFactor_48 (F1),

Start 14:

- Found in 2 of 96 (2.1%) of genes in pham
- Manual Annotations of this start: 2 of 90
- Called 100.0% of time when present
- Phage (with cluster) where this start called: LilSpotty_48 (singleton), Squirty_44 (F3),

Summary by clusters:

There are 6 clusters represented in this pham: F1, singleton, F3, F4, F, F2,

Info for manual annotations of cluster F1:

- Start number 5 was manually annotated 1 time for cluster F1.
- Start number 6 was manually annotated 4 times for cluster F1.
- Start number 10 was manually annotated 1 time for cluster F1.
- Start number 13 was manually annotated 77 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 13 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F3:

- Start number 14 was manually annotated 1 time for cluster F3.

Info for manual annotations of cluster F4:

•Start number 13 was manually annotated 3 times for cluster F4.

Gene Information:

Gene: Akhila_42 Start: 32431, Stop: 32691, Start Num: 13

Candidate Starts for Akhila_42:

(Start: 13 @32431 has 82 MA's), (16, 32449), (18, 32458), (19, 32482), (21, 32503), (25, 32557), (26, 32563), (27, 32566), (33, 32629), (34, 32638), (38, 32644), (39, 32656), (41, 32680),

Gene: Alexphander_55 Start: 37472, Stop: 37738, Start Num: 13

Candidate Starts for Alexphander_55:

(Start: 13 @37472 has 82 MA's), (18, 37499), (19, 37523), (21, 37544), (25, 37598), (26, 37604), (27, 37607), (31, 37652), (33, 37670), (36, 37685), (38, 37691), (39, 37703),

Gene: Ardmore_41 Start: 34224, Stop: 34484, Start Num: 13

Candidate Starts for Ardmore_41:

(Start: 13 @34224 has 82 MA's), (16, 34242), (18, 34251), (19, 34275), (21, 34296), (25, 34350), (26, 34356), (27, 34359), (34, 34431), (38, 34437), (39, 34449), (41, 34473),

Gene: Batiatus_48 Start: 36640, Stop: 36903, Start Num: 13

Candidate Starts for Batiatus_48:

(Start: 13 @36640 has 82 MA's), (16, 36658), (18, 36667), (19, 36691), (21, 36712), (25, 36766), (26, 36772), (27, 36775), (34, 36847), (38, 36853), (39, 36865), (41, 36889),

Gene: Beakin_52 Start: 36460, Stop: 36720, Start Num: 13

Candidate Starts for Beakin_52:

(Start: 13 @36460 has 82 MA's), (16, 36478), (18, 36487), (19, 36511), (21, 36532), (25, 36586), (26, 36592), (27, 36595), (34, 36667), (38, 36673), (39, 36685), (41, 36709),

Gene: BigPhil_46 Start: 32920, Stop: 33180, Start Num: 13

Candidate Starts for BigPhil_46:

(Start: 13 @32920 has 82 MA's), (16, 32938), (18, 32947), (19, 32971), (21, 32992), (25, 33046), (26, 33052), (27, 33055), (31, 33100), (33, 33118), (34, 33127), (38, 33133), (39, 33145),

Gene: Bipolar_47 Start: 36374, Stop: 36634, Start Num: 13

Candidate Starts for Bipolar_47:

(Start: 13 @36374 has 82 MA's), (15, 36383), (19, 36425), (21, 36446), (25, 36500), (26, 36506), (27, 36509), (34, 36581), (38, 36587), (39, 36599),

Gene: Blarby_61 Start: 37278, Stop: 37565, Start Num: 13

Candidate Starts for Blarby_61:

(Start: 13 @37278 has 82 MA's), (17, 37299), (20, 37359), (22, 37377), (27, 37428), (28, 37455), (29, 37461), (30, 37464), (34, 37506), (40, 37542),

Gene: BobaPhett_54 Start: 39312, Stop: 39671, Start Num: 6

Candidate Starts for BobaPhett_54:

(1, 38748), (2, 38919), (3, 38985), (Start: 6 @39312 has 4 MA's), (9, 39327), (12, 39381), (Start: 13 @39411 has 82 MA's), (16, 39429), (18, 39438), (19, 39462), (21, 39483), (25, 39537), (26, 39543), (27, 39546), (34, 39618), (38, 39624), (39, 39636),

Gene: Bobi_52 Start: 37227, Stop: 37487, Start Num: 13

Candidate Starts for Bobi_52:

(Start: 13 @37227 has 82 MA's), (16, 37245), (18, 37254), (19, 37278), (21, 37299), (25, 37353), (26, 37359), (27, 37362), (33, 37425), (34, 37434), (38, 37440), (39, 37452), (41, 37476),

