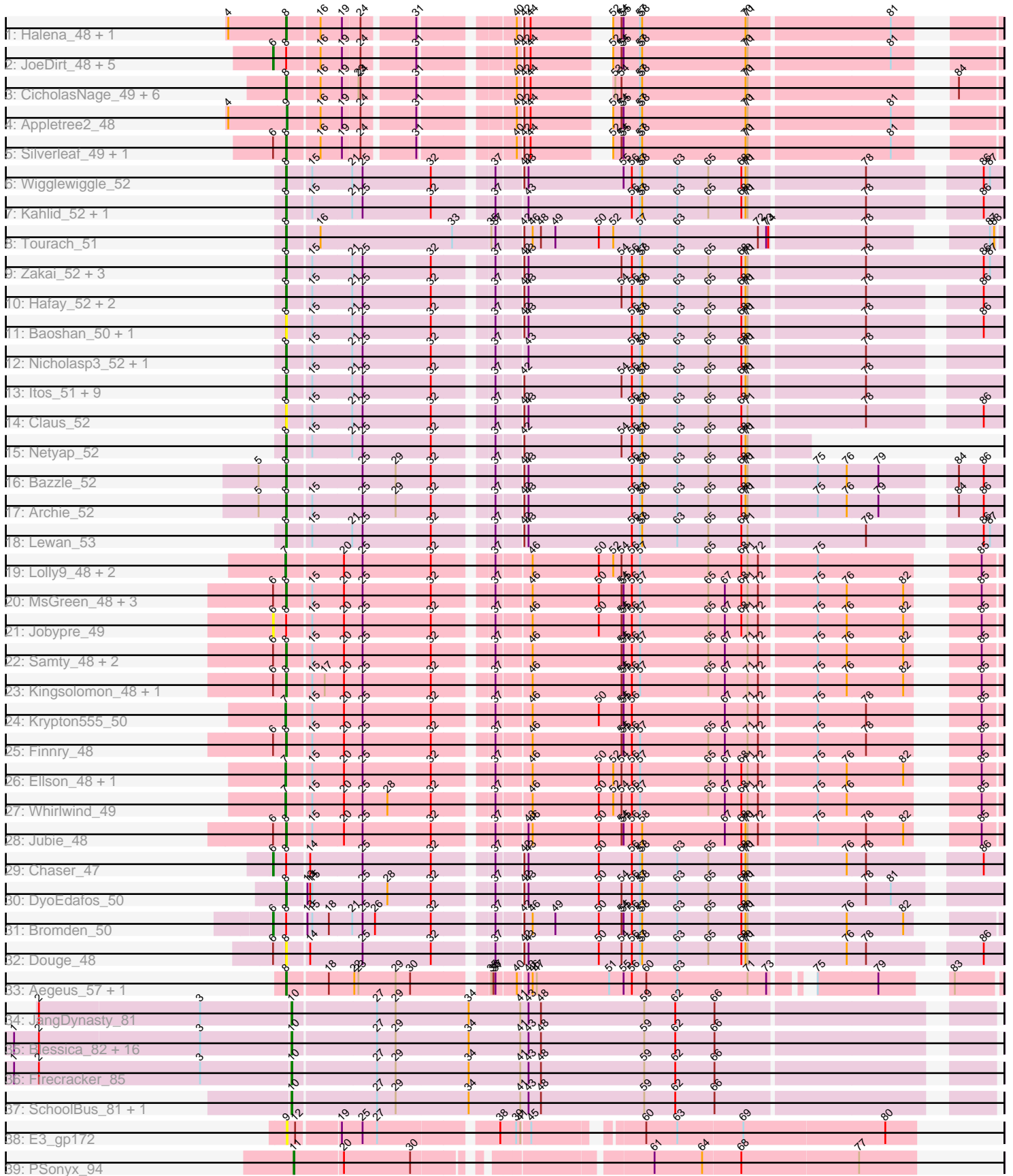


Pham 163502



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 163502 Report

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

Pham number 163502 has 96 members, 14 are drafts.

Phages represented in each track:

- Track 1 : Halena_48, Wamburgexpress_49
- Track 2 : JoeDirt_48, DirkDirk_48, MAckerman_48, LeBron_49, AvadaKedavra_49, UPIE_49
- Track 3 : CicholasNage_49, Calm_49, Wyatt2_49, Rose5_48, Zaria_49, Acquire49_49, Tyson_48
- Track 4 : Appletree2_48
- Track 5 : Silverleaf_49, Enceladus_48
- Track 6 : Wigglewiggles_52
- Track 7 : Kahlid_52, Wilder_52
- Track 8 : Tourach_51
- Track 9 : Zakai_52, Vetric_52, Crossroads_52, GuuelaD_51
- Track 10 : Hafay_52, Loadrie_51, MkaliMitinis3_52
- Track 11 : Baoshan_50, ZhongYanYuan_50
- Track 12 : Nicholasp3_52, Gardann_52
- Track 13 : Itos_51, Winky_52, Breezona_52, Finemlucis_52, BobsGarage_52, BigCheese_52, Faith1_52, Miley16_52, LilDestine_52, DrSeegs_52
- Track 14 : Claus_52
- Track 15 : Netyap_52
- Track 16 : Bazzle_52
- Track 17 : Archie_52
- Track 18 : Lewan_53
- Track 19 : Lolly9_48, MiniLon_50, MiniMac_50
- Track 20 : MsGreen_48, Lumos_49, Clautastrophe_48, Snenia_48
- Track 21 : Jobypre_49
- Track 22 : Samty_48, Bellis_48, Moostard_48
- Track 23 : Kingsolomon_48, Nicholas_48
- Track 24 : Krypton555_50
- Track 25 : Finnry_48
- Track 26 : Ellson_48, DuncansLeg_48
- Track 27 : Whirlwind_49
- Track 28 : Jubie_48
- Track 29 : Chaser_47
- Track 30 : DyoEdafos_50
- Track 31 : Bromden_50
- Track 32 : Douge_48
- Track 33 : Aegeus_57, Baudelaire_57
- Track 34 : JangDynasty_81

- Track 35 : Blessica_82, MadKillah_83, NiebruSaylor_81, Catdawg_81, TelAviv_78, Idergollasper_81, Vorrrps_82, Murai_82, Schuy_80, Ryadel_85, Alkhayr_79, Familton_82, Krili_81, Mori_82, Winget_82, Shida_81, FoulBall_79
- Track 36 : Firecracker_85
- Track 37 : SchoolBus_81, Bora_79
- Track 38 : E3_gp172
- Track 39 : PSonyx_94

