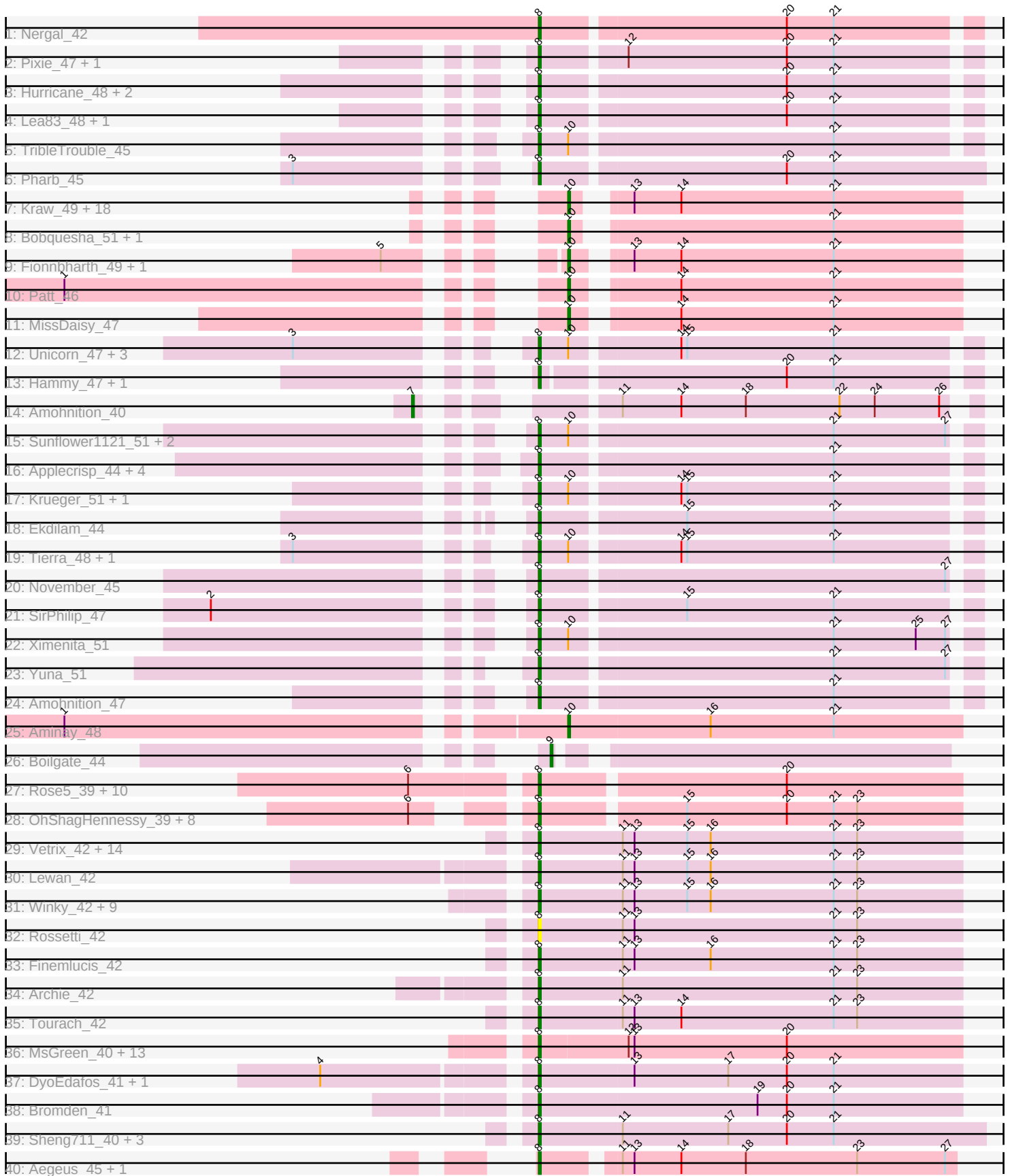


Pham 330596



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 330596 Report

This analysis was run 09/05/26 on database version 662.