Gene: Brocalys_47 Start: 34063, Stop: 34332, Start Num: 13

Candidate Starts for Brocalys_47:

(Start: 13 @34063 has 82 MA's), (16, 34081), (18, 34090), (19, 34114), (21, 34135), (24, 34177), (25, 34189), (26, 34195), (27, 34198), (31, 34243), (33, 34261), (37, 34279), (38, 34285), (39, 34297),

Gene: Brushbloom_57 Start: 37079, Stop: 37339, Start Num: 13

Candidate Starts for Brushbloom_57:

(Start: 13 @37079 has 82 MA's), (16, 37097), (18, 37106), (19, 37130), (21, 37151), (25, 37205), (26, 37211), (27, 37214), (31, 37259), (33, 37277), (34, 37286), (38, 37292), (39, 37304), (41, 37328),

Gene: ByChance_42 Start: 32434, Stop: 32697, Start Num: 13

Candidate Starts for ByChance_42:

(Start: 13 @32434 has 82 MA's), (16, 32452), (18, 32461), (19, 32485), (21, 32506), (25, 32560), (26, 32566), (27, 32569), (33, 32632), (34, 32641), (38, 32647), (39, 32659), (41, 32683),

Gene: Byougenkin_48 Start: 36458, Stop: 36718, Start Num: 13

Candidate Starts for Byougenkin_48:

(Start: 13 @36458 has 82 MA's), (15, 36467), (19, 36509), (21, 36530), (24, 36572), (25, 36584), (26, 36590), (27, 36593), (32, 36647), (33, 36656), (34, 36665), (38, 36671), (39, 36683), (41, 36707),

Gene: CaptainTrips_47 Start: 35660, Stop: 35923, Start Num: 13

Candidate Starts for CaptainTrips_47:

(Start: 13 @35660 has 82 MA's), (16, 35678), (18, 35687), (19, 35711), (21, 35732), (25, 35786), (26, 35792), (27, 35795), (34, 35867), (38, 35873), (39, 35885), (41, 35909),

Gene: Cerasum_46 Start: 32938, Stop: 33198, Start Num: 13

Candidate Starts for Cerasum_46:

(Start: 13 @32938 has 82 MA's), (16, 32956), (18, 32965), (19, 32989), (21, 33010), (25, 33064), (26, 33070), (27, 33073), (31, 33118), (33, 33136), (34, 33145), (38, 33151), (39, 33163),

Gene: Clifton_47 Start: 34414, Stop: 34683, Start Num: 13

Candidate Starts for Clifton_47:

(Start: 13 @34414 has 82 MA's), (16, 34432), (18, 34441), (19, 34465), (21, 34486), (24, 34528), (25, 34540), (26, 34546), (27, 34549), (31, 34594), (33, 34612), (37, 34630), (38, 34636), (39, 34648),

Gene: Coco12_49 Start: 36995, Stop: 37255, Start Num: 13

Candidate Starts for Coco12_49:

(Start: 13 @36995 has 82 MA's), (16, 37013), (18, 37022), (19, 37046), (21, 37067), (25, 37121), (26, 37127), (27, 37130), (31, 37175), (33, 37193), (34, 37202), (38, 37208), (39, 37220),

Gene: Cornucopia_53 Start: 37702, Stop: 37962, Start Num: 13

Candidate Starts for Cornucopia_53:

(Start: 13 @37702 has 82 MA's), (16, 37720), (18, 37729), (19, 37753), (21, 37774), (25, 37828), (26, 37834), (27, 37837), (31, 37882), (33, 37900), (34, 37909), (38, 37915), (39, 37927), (41, 37951),

Gene: DLane_46 Start: 35745, Stop: 36005, Start Num: 13

Candidate Starts for DLane_46:

(Start: 13 @35745 has 82 MA's), (16, 35763), (18, 35772), (19, 35796), (21, 35817), (25, 35871), (26, 35877), (27, 35880), (33, 35943), (34, 35952), (38, 35958), (39, 35970), (41, 35994),

Gene: DRBy19_54 Start: 38199, Stop: 38459, Start Num: 13

Candidate Starts for DRBy19_54:

(Start: 13 @38199 has 82 MA's), (16, 38217), (18, 38226), (19, 38250), (21, 38271), (25, 38325), (26, 38331), (27, 38334), (34, 38406), (38, 38412), (39, 38424),

Gene: DeadP_55 Start: 37934, Stop: 38218, Start Num: 13

Candidate Starts for DeadP_55:

(Start: 13 @37934 has 82 MA's), (17, 37955), (20, 38015), (22, 38033), (27, 38084), (28, 38111), (29, 38117), (30, 38120), (34, 38159), (40, 38195),