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

The start number called the most often in the published annotations is 8, it was called in 50 of the 82 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_49, Aegeus_57, Archie_52, Baoshan_50, Baudelaire_57, Bazzle_52, Bellis_48, BigCheese_52, BobsGarage_52, Breezona_52, Calm_49, CicholasNage_49, Claus_52, Clautastrophe_48, Crossroads_52, Douge_48, DrSeegs_52, DyoEdafos_50, Enceladus_48, Faith1_52, Finemlucis_52, Finnry_48, Gardann_52, GuuelaD_51, Hafay_52, Halena_48, Itos_51, Jubie_48, Kahlid_52, Kingsolomon_48, Lewan_53, LilDestine_52, Loadrie_51, Lumos_49, Miley16_52, MkaliMitinis3_52, Moostard_48, MsGreen_48, Netyap_52, Nicholas_48, Nicholasp3_52, Rose5_48, Samty_48, Silverleaf_49, Snenia_48, Tourach_51, Tyson_48, Vatrix_52, Wamburgxpress_49, Wigglewiggles_52, Wilder_52, Winky_52, Wyatt2_49, Zakai_52, Zaria_49, ZhongYanYuan_50,

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

- AvadaKedavra_49, Bromden_50, Chaser_47, DirkDirk_48, Jobypre_49, JoeDirt_48, LeBron_49, MAckerman_48, UPIE_49,

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

- Alkhayr_79, Appletree2_48, Blessica_82, Bora_79, Catdawg_81, DuncansLeg_48, E3_gp172, Ellson_48, Familton_82, Firecracker_85, FoulBall_79, Idergollasper_81, JangDynasty_81, Krili_81, Krypton555_50, Lolly9_48, MadKillah_83, MiniLon_50, MiniMac_50, Mori_82, Murai_82, NiebruSaylor_81, PSonyx_94, Ryadel_85, SchoolBus_81, Schuy_80, Shida_81, TelAviv_78, Vorrrps_82, Whirlwind_49, Winget_82,

Summary by start number:

Start 6:

- Found in 23 of 96 (24.0%) of genes in pham
- Manual Annotations of this start: 7 of 82
- Called 39.1% of time when present
- Phage (with cluster) where this start called: AvadaKedavra_49 (L1), Bromden_50 (L4), Chaser_47 (L4), DirkDirk_48 (L1), Jobypre_49 (L3), JoeDirt_48 (L1), LeBron_49 (L1), MAckerman_48 (L1), UPIE_49 (L1),

Start 7:

- Found in 7 of 96 (7.3%) of genes in pham
- Manual Annotations of this start: 6 of 82

- Called 100.0% of time when present
- Phage (with cluster) where this start called: DuncansLeg_48 (L3), Ellson_48 (L3), Krypton555_50 (L3), Lolly9_48 (L3), MiniLon_50 (L3), MiniMac_50 (L3), Whirlwind_49 (L3),

Start 8:

- Found in 65 of 96 (67.7%) of genes in pham
- Manual Annotations of this start: 50 of 82
- Called 86.2% of time when present
- Phage (with cluster) where this start called: Acquire49_49 (L1), Aegeus_57 (L5), Archie_52 (L2), Baoshan_50 (L2), Baudelaire_57 (L5), Bazzle_52 (L2), Bellis_48 (L3), BigCheese_52 (L2), BobsGarage_52 (L2), Breezonia_52 (L2), Calm_49 (L1), CicholasNage_49 (L1), Claus_52 (L2), Clautastrophe_48 (L3), Crossroads_52 (L2), Douge_48 (L4), DrSeegs_52 (L2), DyoEdafos_50 (L4), Enceladus_48 (L1), Faith1_52 (L2), Finemlucis_52 (L2), Finnry_48 (L3), Gardann_52 (L2), GuuelaD_51 (L2), Hafay_52 (L2), Halena_48 (L1), Itos_51 (L2), Jubie_48 (L3), Kahlid_52 (L2), Kingsolomon_48 (L3), Lewan_53 (L2), LilDestine_52 (L2), Loadrie_51 (L2), Lumos_49 (L3), Miley16_52 (L2), MkaliMinitis3_52 (L2), Moostard_48 (L3), MsGreen_48 (L3), Netyap_52 (L2), Nicholas_48 (L3), Nicholasp3_52 (L2), Rose5_48 (L1), Samty_48 (L3), Silverleaf_49 (L1), Snenia_48 (L3), Tourach_51 (L2), Tyson_48 (L1), Vatrix_52 (L2), Wamburgrxpress_49 (L1), Wigglewiggles_52 (L2), Wilder_52 (L2), Winky_52 (L2), Wyatt2_49 (L1), Zakai_52 (L2), Zaria_49 (L1), ZhongYanYuan_50 (L2),

Start 9:

- Found in 2 of 96 (2.1%) of genes in pham
- Manual Annotations of this start: 1 of 82
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Appletree2_48 (L1), E3_gp172 (singleton),

Start 10:

- Found in 21 of 96 (21.9%) of genes in pham
- Manual Annotations of this start: 17 of 82
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Alkhayr_79 (O), Blessica_82 (O), Bora_79 (O), Catdawg_81 (O), Familton_82 (O), Firecracker_85 (O), FoulBall_79 (O), Idergollasper_81 (O), JangDynasty_81 (O), Krili_81 (O), MadKillah_83 (O), Mori_82 (O), Murai_82 (O), NiebruSaylor_81 (O), Ryadel_85 (O), SchoolBus_81 (O), Schuy_80 (O), Shida_81 (O), TelAviv_78 (O), Vorrrps_82 (O), Winget_82 (O),

Start 11:

- Found in 1 of 96 (1.0%) of genes in pham
- Manual Annotations of this start: 1 of 82
- Called 100.0% of time when present
- Phage (with cluster) where this start called: PSonyx_94 (singleton),

Summary by clusters:

There are 7 clusters represented in this pham: singleton, O, L4, L5, L2, L3, L1,

Info for manual annotations of cluster L1:

- Start number 6 was manually annotated 5 times for cluster L1.

- Start number 8 was manually annotated 11 times for cluster L1.
- Start number 9 was manually annotated 1 time for cluster L1.

Info for manual annotations of cluster L2:

- Start number 8 was manually annotated 26 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 7 was manually annotated 6 times for cluster L3.
- Start number 8 was manually annotated 10 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 6 was manually annotated 2 times for cluster L4.
- Start number 8 was manually annotated 1 time for cluster L4.

Info for manual annotations of cluster L5:

- Start number 8 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster O:

- Start number 10 was manually annotated 17 times for cluster O.