Pham number 330596 has 135 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Nergal_42
- Track 2 : Pixie_47, TBond007_47
- Track 3 : Hurricane_48, Keshu_49, MacnCheese_49
- Track 4 : Lea83_48, ShedlockHolmes_48
- Track 5 : TribbleTrouble_45
- Track 6 : Pharb_45
- Track 7 : Kraw_49, Chancellor_49, Lebo14_48, Qhanda_51, YasnayaPolyana_49, Mitti_49, Juliette_51, Slarp_49, Cheetobro_49, DanSyl44_52, Wintermute_49, SamScheppers_47, OmniCritical_48, Malthus_50, Taquito_49, JF1_49, Y10_48, Ruthiejr_50, Y2_48
- Track 8 : Bobquesha_51, Reptar3000_47
- Track 9 : Fionnbharth_49, Eponine_51
- Track 10 : Patt_46
- Track 11 : MissDaisy_47
- Track 12 : Unicorn_47, PhelpsODU_47, Bryler_48, Cain_48
- Track 13 : Hammy_47, DarthP_47
- Track 14 : Amohnition_40
- Track 15 : Sunflower1121_51, Syra333_50, Shadow1_50
- Track 16 : Applecrisp_44, Amgine_45, Ellie_43, Fefferhead_45, Lavahound_44
- Track 17 : Krueger_51, Tigress9_50
- Track 18 : Ekdilam_44
- Track 19 : Tierra_48, Phrank_48
- Track 20 : November_45
- Track 21 : SirPhilip_47
- Track 22 : Ximenita_51
- Track 23 : Yuna_51
- Track 24 : Amohnition_47
- Track 25 : Aminay_48
- Track 26 : Boilgate_44
- Track 27 : Rose5_39, Tyson_39, Halena_39, MAckerman_40, CicholasNage_40, Calm_40, Wyatt2_40, Zaria_40, Silverleaf_39, AvadaKedavra_40, Acquire49_40
- Track 28 : OhShagHennessy_39, Wamburgxpress_40, LeBron_40, Enceladus_39, JoeDirt_39, Appletree2_39, Poochiewood_39, DirkDirk_39, UPIE_40
- Track 29 : Vetrix_42, Nicholasp3_42, GuuelaD_42, Kahlid_42, Crossroads_42, Loadrie_42, Gabriela_42, Gardann_42, Wilder_42, Rumpelstiltskin_42, OverPar_42, Underpass_42, MkaliMitinis3_42, Wigglewiggles_42, Zakai_42
- Track 30 : Lewan_42

- Track 31 : Winky_42, Breezona_42, Itos_41, BobsGarage_42, Netyap_42, BigCheese_42, Faith1_42, Miley16_42, LilDestine_42, DrSeegs_42
- Track 32 : Rossetti_42
- Track 33 : Finemlucis_42
- Track 34 : Archie_42
- Track 35 : Tourach_42
- Track 36 : MsGreen_40, Jobypre_40, Lumos_40, Samty_40, Clautastrophe_40, Kingsolomon_40, Bellis_40, Snenia_40, Finnry_40, Moostard_40, TriFive_40, Jubie_40, Red305_40, Nicholas_40
- Track 37 : DyoEdafos_41, Kropertea_40
- Track 38 : Bromden_41
- Track 39 : Sheng711_40, Douge_39, ChutneyChips_40, Chaser_39
- Track 40 : Aegeus_45, Baudelaire_45