Gene: DoRead_52 Start: 35474, Stop: 35734, Start Num: 13

Candidate Starts for DoRead_52:

(Start: 13 @35474 has 82 MA's), (15, 35483), (19, 35525), (21, 35546), (24, 35588), (25, 35600), (26, 35606), (27, 35609), (32, 35663), (33, 35672), (34, 35681), (38, 35687), (39, 35699), (41, 35723),

Gene: Donkeykong_51 Start: 38545, Stop: 38805, Start Num: 13

Candidate Starts for Donkeykong_51:

(Start: 13 @38545 has 82 MA's), (16, 38563), (18, 38572), (19, 38596), (21, 38617), (25, 38671), (26, 38677), (27, 38680), (34, 38752), (38, 38758), (39, 38770), (41, 38794),

Gene: DosHalletts_51 Start: 37887, Stop: 38156, Start Num: 13

Candidate Starts for DosHalletts_51:

(4, 37767), (7, 37794), (8, 37797), (Start: 13 @37887 has 82 MA's), (16, 37905), (19, 37938), (21, 37959), (24, 38001), (25, 38013), (26, 38019), (27, 38022), (31, 38067), (33, 38085), (37, 38103), (38, 38109), (39, 38121),

Gene: EleanorGeorge_48 Start: 36028, Stop: 36288, Start Num: 13

Candidate Starts for EleanorGeorge_48:

(Start: 13 @36028 has 82 MA's), (16, 36046), (18, 36055), (19, 36079), (21, 36100), (25, 36154), (26, 36160), (27, 36163), (34, 36235), (38, 36241), (39, 36253), (41, 36277),

Gene: Emma_50 Start: 35972, Stop: 36232, Start Num: 13

Candidate Starts for Emma_50:

(Start: 13 @35972 has 82 MA's), (16, 35990), (18, 35999), (19, 36023), (21, 36044), (25, 36098), (26, 36104), (27, 36107), (34, 36179), (38, 36185), (39, 36197), (41, 36221),

Gene: Enby_51 Start: 35146, Stop: 35409, Start Num: 13

Candidate Starts for Enby_51:

(Start: 13 @35146 has 82 MA's), (16, 35164), (18, 35173), (19, 35197), (21, 35218), (25, 35272), (26, 35278), (27, 35281), (33, 35344), (34, 35353), (38, 35359), (39, 35371), (41, 35395),

Gene: Estave1_50 Start: 36122, Stop: 36406, Start Num: 13

Candidate Starts for Estave1_50:

(Start: 13 @36122 has 82 MA's), (17, 36143), (20, 36203), (22, 36221), (27, 36272), (28, 36299), (29, 36305), (30, 36308), (34, 36347), (40, 36383),

Gene: Filuzino_48 Start: 35552, Stop: 35812, Start Num: 13

Candidate Starts for Filuzino_48:

(Start: 13 @35552 has 82 MA's), (16, 35570), (18, 35579), (19, 35603), (21, 35624), (25, 35678), (26, 35684), (27, 35687), (34, 35759), (38, 35765), (39, 35777), (41, 35801),

Gene: Flathead_49 Start: 36925, Stop: 37185, Start Num: 13

Candidate Starts for Flathead_49:

(Start: 13 @36925 has 82 MA's), (16, 36943), (18, 36952), (19, 36976), (21, 36997), (25, 37051), (26, 37057), (27, 37060), (33, 37123), (34, 37132), (38, 37138), (39, 37150), (41, 37174),

Gene: Fruitloop_48 Start: 37415, Stop: 37678, Start Num: 13

Candidate Starts for Fruitloop_48:

(Start: 13 @37415 has 82 MA's), (16, 37433), (18, 37442), (19, 37466), (21, 37487), (25, 37541), (26, 37547), (27, 37550), (34, 37622), (35, 37625), (38, 37631), (39, 37643), (41, 37667),

Gene: Galactic_51 Start: 37171, Stop: 37431, Start Num: 13

Candidate Starts for Galactic_51:

(Start: 13 @37171 has 82 MA's), (16, 37189), (18, 37198), (19, 37222), (21, 37243), (25, 37297), (26, 37303), (27, 37306), (34, 37378), (38, 37384), (39, 37396),

Gene: Gorge_55 Start: 38326, Stop: 38589, Start Num: 13

Candidate Starts for Gorge_55:

(Start: 13 @38326 has 82 MA's), (16, 38344), (18, 38353), (19, 38377), (21, 38398), (25, 38452), (26, 38458), (27, 38461), (33, 38524), (34, 38533), (38, 38539), (39, 38551), (41, 38575),

Gene: Guppsters_50 Start: 36031, Stop: 36291, Start Num: 13

Candidate Starts for Guppsters_50:

(Start: 13 @36031 has 82 MA's), (16, 36049), (18, 36058), (19, 36082), (21, 36103), (25, 36157), (26, 36163), (27, 36166), (34, 36238), (38, 36244), (39, 36256), (41, 36280),

Gene: Hades_51 Start: 36925, Stop: 37188, Start Num: 13

Candidate Starts for Hades_51:

(Start: 13 @36925 has 82 MA's), (16, 36943), (19, 36976), (21, 36997), (25, 37051), (26, 37057), (27, 37060), (33, 37123), (34, 37132), (38, 37138), (39, 37150), (41, 37174),

Gene: Hegedechwinu_50 Start: 35352, Stop: 35612, Start Num: 13

Candidate Starts for Hegedechwinu_50:

(Start: 13 @35352 has 82 MA's), (16, 35370), (18, 35379), (19, 35403), (21, 35424), (25, 35478), (26, 35484), (27, 35487), (34, 35559), (38, 35565), (39, 35577), (41, 35601),

Gene: Hlubikazi_47 Start: 35112, Stop: 35372, Start Num: 13

Candidate Starts for Hlubikazi_47:

(Start: 13 @35112 has 82 MA's), (16, 35130), (18, 35139), (19, 35163), (21, 35184), (25, 35238), (26, 35244), (27, 35247), (34, 35319), (38, 35325), (39, 35337),

Gene: IMpilo_47 Start: 35025, Stop: 35282, Start Num: 13

Candidate Starts for IMpilo_47:

(Start: 13 @35025 has 82 MA's), (16, 35043), (18, 35052), (19, 35076), (21, 35097), (25, 35151), (26, 35157), (27, 35160), (33, 35223), (34, 35232), (39, 35250), (41, 35274),

Gene: IrishSherpFalk_51 Start: 38088, Stop: 38348, Start Num: 13

Candidate Starts for IrishSherpFalk_51:

(Start: 13 @38088 has 82 MA's), (16, 38106), (18, 38115), (19, 38139), (21, 38160), (25, 38214), (26, 38220), (27, 38223), (31, 38268), (33, 38286), (34, 38295), (38, 38301), (39, 38313),

Gene: James_54 Start: 38190, Stop: 38549, Start Num: 6

Candidate Starts for James_54:

(1, 37626), (2, 37797), (3, 37863), (Start: 6 @38190 has 4 MA's), (9, 38205), (12, 38259), (Start: 13 @38289 has 82 MA's), (16, 38307), (18, 38316), (19, 38340), (21, 38361), (25, 38415), (26, 38421), (27, 38424), (34, 38496), (38, 38502), (39, 38514),

Gene: Juice456_52 Start: 37930, Stop: 38190, Start Num: 13

Candidate Starts for Juice456_52:

(Start: 13 @37930 has 82 MA's), (16, 37948), (18, 37957), (19, 37981), (21, 38002), (25, 38056), (26, 38062), (27, 38065), (34, 38137), (38, 38143), (39, 38155), (41, 38179),

Gene: Juniper1_48 Start: 36146, Stop: 36406, Start Num: 13

Candidate Starts for Juniper1_48:

(Start: 13 @36146 has 82 MA's), (15, 36155), (19, 36197), (21, 36218), (24, 36260), (25, 36272), (26, 36278), (27, 36281), (32, 36335), (33, 36344), (34, 36353), (38, 36359), (39, 36371), (41, 36395),

Gene: Kenuha5_48 Start: 35550, Stop: 35903, Start Num: 5

Candidate Starts for Kenuha5_48:

(Start: 5 @35550 has 1 MA's), (Start: 13 @35643 has 82 MA's), (16, 35661), (18, 35670), (19, 35694), (21, 35715), (25, 35769), (26, 35775), (27, 35778), (34, 35850), (38, 35856), (39, 35868),

Gene: Kingsley_47 Start: 35728, Stop: 35988, Start Num: 13

Candidate Starts for Kingsley_47:

(Start: 13 @35728 has 82 MA's), (16, 35746), (18, 35755), (19, 35779), (21, 35800), (25, 35854), (26, 35860), (27, 35863), (31, 35908), (33, 35926), (34, 35935), (38, 35941), (39, 35953),

Gene: KristaRAM_49 Start: 37743, Stop: 38003, Start Num: 13

Candidate Starts for KristaRAM_49:

(Start: 13 @37743 has 82 MA's), (16, 37761), (18, 37770), (19, 37794), (21, 37815), (25, 37869), (26, 37875), (27, 37878), (34, 37950), (38, 37956), (39, 37968),

Gene: LastJedi_46 Start: 34457, Stop: 34726, Start Num: 13

Candidate Starts for LastJedi_46:

(Start: 13 @34457 has 82 MA's), (16, 34475), (18, 34484), (19, 34508), (21, 34529), (24, 34571), (25, 34583), (26, 34589), (27, 34592), (31, 34637), (33, 34655), (37, 34673), (38, 34679), (39, 34691),

Gene: LilSpotty_48 Start: 34139, Stop: 34411, Start Num: 14

Candidate Starts for LilSpotty_48:

(11, 34112), (Start: 14 @34139 has 2 MA's), (19, 34193), (21, 34214), (23, 34241), (27, 34274), (33, 34340),

Gene: Lorde_51 Start: 35121, Stop: 35384, Start Num: 13

Candidate Starts for Lorde_51:

(Start: 13 @35121 has 82 MA's), (16, 35139), (18, 35148), (19, 35172), (21, 35193), (25, 35247), (26, 35253), (27, 35256), (33, 35319), (34, 35328), (38, 35334), (39, 35346), (41, 35370),

Gene: LunaBlu_54 Start: 37830, Stop: 38090, Start Num: 13

Candidate Starts for LunaBlu_54:

(Start: 13 @37830 has 82 MA's), (16, 37848), (18, 37857), (19, 37881), (21, 37902), (25, 37956), (26, 37962), (27, 37965), (34, 38037), (38, 38043), (39, 38055),

Gene: LunaStella_48 Start: 35282, Stop: 35557, Start Num: 13

Candidate Starts for LunaStella_48:

(Start: 13 @35282 has 82 MA's), (19, 35333), (21, 35354), (24, 35396), (25, 35408), (26, 35414), (27, 35417), (34, 35495), (37, 35504), (38, 35510), (39, 35522),

Gene: Mandlovu_47 Start: 35054, Stop: 35314, Start Num: 13

Candidate Starts for Mandlovu_47:

(Start: 13 @35054 has 82 MA's), (16, 35072), (18, 35081), (19, 35105), (21, 35126), (25, 35180), (26, 35186), (27, 35189), (34, 35261), (38, 35267), (39, 35279),

Gene: Mattes_54 Start: 38190, Stop: 38549, Start Num: 6

Candidate Starts for Mattes_54:

(1, 37626), (2, 37797), (3, 37863), (Start: 6 @38190 has 4 MA's), (9, 38205), (12, 38259), (Start: 13 @38289 has 82 MA's), (16, 38307), (18, 38316), (19, 38340), (21, 38361), (25, 38415), (26, 38421), (27, 38424), (34, 38496), (38, 38502), (39, 38514),

Gene: Melissauren88_48 Start: 35898, Stop: 36161, Start Num: 13

Candidate Starts for Melissauren88_48:

(Start: 13 @35898 has 82 MA's), (16, 35916), (18, 35925), (19, 35949), (21, 35970), (25, 36024), (26, 36030), (27, 36033), (33, 36096), (34, 36105), (38, 36111), (39, 36123), (41, 36147),

Gene: MilanaBonita_42 Start: 32431, Stop: 32691, Start Num: 13

Candidate Starts for MilanaBonita_42:

(Start: 13 @32431 has 82 MA's), (16, 32449), (18, 32458), (19, 32482), (21, 32503), (25, 32557), (26, 32563), (27, 32566), (33, 32629), (34, 32638), (38, 32644), (39, 32656), (41, 32680),

Gene: MilleniumForce_50 Start: 37892, Stop: 38152, Start Num: 13

Candidate Starts for MilleniumForce_50:

(Start: 13 @37892 has 82 MA's), (16, 37910), (18, 37919), (19, 37943), (21, 37964), (25, 38018), (26, 38024), (27, 38027), (34, 38099), (38, 38105), (39, 38117), (41, 38141),

Gene: MinionDave_49 Start: 36435, Stop: 36698, Start Num: 13

Candidate Starts for MinionDave_49:

(Start: 13 @36435 has 82 MA's), (16, 36453), (18, 36462), (19, 36486), (21, 36507), (25, 36561), (26, 36567), (27, 36570), (34, 36642), (38, 36648), (39, 36660), (41, 36684),

Gene: Minnie_55 Start: 38774, Stop: 39034, Start Num: 13

Candidate Starts for Minnie_55:

(Start: 13 @38774 has 82 MA's), (16, 38792), (18, 38801), (19, 38825), (21, 38846), (25, 38900), (26, 38906), (27, 38909), (31, 38954), (33, 38972), (34, 38981), (38, 38987), (39, 38999),

Gene: MooMoo_46 Start: 35558, Stop: 35833, Start Num: 13

Candidate Starts for MooMoo_46:

(Start: 13 @35558 has 82 MA's), (19, 35609), (21, 35630), (24, 35672), (25, 35684), (26, 35690), (27, 35693), (34, 35771), (37, 35780), (38, 35786), (39, 35798),