Gene Information:

Gene: Acquire49_49 Start: 36929, Stop: 37807, Start Num: 8

Candidate Starts for Acquire49_49:

(Start: 8 @36929 has 50 MA's), (16, 36971), (19, 37001), (23, 37022), (24, 37025), (31, 37094), (40, 37208), (42, 37214), (44, 37223), (53, 37313), (54, 37322), (57, 37349), (58, 37352), (70, 37502), (71, 37505), (84, 37748),

Gene: Aegeus_57 Start: 40090, Stop: 40989, Start Num: 8

Candidate Starts for Aegeus_57:

(Start: 8 @40090 has 50 MA's), (18, 40144), (22, 40180), (23, 40186), (29, 40240), (30, 40261), (35, 40357), (36, 40360), (37, 40363), (40, 40390), (43, 40402), (46, 40408), (47, 40414), (51, 40519), (55, 40540), (56, 40552), (60, 40573), (63, 40618), (71, 40720), (73, 40747), (75, 40780), (79, 40867), (83, 40927),

Gene: Alkhayr_79 Start: 51906, Stop: 50941, Start Num: 10

Candidate Starts for Alkhayr_79:

(1, 52302), (2, 52266), (3, 52035), (Start: 10 @51906 has 17 MA's), (27, 51789), (29, 51762), (34, 51660), (41, 51585), (43, 51573), (48, 51555), (59, 51405), (62, 51360), (66, 51303),

Gene: Appletree2_48 Start: 36860, Stop: 37738, Start Num: 9

Candidate Starts for Appletree2_48:

(4, 36776), (Start: 9 @36860 has 1 MA's), (16, 36902), (19, 36932), (24, 36956), (31, 37025), (40, 37139), (42, 37145), (44, 37154), (52, 37241), (54, 37253), (55, 37256), (57, 37280), (58, 37283), (70, 37433), (71, 37436), (81, 37634),

Gene: Archie_52 Start: 38816, Stop: 39775, Start Num: 8

Candidate Starts for Archie_52:

(5, 38777), (Start: 8 @38816 has 50 MA's), (15, 38846), (25, 38918), (29, 38966), (32, 39017), (37, 39089), (42, 39122), (43, 39128), (56, 39278), (57, 39290), (58, 39293), (63, 39344), (65, 39389), (68, 39437), (70, 39443), (71, 39446), (75, 39539), (76, 39581), (79, 39626), (84, 39710), (86, 39746),

Gene: AvadaKedavra_49 Start: 36911, Stop: 37807, Start Num: 6

Candidate Starts for AvadaKedavra_49:

(Start: 6 @36911 has 7 MA's), (Start: 8 @36929 has 50 MA's), (16, 36971), (19, 37001), (24, 37025), (31, 37094), (40, 37208), (42, 37214), (44, 37223), (52, 37310), (54, 37322), (55, 37325), (57, 37349), (58, 37352), (70, 37502), (71, 37505), (81, 37703),

Gene: Baoshan_50 Start: 38540, Stop: 39499, Start Num: 8

Candidate Starts for Baoshan_50:

(Start: 8 @38540 has 50 MA's), (15, 38570), (21, 38627), (25, 38642), (32, 38741), (37, 38813), (42, 38846), (43, 38852), (56, 39002), (57, 39014), (58, 39017), (63, 39068), (65, 39113), (68, 39161), (70, 39167), (71, 39170), (78, 39332), (86, 39470),

Gene: Baudelaire_57 Start: 40090, Stop: 40989, Start Num: 8

Candidate Starts for Baudelaire_57:

(Start: 8 @40090 has 50 MA's), (18, 40144), (22, 40180), (23, 40186), (29, 40240), (30, 40261), (35, 40357), (36, 40360), (37, 40363), (40, 40390), (43, 40402), (46, 40408), (47, 40414), (51, 40519), (55, 40540), (56, 40552), (60, 40573), (63, 40618), (71, 40720), (73, 40747), (75, 40780), (79, 40867), (83, 40927),

Gene: Bazzle_52 Start: 38886, Stop: 39845, Start Num: 8

Candidate Starts for Bazzle_52:

(5, 38847), (Start: 8 @38886 has 50 MA's), (25, 38988), (29, 39036), (32, 39087), (37, 39159), (42, 39192), (43, 39198), (56, 39348), (57, 39360), (58, 39363), (63, 39414), (65, 39459), (68, 39507), (70, 39513), (71, 39516), (75, 39609), (76, 39651), (79, 39696), (84, 39780), (86, 39816),

Gene: Bellis_48 Start: 38579, Stop: 39511, Start Num: 8

Candidate Starts for Bellis_48:

(Start: 6 @38564 has 7 MA's), (Start: 8 @38579 has 50 MA's), (15, 38609), (20, 38654), (25, 38681), (32, 38780), (37, 38852), (46, 38897), (54, 39026), (55, 39029), (56, 39041), (57, 39053), (65, 39152), (67, 39176), (71, 39209), (72, 39224), (75, 39302), (76, 39344), (82, 39425), (85, 39485),

Gene: BigCheese_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for BigCheese_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: Blessica_82 Start: 52454, Stop: 51489, Start Num: 10

Candidate Starts for Blessica_82:

(1, 52850), (2, 52814), (3, 52583), (Start: 10 @52454 has 17 MA's), (27, 52337), (29, 52310), (34, 52208), (41, 52133), (43, 52121), (48, 52103), (59, 51953), (62, 51908), (66, 51851),

Gene: BobsGarage_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for BobsGarage_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: Bora_79 Start: 51835, Stop: 50870, Start Num: 10

Candidate Starts for Bora_79:

(Start: 10 @51835 has 17 MA's), (27, 51718), (29, 51691), (34, 51589), (41, 51514), (43, 51502), (48, 51484), (59, 51334), (62, 51289), (66, 51232),

Gene: Breezona_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for Breezona_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: Bromden_50 Start: 38042, Stop: 38989, Start Num: 6

Candidate Starts for Bromden_50:

(Start: 6 @38042 has 7 MA's), (Start: 8 @38057 has 50 MA's), (13, 38081), (15, 38087), (18, 38111), (21, 38144), (25, 38159), (26, 38177), (32, 38258), (37, 38330), (42, 38363), (46, 38375), (49, 38408), (50, 38471), (54, 38504), (55, 38507), (56, 38519), (57, 38531), (58, 38534), (63, 38585), (65, 38630), (68, 38678), (70, 38684), (71, 38687), (76, 38822), (82, 38903),

Gene: Calm_49 Start: 36944, Stop: 37822, Start Num: 8

Candidate Starts for Calm_49:

(Start: 8 @36944 has 50 MA's), (16, 36986), (19, 37016), (23, 37037), (24, 37040), (31, 37109), (40, 37223), (42, 37229), (44, 37238), (53, 37328), (54, 37337), (57, 37364), (58, 37367), (70, 37517), (71, 37520), (84, 37763),

Gene: Catdawg_81 Start: 52190, Stop: 51225, Start Num: 10

Candidate Starts for Catdawg_81:

(1, 52586), (2, 52550), (3, 52319), (Start: 10 @52190 has 17 MA's), (27, 52073), (29, 52046), (34, 51944), (41, 51869), (43, 51857), (48, 51839), (59, 51689), (62, 51644), (66, 51587),

Gene: Chaser_47 Start: 36982, Stop: 37956, Start Num: 6

Candidate Starts for Chaser_47:

(Start: 6 @36982 has 7 MA's), (Start: 8 @36997 has 50 MA's), (14, 37024), (25, 37099), (32, 37198), (37, 37270), (42, 37303), (43, 37309), (50, 37411), (56, 37459), (57, 37471), (58, 37474), (63, 37525), (65, 37570), (68, 37618), (70, 37624), (71, 37627), (76, 37762), (78, 37789), (86, 37927),

Gene: CicholasNage_49 Start: 36965, Stop: 37843, Start Num: 8

Candidate Starts for CicholasNage_49:

(Start: 8 @36965 has 50 MA's), (16, 37007), (19, 37037), (23, 37058), (24, 37061), (31, 37130), (40, 37244), (42, 37250), (44, 37259), (53, 37349), (54, 37358), (57, 37385), (58, 37388), (70, 37538), (71, 37541), (84, 37784),

Gene: Claus_52 Start: 38659, Stop: 39618, Start Num: 8

Candidate Starts for Claus_52:

(Start: 8 @38659 has 50 MA's), (15, 38689), (21, 38746), (25, 38761), (32, 38860), (37, 38932), (42, 38965), (43, 38971), (56, 39121), (57, 39133), (58, 39136), (63, 39187), (65, 39232), (68, 39280), (71, 39289), (78, 39451), (86, 39589),

Gene: Clautastrophe_48 Start: 38576, Stop: 39508, Start Num: 8

Candidate Starts for Clautastrophe_48:

(Start: 6 @38561 has 7 MA's), (Start: 8 @38576 has 50 MA's), (15, 38606), (20, 38651), (25, 38678), (32, 38777), (37, 38849), (46, 38894), (50, 38990), (54, 39023), (55, 39026), (56, 39038), (57, 39050), (65, 39149), (67, 39173), (68, 39197), (71, 39206), (72, 39221), (75, 39299), (76, 39341), (82, 39422), (85, 39482),

Gene: Crossroads_52 Start: 38649, Stop: 39641, Start Num: 8

Candidate Starts for Crossroads_52:

(Start: 8 @38649 has 50 MA's), (15, 38679), (21, 38736), (25, 38751), (32, 38850), (37, 38922), (42, 38955), (43, 38961), (54, 39096), (56, 39111), (57, 39123), (58, 39126), (63, 39177), (65, 39222), (68, 39270), (70, 39276), (71, 39279), (78, 39441), (86, 39612), (87, 39621),

Gene: DirkDirk_48 Start: 36889, Stop: 37785, Start Num: 6

Candidate Starts for DirkDirk_48:

(Start: 6 @36889 has 7 MA's), (Start: 8 @36907 has 50 MA's), (16, 36949), (19, 36979), (24, 37003), (31, 37072), (40, 37186), (42, 37192), (44, 37201), (52, 37288), (54, 37300), (55, 37303), (57, 37327), (58, 37330), (70, 37480), (71, 37483), (81, 37681),

Gene: Douge_48 Start: 36984, Stop: 37943, Start Num: 8

Candidate Starts for Douge_48:

(Start: 6 @36969 has 7 MA's), (Start: 8 @36984 has 50 MA's), (14, 37011), (25, 37086), (32, 37185), (37, 37257), (42, 37290), (43, 37296), (50, 37398), (54, 37431), (56, 37446), (57, 37458), (58, 37461), (63, 37512), (65, 37557), (68, 37605), (70, 37611), (71, 37614), (76, 37749), (78, 37776), (86, 37914),

Gene: DrSeegs_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for DrSeegs_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: DuncansLeg_48 Start: 38602, Stop: 39534, Start Num: 7

Candidate Starts for DuncansLeg_48:

(Start: 7 @38602 has 6 MA's), (15, 38632), (20, 38677), (25, 38704), (32, 38803), (37, 38875), (46, 38920), (50, 39016), (52, 39037), (54, 39049), (56, 39064), (57, 39076), (65, 39175), (67, 39199), (68, 39223), (71, 39232), (72, 39247), (75, 39325), (76, 39367), (82, 39448), (85, 39508),

Gene: DyoEdafos_50 Start: 37265, Stop: 38224, Start Num: 8

Candidate Starts for DyoEdafos_50:

(Start: 8 @37265 has 50 MA's), (13, 37289), (14, 37292), (15, 37295), (25, 37367), (28, 37403), (32, 37466), (37, 37538), (42, 37571), (43, 37577), (50, 37679), (54, 37712), (56, 37727), (57, 37739), (58, 37742), (63, 37793), (65, 37838), (68, 37886), (70, 37892), (71, 37895), (78, 38057), (81, 38093),

Gene: E3_gp172 Start: 117552, Stop: 118379, Start Num: 9

Candidate Starts for E3_gp172:

(Start: 9 @117552 has 1 MA's), (12, 117564), (19, 117621), (25, 117651), (27, 117672), (38, 117828), (39, 117849), (41, 117855), (45, 117867), (60, 117996), (63, 118041), (69, 118134), (80, 118335),

Gene: Ellson_48 Start: 38632, Stop: 39564, Start Num: 7

Candidate Starts for Ellson_48:

(Start: 7 @38632 has 6 MA's), (15, 38662), (20, 38707), (25, 38734), (32, 38833), (37, 38905), (46, 38950), (50, 39046), (52, 39067), (54, 39079), (56, 39094), (57, 39106), (65, 39205), (67, 39229), (68, 39253), (71, 39262), (72, 39277), (75, 39355), (76, 39397), (82, 39478), (85, 39538),

Gene: Enceladus_48 Start: 36902, Stop: 37780, Start Num: 8

Candidate Starts for Enceladus_48:

(Start: 6 @36884 has 7 MA's), (Start: 8 @36902 has 50 MA's), (16, 36944), (19, 36974), (24, 36998), (31, 37067), (40, 37181), (42, 37187), (44, 37196), (52, 37283), (54, 37295), (55, 37298), (57, 37322), (58, 37325), (70, 37475), (71, 37478), (81, 37676),

Gene: Faith1_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for Faith1_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: Familton_82 Start: 52147, Stop: 51182, Start Num: 10

Candidate Starts for Familton_82:

(1, 52543), (2, 52507), (3, 52276), (Start: 10 @52147 has 17 MA's), (27, 52030), (29, 52003), (34, 51901), (41, 51826), (43, 51814), (48, 51796), (59, 51646), (62, 51601), (66, 51544),

Gene: Finemlucis_52 Start: 38933, Stop: 39892, Start Num: 8

Candidate Starts for Finemlucis_52:

(Start: 8 @38933 has 50 MA's), (15, 38963), (21, 39020), (25, 39035), (32, 39134), (37, 39206), (42, 39239), (54, 39380), (56, 39395), (57, 39407), (58, 39410), (63, 39461), (65, 39506), (68, 39554), (70, 39560), (71, 39563), (78, 39725),

Gene: Finnry_48 Start: 38580, Stop: 39512, Start Num: 8

Candidate Starts for Finnry_48:

(Start: 6 @38565 has 7 MA's), (Start: 8 @38580 has 50 MA's), (15, 38610), (20, 38655), (25, 38682), (32, 38781), (37, 38853), (46, 38898), (54, 39027), (55, 39030), (56, 39042), (57, 39054), (65, 39153), (67, 39177), (71, 39210), (72, 39225), (75, 39303), (78, 39372), (85, 39486),

Gene: Firecracker_85 Start: 53537, Stop: 52572, Start Num: 10

Candidate Starts for Firecracker_85:

(1, 53936), (2, 53900), (3, 53666), (Start: 10 @53537 has 17 MA's), (27, 53420), (29, 53393), (34, 53291), (41, 53216), (43, 53204), (48, 53186), (59, 53036), (62, 52991), (66, 52934),

Gene: FoulBall_79 Start: 52189, Stop: 51224, Start Num: 10

Candidate Starts for FoulBall_79:

(1, 52585), (2, 52549), (3, 52318), (Start: 10 @52189 has 17 MA's), (27, 52072), (29, 52045), (34, 51943), (41, 51868), (43, 51856), (48, 51838), (59, 51688), (62, 51643), (66, 51586),

Gene: Gardann_52 Start: 38648, Stop: 39607, Start Num: 8

Candidate Starts for Gardann_52:

(Start: 8 @38648 has 50 MA's), (15, 38678), (21, 38735), (25, 38750), (32, 38849), (37, 38921), (43, 38960), (56, 39110), (57, 39122), (58, 39125), (63, 39176), (65, 39221), (68, 39269), (70, 39275), (71, 39278), (78, 39440),

Gene: GuuelaD_51 Start: 38686, Stop: 39678, Start Num: 8

Candidate Starts for GuuelaD_51:

(Start: 8 @38686 has 50 MA's), (15, 38716), (21, 38773), (25, 38788), (32, 38887), (37, 38959), (42, 38992), (43, 38998), (54, 39133), (56, 39148), (57, 39160), (58, 39163), (63, 39214), (65, 39259), (68, 39307), (70, 39313), (71, 39316), (78, 39478), (86, 39649), (87, 39658),

Gene: Hafay_52 Start: 38709, Stop: 39668, Start Num: 8

Candidate Starts for Hafay_52:

(Start: 8 @38709 has 50 MA's), (15, 38739), (21, 38796), (25, 38811), (32, 38910), (37, 38982), (42, 39015), (43, 39021), (54, 39156), (56, 39171), (57, 39183), (58, 39186), (63, 39237), (65, 39282), (68, 39330), (70, 39336), (71, 39339), (78, 39501), (86, 39639),

Gene: Halena_48 Start: 36944, Stop: 37822, Start Num: 8

Candidate Starts for Halena_48:

(4, 36860), (Start: 8 @36944 has 50 MA's), (16, 36986), (19, 37016), (24, 37040), (31, 37109), (40, 37223), (42, 37229), (44, 37238), (52, 37325), (54, 37337), (55, 37340), (57, 37364), (58, 37367), (70,

37517), (71, 37520), (81, 37718),

Gene: Idergollasper_81 Start: 52141, Stop: 51176, Start Num: 10

Candidate Starts for Idergollasper_81:

(1, 52537), (2, 52501), (3, 52270), (Start: 10 @52141 has 17 MA's), (27, 52024), (29, 51997), (34, 51895), (41, 51820), (43, 51808), (48, 51790), (59, 51640), (62, 51595), (66, 51538),

Gene: Itos_51 Start: 37553, Stop: 38512, Start Num: 8

Candidate Starts for Itos_51:

(Start: 8 @37553 has 50 MA's), (15, 37583), (21, 37640), (25, 37655), (32, 37754), (37, 37826), (42, 37859), (54, 38000), (56, 38015), (57, 38027), (58, 38030), (63, 38081), (65, 38126), (68, 38174), (70, 38180), (71, 38183), (78, 38345),

Gene: JangDynasty_81 Start: 52208, Stop: 51243, Start Num: 10

Candidate Starts for JangDynasty_81:

(2, 52568), (3, 52337), (Start: 10 @52208 has 17 MA's), (27, 52091), (29, 52064), (34, 51962), (41, 51887), (43, 51875), (48, 51857), (59, 51707), (62, 51662), (66, 51605),

Gene: Jobypre_49 Start: 38561, Stop: 39508, Start Num: 6

Candidate Starts for Jobypre_49:

(Start: 6 @38561 has 7 MA's), (Start: 8 @38576 has 50 MA's), (15, 38606), (20, 38651), (25, 38678), (32, 38777), (37, 38849), (46, 38894), (50, 38990), (54, 39023), (55, 39026), (56, 39038), (57, 39050), (65, 39149), (67, 39173), (68, 39197), (71, 39206), (72, 39221), (75, 39299), (76, 39341), (82, 39422), (85, 39482),

Gene: JoeDirt_48 Start: 36882, Stop: 37778, Start Num: 6

Candidate Starts for JoeDirt_48:

(Start: 6 @36882 has 7 MA's), (Start: 8 @36900 has 50 MA's), (16, 36942), (19, 36972), (24, 36996), (31, 37065), (40, 37179), (42, 37185), (44, 37194), (52, 37281), (54, 37293), (55, 37296), (57, 37320), (58, 37323), (70, 37473), (71, 37476), (81, 37674),

Gene: Jubie_48 Start: 38577, Stop: 39509, Start Num: 8

Candidate Starts for Jubie_48:

(Start: 6 @38562 has 7 MA's), (Start: 8 @38577 has 50 MA's), (15, 38607), (20, 38652), (25, 38679), (32, 38778), (37, 38850), (43, 38889), (46, 38895), (50, 38991), (54, 39024), (55, 39027), (56, 39039), (58, 39054), (67, 39174), (68, 39198), (70, 39204), (71, 39207), (72, 39222), (75, 39300), (78, 39369), (82, 39423), (85, 39483),

Gene: Kahlid_52 Start: 38653, Stop: 39612, Start Num: 8

Candidate Starts for Kahlid_52:

(Start: 8 @38653 has 50 MA's), (15, 38683), (21, 38740), (25, 38755), (32, 38854), (37, 38926), (43, 38965), (56, 39115), (57, 39127), (58, 39130), (63, 39181), (65, 39226), (68, 39274), (70, 39280), (71, 39283), (78, 39445), (86, 39583),

Gene: Kingsolomon_48 Start: 38576, Stop: 39508, Start Num: 8

Candidate Starts for Kingsolomon_48:

(Start: 6 @38561 has 7 MA's), (Start: 8 @38576 has 50 MA's), (15, 38606), (17, 38624), (20, 38651), (25, 38678), (32, 38777), (37, 38849), (46, 38894), (54, 39023), (55, 39026), (56, 39038), (57, 39050), (65, 39149), (67, 39173), (71, 39206), (72, 39221), (75, 39299), (76, 39341), (82, 39422), (85, 39482),