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 103 of the 128 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_40, Aegeus_45, Amgine_45, Amohnition_47, Applecrisp_44, Appletree2_39, Archie_42, AvadaKedavra_40, Baudelaire_45, Bellis_40, BigCheese_42, BobsGarage_42, Breezona_42, Bromden_41, Bryler_48, Cain_48, Calm_40, Chaser_39, ChutneyChips_40, CicholasNage_40, Clautastrophe_40, Crossroads_42, DarthP_47, DirkDirk_39, Douge_39, DrSeegs_42, DyoEdafos_41, Ekdilam_44, Ellie_43, Enceladus_39, Faith1_42, Fefferhead_45, Finemlucis_42, Finnry_40, Gabriela_42, Gardann_42, GuuelaD_42, Halena_39, Hammy_47, Hurricane_48, Itos_41, Jobypre_40, JoeDirt_39, Jubie_40, Kahlid_42, Keshu_49, Kingsolomon_40, Kropertea_40, Krueger_51, Lavahound_44, LeBron_40, Lea83_48, Lewan_42, LilDestine_42, Loadrie_42, Lumos_40, MAckerman_40, MacnCheese_49, Miley16_42, MkaliMitinis3_42, Moostard_40, MsGreen_40, Nergal_42, Netyap_42, Nicholas_40, Nicholasp3_42, November_45, OhShagHennessy_39, OverPar_42, Pharb_45, PhelpsODU_47, Phrank_48, Pixie_47, Poochiewood_39, Red305_40, Rose5_39, Rossetti_42, Rumpelstiltskin_42, Samty_40, Shadow1_50, ShedlockHolmes_48, Sheng711_40, Silverleaf_39, SirPhilip_47, Snenia_40, Sunflower1121_51, Syra333_50, TBond007_47, Tierra_48, Tigress9_50, Tourach_42, TriFive_40, TribbleTrouble_45, Tyson_39, UPIE_40, Underpass_42, Unicorn_47, Vetrix_42, Wamburggrxpress_40, Wigglewiggle_42, Wilder_42, Winky_42, Wyatt2_40, Ximenita_51, Yuna_51, Zakai_42, Zaria_40,

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

•

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

- Aminay_48, Amohnition_40, Bobquesha_51, Boilgate_44, Chancellor_49, Cheetobro_49, DanSyl44_52, Eponine_51, Fionnbharth_49, JF1_49, Juliette_51, Kraw_49, Lebo14_48, Malthus_50, MissDaisy_47, Mitti_49, OmniCritical_48, Patt_46, Qhanda_51, Reptar3000_47, Ruthiejr_50, SamScheppers_47, Slarp_49, Taquito_49, Wintermute_49, Y10_48, Y2_48, YasnayaPolyana_49,

Summary by start number:

Start 7:

- Found in 1 of 135 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 128
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amohnition_40 (K6),

Start 8:

- Found in 107 of 135 (79.3%) of genes in pham
- Manual Annotations of this start: 103 of 128
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Acquire49_40 (L1), Aegeus_45 (L5), Amgine_45 (K6), Amohnition_47 (K6), Applecrisp_44 (K6), Appletree2_39 (L1), Archie_42 (L2), AvadaKedavra_40 (L1), Baudelaire_45 (L5), Bellis_40 (L3), BigCheese_42 (L2), BobsGarage_42 (L2), Breezona_42 (L2), Bromden_41 (L4), Bryler_48 (K6), Cain_48 (K6), Calm_40 (L1), Chaser_39 (L4), ChutneyChips_40 (L4), CicholasNage_40 (L1), Clautastrophe_40 (L3), Crossroads_42 (L2), DarthP_47 (K6), DirkDirk_39 (L1), Douge_39 (L4), DrSeegs_42 (L2), DyoEdafos_41 (L4), Ekdilam_44 (K6), Ellie_43 (K6), Enceladus_39 (L1), Faith1_42 (L2), Fefferhead_45 (K6), Finemlucis_42 (L2), Finnry_40 (L3), Gabriela_42 (L2), Gardann_42 (L2), GuuelaD_42 (L2), Halena_39 (L1), Hammy_47 (K6), Hurricane_48 (K3), Itos_41 (L2), Jobypre_40 (L3), JoeDirt_39 (L1), Jubie_40 (L3), Kahlid_42 (L2), Keshu_49 (K3), Kingsolomon_40 (L3), Kropertea_40 (L4), Krueger_51 (K6), Lavahound_44 (K6), LeBron_40 (L1), Lea83_48 (K3), Lewan_42 (L2), LilDestine_42 (L2), Loadrie_42 (L2), Lumos_40 (L3), MAckerman_40 (L1), MacnCheese_49 (K3), Miley16_42 (L2), MkaliMitinis3_42 (L2), Moostard_40 (L3), MsGreen_40 (L3), Nergal_42 (AG), Netyap_42 (L2), Nicholas_40 (L3), Nicholasp3_42 (L2), November_45 (K6), OhShagHennessy_39 (L1), OverPar_42 (L2), Pharb_45 (K3), PhelpsODU_47 (K6), Phrank_48 (K6), Pixie_47 (K3), Poochiewood_39 (L1), Red305_40 (L3), Rose5_39 (L1), Rossetti_42 (L2), Rumpelstiltskin_42 (L2), Samty_40 (L3), Shadow1_50 (K6), ShedlockHolmes_48 (K3), Sheng711_40 (L4), Silverleaf_39 (L1), SirPhilip_47 (K6), Snenia_40 (L3), Sunflower1121_51 (K6), Syra333_50 (K6), TBond007_47 (K3), Tierra_48 (K6), Tigress9_50 (K6), Tourach_42 (L2), TriFive_40 (L3), TribbleTrouble_45 (K3), Tyson_39 (L1), UPIE_40 (L1), Underpass_42 (L2), Unicorn_47 (K6), Vetrix_42 (L2), Wamburggrxpress_40 (L1), Wigglewiggle_42 (L2), Wilder_42 (L2), Winky_42 (L2), Wyatt2_40 (L1), Ximenita_51 (K6), Yuna_51 (K6), Zakai_42 (L2), Zaria_40 (L1),