Gene: Moonbeam_46 Start: 35928, Stop: 36188, Start Num: 13

Candidate Starts for Moonbeam_46:

(Start: 13 @35928 has 82 MA's), (16, 35946), (18, 35955), (19, 35979), (21, 36000), (25, 36054), (26, 36060), (27, 36063), (34, 36135), (38, 36141), (39, 36153), (41, 36177),

Gene: Mova_50 Start: 35691, Stop: 35951, Start Num: 13

Candidate Starts for Mova_50:

(Start: 13 @35691 has 82 MA's), (16, 35709), (18, 35718), (19, 35742), (21, 35763), (25, 35817), (26, 35823), (27, 35826), (34, 35898), (38, 35904), (39, 35916), (41, 35940),

Gene: Mozy_60 Start: 39450, Stop: 39764, Start Num: 10

Candidate Starts for Mozy_60:

(Start: 10 @39450 has 1 MA's), (Start: 13 @39504 has 82 MA's), (16, 39522), (18, 39531), (19, 39555), (21, 39576), (24, 39618), (25, 39630), (26, 39636), (27, 39639), (33, 39702), (34, 39711), (38, 39717), (39, 39729), (41, 39753),

Gene: Ms6_43 Start: 30964, Stop: 31230, Start Num: 13

Candidate Starts for Ms6_43:

(Start: 13 @30964 has 82 MA's), (16, 30982), (18, 30991), (19, 31015), (21, 31036), (25, 31090), (26, 31096), (27, 31099), (31, 31144), (33, 31162), (36, 31177), (38, 31183), (39, 31195), (41, 31219),

Gene: Mutaforma13_53 Start: 38482, Stop: 38742, Start Num: 13

Candidate Starts for Mutaforma13_53:

(Start: 13 @38482 has 82 MA's), (16, 38500), (18, 38509), (19, 38533), (21, 38554), (25, 38608), (26, 38614), (27, 38617), (34, 38689), (38, 38695), (39, 38707), (41, 38731),

Gene: Ovechkin_47 Start: 36285, Stop: 36545, Start Num: 13

Candidate Starts for Ovechkin_47:

(Start: 13 @36285 has 82 MA's), (16, 36303), (18, 36312), (19, 36336), (21, 36357), (25, 36411), (26, 36417), (27, 36420), (34, 36492), (38, 36498), (39, 36510), (41, 36534),

Gene: Phalconet_49 Start: 36205, Stop: 36465, Start Num: 13

Candidate Starts for Phalconet_49:

(Start: 13 @36205 has 82 MA's), (16, 36223), (18, 36232), (19, 36256), (21, 36277), (25, 36331), (26, 36337), (27, 36340), (33, 36403), (34, 36412), (38, 36418), (39, 36430), (41, 36454),

Gene: Phanphagia_45 Start: 36033, Stop: 36293, Start Num: 13

Candidate Starts for Phanphagia_45:

(Start: 13 @36033 has 82 MA's), (15, 36042), (19, 36084), (21, 36105), (25, 36159), (26, 36165), (27, 36168), (34, 36240), (38, 36246), (39, 36258),

Gene: PhesterPhotato_52 Start: 37160, Stop: 37420, Start Num: 13

Candidate Starts for PhesterPhotato_52:

(Start: 13 @37160 has 82 MA's), (16, 37178), (18, 37187), (19, 37211), (21, 37232), (25, 37286), (26, 37292), (27, 37295), (33, 37358), (34, 37367), (38, 37373), (39, 37385), (41, 37409),

Gene: Philus_54 Start: 38175, Stop: 38435, Start Num: 13

Candidate Starts for Philus_54:

(Start: 13 @38175 has 82 MA's), (16, 38193), (18, 38202), (19, 38226), (21, 38247), (25, 38301), (26, 38307), (27, 38310), (34, 38382), (38, 38388), (39, 38400),

Gene: Pippy_50 Start: 36021, Stop: 36290, Start Num: 13

Candidate Starts for Pippy_50:

(Start: 13 @36021 has 82 MA's), (16, 36039), (18, 36048), (19, 36072), (21, 36093), (24, 36135), (25, 36147), (26, 36153), (27, 36156), (31, 36201), (33, 36219), (37, 36237), (38, 36243), (39, 36255),

Gene: Renaud18_55 Start: 37223, Stop: 37507, Start Num: 13

Candidate Starts for Renaud18_55:

(Start: 13 @37223 has 82 MA's), (17, 37244), (20, 37304), (22, 37322), (27, 37373), (28, 37400), (29, 37406), (30, 37409), (34, 37448), (40, 37484),

Gene: Rialto_55 Start: 39407, Stop: 39676, Start Num: 13

Candidate Starts for Rialto_55:

(Start: 13 @39407 has 82 MA's), (16, 39425), (18, 39434), (19, 39458), (21, 39479), (24, 39521), (25, 39533), (26, 39539), (27, 39542), (31, 39587), (33, 39605), (37, 39623), (38, 39629), (39, 39641),

Gene: Rita_52 Start: 36039, Stop: 36299, Start Num: 13

Candidate Starts for Rita_52:

(Start: 13 @36039 has 82 MA's), (15, 36048), (19, 36090), (21, 36111), (24, 36153), (25, 36165), (26, 36171), (27, 36174), (33, 36237), (34, 36246), (38, 36252), (39, 36264), (41, 36288),

Gene: SG4_47 Start: 35631, Stop: 35894, Start Num: 13

Candidate Starts for SG4_47:

(Start: 13 @35631 has 82 MA's), (16, 35649), (18, 35658), (19, 35682), (21, 35703), (25, 35757), (26, 35763), (27, 35766), (33, 35829), (34, 35838), (38, 35844), (39, 35856), (41, 35880),

Gene: Saal_53 Start: 38145, Stop: 38408, Start Num: 13

Candidate Starts for Saal_53:

(Start: 13 @38145 has 82 MA's), (16, 38163), (18, 38172), (19, 38196), (21, 38217), (25, 38271), (26, 38277), (27, 38280), (33, 38343), (34, 38352), (38, 38358), (39, 38370), (41, 38394),

Gene: Sarma624_48 Start: 32920, Stop: 33180, Start Num: 13

Candidate Starts for Sarma624_48:

(Start: 13 @32920 has 82 MA's), (16, 32938), (18, 32947), (19, 32971), (21, 32992), (25, 33046), (26, 33052), (27, 33055), (31, 33100), (33, 33118), (34, 33127), (38, 33133), (39, 33145),

Gene: Shauna1_45 Start: 36023, Stop: 36283, Start Num: 13

Candidate Starts for Shauna1_45:

(Start: 13 @36023 has 82 MA's), (15, 36032), (19, 36074), (21, 36095), (25, 36149), (26, 36155), (27, 36158), (34, 36230), (38, 36236), (39, 36248),

Gene: ShroomBoi_50 Start: 36513, Stop: 36773, Start Num: 13

Candidate Starts for ShroomBoi_50:

(Start: 13 @36513 has 82 MA's), (16, 36531), (18, 36540), (19, 36564), (21, 36585), (25, 36639), (26, 36645), (27, 36648), (34, 36720), (38, 36726), (39, 36738),

Gene: SimranZ1_49 Start: 35859, Stop: 36119, Start Num: 13

Candidate Starts for SimranZ1_49:

(Start: 13 @35859 has 82 MA's), (15, 35868), (19, 35910), (21, 35931), (24, 35973), (25, 35985), (26, 35991), (27, 35994), (32, 36048), (33, 36057), (34, 36066), (38, 36072), (39, 36084), (41, 36108),

Gene: Soul22_54 Start: 36760, Stop: 37020, Start Num: 13

Candidate Starts for Soul22_54:

(Start: 13 @36760 has 82 MA's), (16, 36778), (18, 36787), (19, 36811), (21, 36832), (25, 36886), (26, 36892), (27, 36895), (34, 36967), (38, 36973), (39, 36985), (41, 37009),

Gene: Spartacus_52 Start: 37005, Stop: 37265, Start Num: 13

Candidate Starts for Spartacus_52:

(Start: 13 @37005 has 82 MA's), (16, 37023), (18, 37032), (19, 37056), (21, 37077), (25, 37131), (26, 37137), (27, 37140), (31, 37185), (33, 37203), (34, 37212), (38, 37218), (39, 37230),

Gene: Squirty_44 Start: 33796, Stop: 34068, Start Num: 14

Candidate Starts for Squirty_44:

(11, 33769), (Start: 14 @33796 has 2 MA's), (19, 33850), (21, 33871), (23, 33898), (27, 33931), (33, 33997),

Gene: StAnnes_49 Start: 36877, Stop: 37140, Start Num: 13

Candidate Starts for StAnnes_49:

(Start: 13 @36877 has 82 MA's), (16, 36895), (18, 36904), (19, 36928), (21, 36949), (25, 37003), (26, 37009), (27, 37012), (33, 37075), (34, 37084), (38, 37090), (39, 37102), (41, 37126),

Gene: Strokeseat_47 Start: 35111, Stop: 35371, Start Num: 13

Candidate Starts for Strokeseat_47:

(Start: 13 @35111 has 82 MA's), (16, 35129), (18, 35138), (19, 35162), (21, 35183), (25, 35237), (26, 35243), (27, 35246), (34, 35318), (38, 35324), (39, 35336),