Gene: Krili_81 Start: 51702, Stop: 50737, Start Num: 10

Candidate Starts for Krili_81:

(1, 52098), (2, 52062), (3, 51831), (Start: 10 @51702 has 17 MA's), (27, 51585), (29, 51558), (34, 51456), (41, 51381), (43, 51369), (48, 51351), (59, 51201), (62, 51156), (66, 51099),

Gene: Krypton555_50 Start: 38550, Stop: 39482, Start Num: 7

Candidate Starts for Krypton555_50:

(Start: 7 @38550 has 6 MA's), (15, 38580), (20, 38625), (25, 38652), (32, 38751), (37, 38823), (46, 38868), (50, 38964), (54, 38997), (55, 39000), (56, 39012), (67, 39147), (71, 39180), (72, 39195), (75, 39273), (78, 39342), (85, 39456),

Gene: LeBron_49 Start: 36926, Stop: 37822, Start Num: 6

Candidate Starts for LeBron_49:

(Start: 6 @36926 has 7 MA's), (Start: 8 @36944 has 50 MA's), (16, 36986), (19, 37016), (24, 37040), (31, 37109), (40, 37223), (42, 37229), (44, 37238), (52, 37325), (54, 37337), (55, 37340), (57, 37364), (58, 37367), (70, 37517), (71, 37520), (81, 37718),

Gene: Lewan_53 Start: 38671, Stop: 39630, Start Num: 8

Candidate Starts for Lewan_53:

(Start: 8 @38671 has 50 MA's), (15, 38701), (21, 38758), (25, 38773), (32, 38872), (37, 38944), (42, 38977), (43, 38983), (56, 39133), (57, 39145), (58, 39148), (63, 39199), (65, 39244), (68, 39292), (71, 39301), (78, 39463), (86, 39601), (87, 39610),

Gene: LilDestine_52 Start: 38645, Stop: 39604, Start Num: 8

Candidate Starts for LilDestine_52:

(Start: 8 @38645 has 50 MA's), (15, 38675), (21, 38732), (25, 38747), (32, 38846), (37, 38918), (42, 38951), (54, 39092), (56, 39107), (57, 39119), (58, 39122), (63, 39173), (65, 39218), (68, 39266), (70, 39272), (71, 39275), (78, 39437),

Gene: Loadrie_51 Start: 38707, Stop: 39666, Start Num: 8

Candidate Starts for Loadrie_51:

(Start: 8 @38707 has 50 MA's), (15, 38737), (21, 38794), (25, 38809), (32, 38908), (37, 38980), (42, 39013), (43, 39019), (54, 39154), (56, 39169), (57, 39181), (58, 39184), (63, 39235), (65, 39280), (68, 39328), (70, 39334), (71, 39337), (78, 39499), (86, 39637),

Gene: Lolly9_48 Start: 38388, Stop: 39320, Start Num: 7

Candidate Starts for Lolly9_48:

(Start: 7 @38388 has 6 MA's), (20, 38463), (25, 38490), (32, 38589), (37, 38661), (46, 38706), (50, 38802), (52, 38823), (54, 38835), (56, 38850), (57, 38862), (65, 38961), (68, 39009), (71, 39018), (72, 39033), (75, 39111), (85, 39294),

Gene: Lumos_49 Start: 38573, Stop: 39505, Start Num: 8

Candidate Starts for Lumos_49:

(Start: 6 @38558 has 7 MA's), (Start: 8 @38573 has 50 MA's), (15, 38603), (20, 38648), (25, 38675), (32, 38774), (37, 38846), (46, 38891), (50, 38987), (54, 39020), (55, 39023), (56, 39035), (57, 39047), (65, 39146), (67, 39170), (68, 39194), (71, 39203), (72, 39218), (75, 39296), (76, 39338), (82, 39419), (85, 39479),

Gene: MAckerman_48 Start: 36919, Stop: 37815, Start Num: 6

Candidate Starts for MAckerman_48:

(Start: 6 @36919 has 7 MA's), (Start: 8 @36937 has 50 MA's), (16, 36979), (19, 37009), (24, 37033), (31, 37102), (40, 37216), (42, 37222), (44, 37231), (52, 37318), (54, 37330), (55, 37333), (57, 37357), (58, 37360), (70, 37510), (71, 37513), (81, 37711),

Gene: MadKillah_83 Start: 51971, Stop: 51006, Start Num: 10

Candidate Starts for MadKillah_83:

(1, 52367), (2, 52331), (3, 52100), (Start: 10 @51971 has 17 MA's), (27, 51854), (29, 51827), (34, 51725), (41, 51650), (43, 51638), (48, 51620), (59, 51470), (62, 51425), (66, 51368),

Gene: Miley16_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for Miley16_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: MiniLon_50 Start: 38389, Stop: 39321, Start Num: 7

Candidate Starts for MiniLon_50:

(Start: 7 @38389 has 6 MA's), (20, 38464), (25, 38491), (32, 38590), (37, 38662), (46, 38707), (50, 38803), (52, 38824), (54, 38836), (56, 38851), (57, 38863), (65, 38962), (68, 39010), (71, 39019), (72, 39034), (75, 39112), (85, 39295),

Gene: MiniMac_50 Start: 38387, Stop: 39319, Start Num: 7

Candidate Starts for MiniMac_50:

(Start: 7 @38387 has 6 MA's), (20, 38462), (25, 38489), (32, 38588), (37, 38660), (46, 38705), (50, 38801), (52, 38822), (54, 38834), (56, 38849), (57, 38861), (65, 38960), (68, 39008), (71, 39017), (72, 39032), (75, 39110), (85, 39293),

Gene: MkaliMitinis3_52 Start: 38677, Stop: 39636, Start Num: 8

Candidate Starts for MkaliMitinis3_52:

(Start: 8 @38677 has 50 MA's), (15, 38707), (21, 38764), (25, 38779), (32, 38878), (37, 38950), (42, 38983), (43, 38989), (54, 39124), (56, 39139), (57, 39151), (58, 39154), (63, 39205), (65, 39250), (68, 39298), (70, 39304), (71, 39307), (78, 39469), (86, 39607),

Gene: Moostard_48 Start: 38579, Stop: 39511, Start Num: 8

Candidate Starts for Moostard_48:

(Start: 6 @38564 has 7 MA's), (Start: 8 @38579 has 50 MA's), (15, 38609), (20, 38654), (25, 38681), (32, 38780), (37, 38852), (46, 38897), (54, 39026), (55, 39029), (56, 39041), (57, 39053), (65, 39152), (67, 39176), (71, 39209), (72, 39224), (75, 39302), (76, 39344), (82, 39425), (85, 39485),

Gene: Mori_82 Start: 52230, Stop: 51265, Start Num: 10

Candidate Starts for Mori_82:

(1, 52626), (2, 52590), (3, 52359), (Start: 10 @52230 has 17 MA's), (27, 52113), (29, 52086), (34, 51984), (41, 51909), (43, 51897), (48, 51879), (59, 51729), (62, 51684), (66, 51627),