Start 9:

- Found in 1 of 135 (0.7%) of genes in pham
- Manual Annotations of this start: 1 of 128
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Boilgate_44 (K8),

Start 10:

- Found in 39 of 135 (28.9%) of genes in pham
- Manual Annotations of this start: 23 of 128
- Called 66.7% of time when present
- Phage (with cluster) where this start called: Aminay_48 (K7), Bobquesha_51 (K4), Chancellor_49 (K4), Cheetobro_49 (K4), DanSyl44_52 (K4), Eponine_51 (K4), Fionnbharth_49 (K4), JF1_49 (K4), Juliette_51 (K4), Kraw_49 (K4), Lebo14_48 (K4), Malthus_50 (K4), MissDaisy_47 (K4), Mitti_49 (K4), OmniCritical_48 (K4), Patt_46 (K4), Qhanda_51 (K4), Reptar3000_47 (K4), Ruthiejr_50 (K4), SamScheppers_47

(K4), Slarp_49 (K4), Taquito_49 (K4), Wintermute_49 (K4), Y10_48 (K4), Y2_48 (K4), YasnayaPolyana_49 (K4),

Summary by clusters:

There are 11 clusters represented in this pham: AG, L1, K3, L4, L5, L2, L3, K4, K7, K8, K6,

Info for manual annotations of cluster AG:

- Start number 8 was manually annotated 1 time for cluster AG.

Info for manual annotations of cluster K3:

- Start number 8 was manually annotated 9 times for cluster K3.

Info for manual annotations of cluster K4:

- Start number 10 was manually annotated 22 times for cluster K4.

Info for manual annotations of cluster K6:

- Start number 7 was manually annotated 1 time for cluster K6.
- Start number 8 was manually annotated 24 times for cluster K6.

Info for manual annotations of cluster K7:

- Start number 10 was manually annotated 1 time for cluster K7.

Info for manual annotations of cluster K8:

- Start number 9 was manually annotated 1 time for cluster K8.

Info for manual annotations of cluster L1:

- Start number 8 was manually annotated 19 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 8 was manually annotated 29 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 8 was manually annotated 13 times for cluster L3.

Info for manual annotations of cluster L4:

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

Info for manual annotations of cluster L5:

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

Gene Information:

Gene: Acquire49_40 Start: 33342, Stop: 33551, Start Num: 8

Candidate Starts for Acquire49_40:

(6, 33285), (Start: 8 @33342 has 103 MA's), (20, 33462),

Gene: Aegeus_45 Start: 37056, Stop: 37259, Start Num: 8

Candidate Starts for Aegeus_45:

(Start: 8 @37056 has 103 MA's), (11, 37089), (13, 37095), (14, 37119), (18, 37152), (23, 37209), (27, 37254),

Gene: Amgine_45 Start: 36475, Stop: 36687, Start Num: 8

Candidate Starts for Amgine_45:

(Start: 8 @36475 has 103 MA's), (21, 36619),

Gene: Aminay_48 Start: 36910, Stop: 37110, Start Num: 10

Candidate Starts for Aminay_48:

(1, 36673), (Start: 10 @36910 has 23 MA's), (16, 36982), (21, 37045),

Gene: Amohnition_40 Start: 32428, Stop: 32189, Start Num: 7

Candidate Starts for Amohnition_40:

(Start: 7 @32428 has 1 MA's), (11, 32362), (14, 32332), (18, 32299), (22, 32251), (24, 32233), (26, 32200),

Gene: Amohnition_47 Start: 36488, Stop: 36700, Start Num: 8

Candidate Starts for Amohnition_47:

(Start: 8 @36488 has 103 MA's), (21, 36632),

Gene: Applecrisp_44 Start: 35971, Stop: 36183, Start Num: 8

Candidate Starts for Applecrisp_44:

(Start: 8 @35971 has 103 MA's), (21, 36115),

Gene: Appletree2_39 Start: 33269, Stop: 33478, Start Num: 8

Candidate Starts for Appletree2_39:

(6, 33227), (Start: 8 @33269 has 103 MA's), (15, 33338), (20, 33389), (21, 33413), (23, 33425),

Gene: Archie_42 Start: 34898, Stop: 35113, Start Num: 8

Candidate Starts for Archie_42:

(Start: 8 @34898 has 103 MA's), (11, 34940), (21, 35048), (23, 35060),

Gene: AvadaKedavra_40 Start: 33351, Stop: 33560, Start Num: 8

Candidate Starts for AvadaKedavra_40:

(6, 33294), (Start: 8 @33351 has 103 MA's), (20, 33471),

Gene: Baudelaire_45 Start: 37056, Stop: 37259, Start Num: 8

Candidate Starts for Baudelaire_45:

(Start: 8 @37056 has 103 MA's), (11, 37089), (13, 37095), (14, 37119), (18, 37152), (23, 37209), (27, 37254),

Gene: Bellis_40 Start: 34953, Stop: 35168, Start Num: 8

Candidate Starts for Bellis_40:

(Start: 8 @34953 has 103 MA's), (12, 34998), (13, 35001), (20, 35079),

Gene: BigCheese_42 Start: 34694, Stop: 34909, Start Num: 8

Candidate Starts for BigCheese_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: Bobquesha_51 Start: 35789, Stop: 35974, Start Num: 10

Candidate Starts for Bobquesha_51:

(Start: 10 @35789 has 23 MA's), (21, 35909),

Gene: BobsGarage_42 Start: 34694, Stop: 34909, Start Num: 8

Candidate Starts for BobsGarage_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: Boilgate_44 Start: 36561, Stop: 36746, Start Num: 9

Candidate Starts for Boilgate_44:

(Start: 9 @36561 has 1 MA's),

Gene: Breezona_42 Start: 34694, Stop: 34909, Start Num: 8

Candidate Starts for Breezona_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: Bromden_41 Start: 34169, Stop: 34384, Start Num: 8

Candidate Starts for Bromden_41:

(Start: 8 @34169 has 103 MA's), (19, 34280), (20, 34295), (21, 34319),

Gene: Bryler_48 Start: 35349, Stop: 35561, Start Num: 8

Candidate Starts for Bryler_48:

(3, 35259), (Start: 8 @35349 has 103 MA's), (Start: 10 @35364 has 23 MA's), (14, 35415), (15, 35418), (21, 35493),

Gene: Cain_48 Start: 35337, Stop: 35549, Start Num: 8

Candidate Starts for Cain_48:

(3, 35247), (Start: 8 @35337 has 103 MA's), (Start: 10 @35352 has 23 MA's), (14, 35403), (15, 35406), (21, 35481),

Gene: Calm_40 Start: 33357, Stop: 33566, Start Num: 8

Candidate Starts for Calm_40:

(6, 33300), (Start: 8 @33357 has 103 MA's), (20, 33477),

Gene: Chancellor_49 Start: 36414, Stop: 36599, Start Num: 10

Candidate Starts for Chancellor_49:

(Start: 10 @36414 has 23 MA's), (13, 36432), (14, 36456), (21, 36534),

Gene: Chaser_39 Start: 33432, Stop: 33659, Start Num: 8

Candidate Starts for Chaser_39:

(Start: 8 @33432 has 103 MA's), (11, 33474), (17, 33528), (20, 33558), (21, 33582),

Gene: Cheetobro_49 Start: 36411, Stop: 36596, Start Num: 10

Candidate Starts for Cheetobro_49:

(Start: 10 @36411 has 23 MA's), (13, 36429), (14, 36453), (21, 36531),

Gene: ChutneyChips_40 Start: 33612, Stop: 33839, Start Num: 8

Candidate Starts for ChutneyChips_40:

(Start: 8 @33612 has 103 MA's), (11, 33654), (17, 33708), (20, 33738), (21, 33762),

Gene: CicholasNage_40 Start: 33378, Stop: 33587, Start Num: 8

Candidate Starts for CicholasNage_40:

(6, 33321), (Start: 8 @33378 has 103 MA's), (20, 33498),

Gene: Clautastrophe_40 Start: 34951, Stop: 35166, Start Num: 8
Candidate Starts for Clautastrophe_40:
(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: Crossroads_42 Start: 34696, Stop: 34911, Start Num: 8
Candidate Starts for Crossroads_42:
(Start: 8 @34696 has 103 MA's), (11, 34738), (13, 34744), (15, 34771), (16, 34783), (21, 34846), (23, 34858),

Gene: DanSyl44_52 Start: 37457, Stop: 37642, Start Num: 10
Candidate Starts for DanSyl44_52:
(Start: 10 @37457 has 23 MA's), (13, 37475), (14, 37499), (21, 37577),

Gene: DarthP_47 Start: 36375, Stop: 36584, Start Num: 8
Candidate Starts for DarthP_47:
(Start: 8 @36375 has 103 MA's), (20, 36492), (21, 36516),

Gene: DirkDirk_39 Start: 33329, Stop: 33538, Start Num: 8
Candidate Starts for DirkDirk_39:
(6, 33287), (Start: 8 @33329 has 103 MA's), (15, 33398), (20, 33449), (21, 33473), (23, 33485),

Gene: Douge_39 Start: 33370, Stop: 33597, Start Num: 8
Candidate Starts for Douge_39:
(Start: 8 @33370 has 103 MA's), (11, 33412), (17, 33466), (20, 33496), (21, 33520),

Gene: DrSeegs_42 Start: 34694, Stop: 34909, Start Num: 8
Candidate Starts for DrSeegs_42:
(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: DyoEdafos_41 Start: 33704, Stop: 33919, Start Num: 8
Candidate Starts for DyoEdafos_41:
(4, 33605), (Start: 8 @33704 has 103 MA's), (13, 33752), (17, 33800), (20, 33830), (21, 33854),

Gene: Ekdilam_44 Start: 35937, Stop: 36149, Start Num: 8
Candidate Starts for Ekdilam_44:
(Start: 8 @35937 has 103 MA's), (15, 36006), (21, 36081),

Gene: Ellie_43 Start: 35663, Stop: 35875, Start Num: 8
Candidate Starts for Ellie_43:
(Start: 8 @35663 has 103 MA's), (21, 35807),

Gene: Enceladus_39 Start: 33312, Stop: 33521, Start Num: 8
Candidate Starts for Enceladus_39:
(6, 33270), (Start: 8 @33312 has 103 MA's), (15, 33381), (20, 33432), (21, 33456), (23, 33468),

Gene: Eponine_51 Start: 37164, Stop: 37352, Start Num: 10
Candidate Starts for Eponine_51:
(5, 37113), (Start: 10 @37164 has 23 MA's), (13, 37185), (14, 37209), (21, 37287),

Gene: Faith1_42 Start: 34694, Stop: 34909, Start Num: 8
Candidate Starts for Faith1_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: Fefferhead_45 Start: 35614, Stop: 35826, Start Num: 8

Candidate Starts for Fefferhead_45:

(Start: 8 @35614 has 103 MA's), (21, 35758),

Gene: Finemlucis_42 Start: 34970, Stop: 35185, Start Num: 8

Candidate Starts for Finemlucis_42:

(Start: 8 @34970 has 103 MA's), (11, 35012), (13, 35018), (16, 35057), (21, 35120), (23, 35132),