Gene: SuperGrey_50 Start: 37482, Stop: 37742, Start Num: 13

Candidate Starts for SuperGrey_50:

(Start: 13 @37482 has 82 MA's), (16, 37500), (18, 37509), (19, 37533), (21, 37554), (25, 37608), (26, 37614), (27, 37617), (34, 37689), (38, 37695), (39, 37707),

Gene: SwagPiggett_56 Start: 39180, Stop: 39440, Start Num: 13

Candidate Starts for SwagPiggett_56:

(1, 38517), (2, 38688), (3, 38754), (Start: 6 @39081 has 4 MA's), (9, 39096), (12, 39150), (Start: 13 @39180 has 82 MA's), (16, 39198), (18, 39207), (19, 39231), (21, 39252), (25, 39306), (26, 39312), (27, 39315), (34, 39387), (38, 39393), (39, 39405),

Gene: TChen_50 Start: 37233, Stop: 37508, Start Num: 13

Candidate Starts for TChen_50:

(Start: 13 @37233 has 82 MA's), (19, 37284), (21, 37305), (24, 37347), (25, 37359), (26, 37365), (27, 37368), (34, 37446), (37, 37455), (38, 37461), (39, 37473),

Gene: Taj_53 Start: 37144, Stop: 37428, Start Num: 13

Candidate Starts for Taj_53:

(Start: 13 @37144 has 82 MA's), (17, 37165), (20, 37225), (22, 37243), (27, 37294), (28, 37321), (29, 37327), (30, 37330), (34, 37369), (40, 37405),

Gene: VRedHorse_50 Start: 36119, Stop: 36382, Start Num: 13

Candidate Starts for VRedHorse_50:

(Start: 13 @36119 has 82 MA's), (16, 36137), (18, 36146), (19, 36170), (21, 36191), (25, 36245), (26, 36251), (27, 36254), (34, 36326), (38, 36332), (39, 36344), (41, 36368),

Gene: Velveteen_45 Start: 32920, Stop: 33180, Start Num: 13

Candidate Starts for Velveteen_45:

(Start: 13 @32920 has 82 MA's), (16, 32938), (18, 32947), (19, 32971), (21, 32992), (25, 33046), (26, 33052), (27, 33055), (31, 33100), (33, 33118), (34, 33127), (38, 33133), (39, 33145),

Gene: Wachhund_52 Start: 36526, Stop: 36786, Start Num: 13

Candidate Starts for Wachhund_52:

(Start: 13 @36526 has 82 MA's), (16, 36544), (18, 36553), (19, 36577), (21, 36598), (25, 36652), (26, 36658), (27, 36661), (34, 36733), (38, 36739), (39, 36751),

Gene: Wee_52 Start: 37416, Stop: 37700, Start Num: 13

Candidate Starts for Wee_52:

(Start: 13 @37416 has 82 MA's), (17, 37437), (20, 37497), (22, 37515), (27, 37566), (28, 37593), (29, 37599), (30, 37602), (34, 37641), (40, 37677),

Gene: Whatsapiecost_49 Start: 35788, Stop: 36048, Start Num: 13

Candidate Starts for Whatsapiecost_49:

(Start: 13 @35788 has 82 MA's), (16, 35806), (18, 35815), (19, 35839), (21, 35860), (25, 35914), (26, 35920), (27, 35923), (34, 35995), (38, 36001), (39, 36013), (41, 36037),

Gene: WillSterrel_51 Start: 38121, Stop: 38381, Start Num: 13

Candidate Starts for WillSterrel_51:

(Start: 13 @38121 has 82 MA's), (16, 38139), (18, 38148), (19, 38172), (21, 38193), (25, 38247), (26, 38253), (27, 38256), (31, 38301), (33, 38319), (34, 38328), (38, 38334), (39, 38346),

Gene: XFactor_48 Start: 35606, Stop: 35869, Start Num: 13

Candidate Starts for XFactor_48:

(Start: 13 @35606 has 82 MA's), (16, 35624), (18, 35633), (19, 35657), (21, 35678), (25, 35732), (26, 35738), (27, 35741), (33, 35804), (34, 35813), (38, 35819), (39, 35831), (41, 35855),

Gene: Zizzle_56 Start: 38765, Stop: 39124, Start Num: 6

Candidate Starts for Zizzle_56:

(1, 38201), (2, 38372), (3, 38438), (Start: 6 @38765 has 4 MA's), (9, 38780), (12, 38834), (Start: 13 @38864 has 82 MA's), (16, 38882), (18, 38891), (19, 38915), (21, 38936), (25, 38990), (26, 38996), (27, 38999), (34, 39071), (38, 39077), (39, 39089),