Gene: MsGreen_48 Start: 38576, Stop: 39508, Start Num: 8

Candidate Starts for MsGreen_48:

(Start: 6 @38561 has 7 MA's), (Start: 8 @38576 has 50 MA's), (15, 38606), (20, 38651), (25, 38678), (32, 38777), (37, 38849), (46, 38894), (50, 38990), (54, 39023), (55, 39026), (56, 39038), (57, 39050), (65, 39149), (67, 39173), (68, 39197), (71, 39206), (72, 39221), (75, 39299), (76, 39341), (82, 39422), (85, 39482),

Gene: Murai_82 Start: 52363, Stop: 51398, Start Num: 10

Candidate Starts for Murai_82:

(1, 52759), (2, 52723), (3, 52492), (Start: 10 @52363 has 17 MA's), (27, 52246), (29, 52219), (34, 52117), (41, 52042), (43, 52030), (48, 52012), (59, 51862), (62, 51817), (66, 51760),

Gene: Netyap_52 Start: 38647, Stop: 39360, Start Num: 8

Candidate Starts for Netyap_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277),

Gene: Nicholas_48 Start: 38576, Stop: 39508, Start Num: 8

Candidate Starts for Nicholas_48:

(Start: 6 @38561 has 7 MA's), (Start: 8 @38576 has 50 MA's), (15, 38606), (17, 38624), (20, 38651), (25, 38678), (32, 38777), (37, 38849), (46, 38894), (54, 39023), (55, 39026), (56, 39038), (57, 39050), (65, 39149), (67, 39173), (71, 39206), (72, 39221), (75, 39299), (76, 39341), (82, 39422), (85, 39482),

Gene: Nicholasp3_52 Start: 38648, Stop: 39607, Start Num: 8

Candidate Starts for Nicholasp3_52:

(Start: 8 @38648 has 50 MA's), (15, 38678), (21, 38735), (25, 38750), (32, 38849), (37, 38921), (43, 38960), (56, 39110), (57, 39122), (58, 39125), (63, 39176), (65, 39221), (68, 39269), (70, 39275), (71, 39278), (78, 39440),

Gene: NiebruSaylor_81 Start: 51621, Stop: 50656, Start Num: 10

Candidate Starts for NiebruSaylor_81:

(1, 52017), (2, 51981), (3, 51750), (Start: 10 @51621 has 17 MA's), (27, 51504), (29, 51477), (34, 51375), (41, 51300), (43, 51288), (48, 51270), (59, 51120), (62, 51075), (66, 51018),

Gene: PSonyx_94 Start: 52171, Stop: 51347, Start Num: 11

Candidate Starts for PSonyx_94:

(Start: 11 @52171 has 1 MA's), (20, 52102), (30, 52006), (61, 51718), (64, 51649), (68, 51595), (77, 51427),

Gene: Rose5_48 Start: 36929, Stop: 37807, Start Num: 8

Candidate Starts for Rose5_48:

(Start: 8 @36929 has 50 MA's), (16, 36971), (19, 37001), (23, 37022), (24, 37025), (31, 37094), (40, 37208), (42, 37214), (44, 37223), (53, 37313), (54, 37322), (57, 37349), (58, 37352), (70, 37502), (71, 37505), (84, 37748),

Gene: Ryadel_85 Start: 52977, Stop: 52012, Start Num: 10

Candidate Starts for Ryadel_85:

(1, 53373), (2, 53337), (3, 53106), (Start: 10 @52977 has 17 MA's), (27, 52860), (29, 52833), (34, 52731), (41, 52656), (43, 52644), (48, 52626), (59, 52476), (62, 52431), (66, 52374),

Gene: Samty_48 Start: 38578, Stop: 39510, Start Num: 8

Candidate Starts for Samty_48:

(Start: 6 @38563 has 7 MA's), (Start: 8 @38578 has 50 MA's), (15, 38608), (20, 38653), (25, 38680), (32, 38779), (37, 38851), (46, 38896), (54, 39025), (55, 39028), (56, 39040), (57, 39052), (65, 39151), (67, 39175), (71, 39208), (72, 39223), (75, 39301), (76, 39343), (82, 39424), (85, 39484),

Gene: SchoolBus_81 Start: 52125, Stop: 51160, Start Num: 10

Candidate Starts for SchoolBus_81:

(Start: 10 @52125 has 17 MA's), (27, 52008), (29, 51981), (34, 51879), (41, 51804), (43, 51792), (48, 51774), (59, 51624), (62, 51579), (66, 51522),

Gene: Schuy_80 Start: 51974, Stop: 51009, Start Num: 10

Candidate Starts for Schuy_80:

(1, 52370), (2, 52334), (3, 52103), (Start: 10 @51974 has 17 MA's), (27, 51857), (29, 51830), (34, 51728), (41, 51653), (43, 51641), (48, 51623), (59, 51473), (62, 51428), (66, 51371),

Gene: Shida_81 Start: 51814, Stop: 50849, Start Num: 10

Candidate Starts for Shida_81:

(1, 52210), (2, 52174), (3, 51943), (Start: 10 @51814 has 17 MA's), (27, 51697), (29, 51670), (34, 51568), (41, 51493), (43, 51481), (48, 51463), (59, 51313), (62, 51268), (66, 51211),

Gene: Silverleaf_49 Start: 36922, Stop: 37800, Start Num: 8

Candidate Starts for Silverleaf_49:

(Start: 6 @36904 has 7 MA's), (Start: 8 @36922 has 50 MA's), (16, 36964), (19, 36994), (24, 37018), (31, 37087), (40, 37201), (42, 37207), (44, 37216), (52, 37303), (54, 37315), (55, 37318), (57, 37342), (58, 37345), (70, 37495), (71, 37498), (81, 37696),

Gene: Snenia_48 Start: 38577, Stop: 39509, Start Num: 8

Candidate Starts for Snenia_48:

(Start: 6 @38562 has 7 MA's), (Start: 8 @38577 has 50 MA's), (15, 38607), (20, 38652), (25, 38679), (32, 38778), (37, 38850), (46, 38895), (50, 38991), (54, 39024), (55, 39027), (56, 39039), (57, 39051), (65, 39150), (67, 39174), (68, 39198), (71, 39207), (72, 39222), (75, 39300), (76, 39342), (82, 39423), (85, 39483),

Gene: TelAviv_78 Start: 52108, Stop: 51143, Start Num: 10

Candidate Starts for TelAviv_78:

(1, 52504), (2, 52468), (3, 52237), (Start: 10 @52108 has 17 MA's), (27, 51991), (29, 51964), (34, 51862), (41, 51787), (43, 51775), (48, 51757), (59, 51607), (62, 51562), (66, 51505),

Gene: Tourach_51 Start: 38673, Stop: 39623, Start Num: 8

Candidate Starts for Tourach_51:

(Start: 8 @38673 has 50 MA's), (16, 38715), (33, 38904), (35, 38958), (37, 38964), (42, 38997), (46, 39009), (48, 39021), (49, 39042), (50, 39105), (52, 39126), (57, 39165), (63, 39219), (72, 39336), (73, 39348), (74, 39351), (78, 39483), (87, 39609), (88, 39615),

Gene: Tyson_48 Start: 36931, Stop: 37809, Start Num: 8

Candidate Starts for Tyson_48:

(Start: 8 @36931 has 50 MA's), (16, 36973), (19, 37003), (23, 37024), (24, 37027), (31, 37096), (40, 37210), (42, 37216), (44, 37225), (53, 37315), (54, 37324), (57, 37351), (58, 37354), (70, 37504), (71, 37507), (84, 37750),

Gene: UPIE_49 Start: 36898, Stop: 37794, Start Num: 6

Candidate Starts for UPIE_49:

(Start: 6 @36898 has 7 MA's), (Start: 8 @36916 has 50 MA's), (16, 36958), (19, 36988), (24, 37012), (31, 37081), (40, 37195), (42, 37201), (44, 37210), (52, 37297), (54, 37309), (55, 37312), (57, 37336), (58, 37339), (70, 37489), (71, 37492), (81, 37690),

Gene: Vetric_52 Start: 38653, Stop: 39612, Start Num: 8

Candidate Starts for Vetric_52:

(Start: 8 @38653 has 50 MA's), (15, 38683), (21, 38740), (25, 38755), (32, 38854), (37, 38926), (42, 38959), (43, 38965), (54, 39100), (56, 39115), (57, 39127), (58, 39130), (63, 39181), (65, 39226), (68, 39274), (70, 39280), (71, 39283), (78, 39445), (86, 39583), (87, 39592),

Gene: Vorrps_82 Start: 52231, Stop: 51266, Start Num: 10

Candidate Starts for Vorrps_82:

(1, 52627), (2, 52591), (3, 52360), (Start: 10 @52231 has 17 MA's), (27, 52114), (29, 52087), (34, 51985), (41, 51910), (43, 51898), (48, 51880), (59, 51730), (62, 51685), (66, 51628),

Gene: Wamburgxpress_49 Start: 36932, Stop: 37810, Start Num: 8

Candidate Starts for Wamburgexpress_49:

(4, 36848), (Start: 8 @36932 has 50 MA's), (16, 36974), (19, 37004), (24, 37028), (31, 37097), (40, 37211), (42, 37217), (44, 37226), (52, 37313), (54, 37325), (55, 37328), (57, 37352), (58, 37355), (70, 37505), (71, 37508), (81, 37706),

Gene: Whirlwind_49 Start: 38392, Stop: 39324, Start Num: 7

Candidate Starts for Whirlwind_49:

(Start: 7 @38392 has 6 MA's), (15, 38422), (20, 38467), (25, 38494), (28, 38530), (32, 38593), (37, 38665), (46, 38710), (50, 38806), (52, 38827), (54, 38839), (56, 38854), (57, 38866), (65, 38965), (67, 38989), (68, 39013), (71, 39022), (72, 39037), (75, 39115), (76, 39157), (85, 39298),

Gene: Wigglewigggle_52 Start: 38708, Stop: 39667, Start Num: 8

Candidate Starts for Wigglewigggle_52:

(Start: 8 @38708 has 50 MA's), (15, 38738), (21, 38795), (25, 38810), (32, 38909), (37, 38981), (42, 39014), (43, 39020), (55, 39158), (56, 39170), (57, 39182), (58, 39185), (63, 39236), (65, 39281), (68, 39329), (70, 39335), (71, 39338), (78, 39500), (86, 39638), (87, 39647),

Gene: Wilder_52 Start: 38653, Stop: 39612, Start Num: 8

Candidate Starts for Wilder_52:

(Start: 8 @38653 has 50 MA's), (15, 38683), (21, 38740), (25, 38755), (32, 38854), (37, 38926), (43, 38965), (56, 39115), (57, 39127), (58, 39130), (63, 39181), (65, 39226), (68, 39274), (70, 39280), (71, 39283), (78, 39445), (86, 39583),

Gene: Winget_82 Start: 52401, Stop: 51436, Start Num: 10

Candidate Starts for Winget_82:

(1, 52797), (2, 52761), (3, 52530), (Start: 10 @52401 has 17 MA's), (27, 52284), (29, 52257), (34, 52155), (41, 52080), (43, 52068), (48, 52050), (59, 51900), (62, 51855), (66, 51798),

Gene: Winky_52 Start: 38647, Stop: 39606, Start Num: 8

Candidate Starts for Winky_52:

(Start: 8 @38647 has 50 MA's), (15, 38677), (21, 38734), (25, 38749), (32, 38848), (37, 38920), (42, 38953), (54, 39094), (56, 39109), (57, 39121), (58, 39124), (63, 39175), (65, 39220), (68, 39268), (70, 39274), (71, 39277), (78, 39439),

Gene: Wyatt2_49 Start: 36929, Stop: 37807, Start Num: 8

Candidate Starts for Wyatt2_49:

(Start: 8 @36929 has 50 MA's), (16, 36971), (19, 37001), (23, 37022), (24, 37025), (31, 37094), (40, 37208), (42, 37214), (44, 37223), (53, 37313), (54, 37322), (57, 37349), (58, 37352), (70, 37502), (71, 37505), (84, 37748),

Gene: Zakai_52 Start: 38905, Stop: 39897, Start Num: 8

Candidate Starts for Zakai_52:

(Start: 8 @38905 has 50 MA's), (15, 38935), (21, 38992), (25, 39007), (32, 39106), (37, 39178), (42, 39211), (43, 39217), (54, 39352), (56, 39367), (57, 39379), (58, 39382), (63, 39433), (65, 39478), (68, 39526), (70, 39532), (71, 39535), (78, 39697), (86, 39868), (87, 39877),

Gene: Zaria_49 Start: 36944, Stop: 37822, Start Num: 8

Candidate Starts for Zaria_49:

(Start: 8 @36944 has 50 MA's), (16, 36986), (19, 37016), (23, 37037), (24, 37040), (31, 37109), (40, 37223), (42, 37229), (44, 37238), (53, 37328), (54, 37337), (57, 37364), (58, 37367), (70, 37517), (71, 37520), (84, 37763),

Gene: ZhongYanYuan_50 Start: 38504, Stop: 39463, Start Num: 8

Candidate Starts for ZhongYanYuan_50:

(Start: 8 @38504 has 50 MA's), (15, 38534), (21, 38591), (25, 38606), (32, 38705), (37, 38777), (42, 38810), (43, 38816), (56, 38966), (57, 38978), (58, 38981), (63, 39032), (65, 39077), (68, 39125), (70, 39131), (71, 39134), (78, 39296), (86, 39434),