Gene: Finnry_40 Start: 34954, Stop: 35169, Start Num: 8

Candidate Starts for Finnry_40:

(Start: 8 @34954 has 103 MA's), (12, 34999), (13, 35002), (20, 35080),

Gene: Fionnbharth_49 Start: 36562, Stop: 36750, Start Num: 10

Candidate Starts for Fionnbharth_49:

(5, 36511), (Start: 10 @36562 has 23 MA's), (13, 36583), (14, 36607), (21, 36685),

Gene: Gabriela_42 Start: 34956, Stop: 35171, Start Num: 8

Candidate Starts for Gabriela_42:

(Start: 8 @34956 has 103 MA's), (11, 34998), (13, 35004), (15, 35031), (16, 35043), (21, 35106), (23, 35118),

Gene: Gardann_42 Start: 34695, Stop: 34910, Start Num: 8

Candidate Starts for Gardann_42:

(Start: 8 @34695 has 103 MA's), (11, 34737), (13, 34743), (15, 34770), (16, 34782), (21, 34845), (23, 34857),

Gene: GuuelaD_42 Start: 34733, Stop: 34948, Start Num: 8

Candidate Starts for GuuelaD_42:

(Start: 8 @34733 has 103 MA's), (11, 34775), (13, 34781), (15, 34808), (16, 34820), (21, 34883), (23, 34895),

Gene: Halena_39 Start: 33353, Stop: 33562, Start Num: 8

Candidate Starts for Halena_39:

(6, 33296), (Start: 8 @33353 has 103 MA's), (20, 33473),

Gene: Hammy_47 Start: 36363, Stop: 36572, Start Num: 8

Candidate Starts for Hammy_47:

(Start: 8 @36363 has 103 MA's), (20, 36480), (21, 36504),

Gene: Hurricane_48 Start: 36096, Stop: 36308, Start Num: 8

Candidate Starts for Hurricane_48:

(Start: 8 @36096 has 103 MA's), (20, 36216), (21, 36240),

Gene: Itos_41 Start: 33600, Stop: 33815, Start Num: 8

Candidate Starts for Itos_41:

(Start: 8 @33600 has 103 MA's), (11, 33642), (13, 33648), (15, 33675), (16, 33687), (21, 33750), (23, 33762),

Gene: JF1_49 Start: 36482, Stop: 36667, Start Num: 10

Candidate Starts for JF1_49:

(Start: 10 @36482 has 23 MA's), (13, 36500), (14, 36524), (21, 36602),

Gene: Jobypre_40 Start: 34951, Stop: 35166, Start Num: 8

Candidate Starts for Jobypre_40:

(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: JoeDirt_39 Start: 33310, Stop: 33519, Start Num: 8

Candidate Starts for JoeDirt_39:

(6, 33268), (Start: 8 @33310 has 103 MA's), (15, 33379), (20, 33430), (21, 33454), (23, 33466),

Gene: Jubie_40 Start: 34952, Stop: 35167, Start Num: 8

Candidate Starts for Jubie_40:

(Start: 8 @34952 has 103 MA's), (12, 34997), (13, 35000), (20, 35078),

Gene: Juliette_51 Start: 36638, Stop: 36823, Start Num: 10

Candidate Starts for Juliette_51:

(Start: 10 @36638 has 23 MA's), (13, 36656), (14, 36680), (21, 36758),

Gene: Kahlid_42 Start: 34700, Stop: 34915, Start Num: 8

Candidate Starts for Kahlid_42:

(Start: 8 @34700 has 103 MA's), (11, 34742), (13, 34748), (15, 34775), (16, 34787), (21, 34850), (23, 34862),

Gene: Keshu_49 Start: 36154, Stop: 36366, Start Num: 8

Candidate Starts for Keshu_49:

(Start: 8 @36154 has 103 MA's), (20, 36274), (21, 36298),

Gene: Kingsolomon_40 Start: 34951, Stop: 35166, Start Num: 8

Candidate Starts for Kingsolomon_40:

(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: Kraw_49 Start: 36326, Stop: 36511, Start Num: 10

Candidate Starts for Kraw_49:

(Start: 10 @36326 has 23 MA's), (13, 36344), (14, 36368), (21, 36446),

Gene: Kropertea_40 Start: 33527, Stop: 33742, Start Num: 8

Candidate Starts for Kropertea_40:

(4, 33428), (Start: 8 @33527 has 103 MA's), (13, 33575), (17, 33623), (20, 33653), (21, 33677),

Gene: Krueger_51 Start: 36343, Stop: 36555, Start Num: 8

Candidate Starts for Krueger_51:

(Start: 8 @36343 has 103 MA's), (Start: 10 @36358 has 23 MA's), (14, 36409), (15, 36412), (21, 36487),

Gene: Lavahound_44 Start: 36596, Stop: 36808, Start Num: 8

Candidate Starts for Lavahound_44:

(Start: 8 @36596 has 103 MA's), (21, 36740),

Gene: LeBron_40 Start: 33354, Stop: 33563, Start Num: 8

Candidate Starts for LeBron_40:

(6, 33312), (Start: 8 @33354 has 103 MA's), (15, 33423), (20, 33474), (21, 33498), (23, 33510),

Gene: Lea83_48 Start: 36128, Stop: 36340, Start Num: 8

Candidate Starts for Lea83_48:

(Start: 8 @36128 has 103 MA's), (20, 36248), (21, 36272),

Gene: Lebo14_48 Start: 36592, Stop: 36777, Start Num: 10

Candidate Starts for Lebo14_48:

(Start: 10 @36592 has 23 MA's), (13, 36610), (14, 36634), (21, 36712),

Gene: Lewan_42 Start: 34687, Stop: 34902, Start Num: 8

Candidate Starts for Lewan_42:

(Start: 8 @34687 has 103 MA's), (11, 34729), (13, 34735), (15, 34762), (16, 34774), (21, 34837), (23, 34849),

Gene: LilDestine_42 Start: 34692, Stop: 34907, Start Num: 8

Candidate Starts for LilDestine_42:

(Start: 8 @34692 has 103 MA's), (11, 34734), (13, 34740), (15, 34767), (16, 34779), (21, 34842), (23, 34854),

Gene: Loadrie_42 Start: 34726, Stop: 34941, Start Num: 8

Candidate Starts for Loadrie_42:

(Start: 8 @34726 has 103 MA's), (11, 34768), (13, 34774), (15, 34801), (16, 34813), (21, 34876), (23, 34888),

Gene: Lumos_40 Start: 34948, Stop: 35163, Start Num: 8

Candidate Starts for Lumos_40:

(Start: 8 @34948 has 103 MA's), (12, 34993), (13, 34996), (20, 35074),

Gene: MAckerman_40 Start: 33347, Stop: 33556, Start Num: 8

Candidate Starts for MAckerman_40:

(6, 33290), (Start: 8 @33347 has 103 MA's), (20, 33467),

Gene: MacnCheese_49 Start: 37043, Stop: 37276, Start Num: 8

Candidate Starts for MacnCheese_49:

(Start: 8 @37043 has 103 MA's), (20, 37163), (21, 37187),

Gene: Malthus_50 Start: 36326, Stop: 36511, Start Num: 10

Candidate Starts for Malthus_50:

(Start: 10 @36326 has 23 MA's), (13, 36344), (14, 36368), (21, 36446),

Gene: Miley16_42 Start: 34694, Stop: 34909, Start Num: 8

Candidate Starts for Miley16_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: MissDaisy_47 Start: 35801, Stop: 35989, Start Num: 10

Candidate Starts for MissDaisy_47:

(Start: 10 @35801 has 23 MA's), (14, 35846), (21, 35924),

Gene: Mitti_49 Start: 36502, Stop: 36687, Start Num: 10

Candidate Starts for Mitti_49:

(Start: 10 @36502 has 23 MA's), (13, 36520), (14, 36544), (21, 36622),

Gene: MkaliMitinis3_42 Start: 34696, Stop: 34911, Start Num: 8

Candidate Starts for MkaliMitinis3_42:

(Start: 8 @34696 has 103 MA's), (11, 34738), (13, 34744), (15, 34771), (16, 34783), (21, 34846), (23, 34858),

Gene: Moostard_40 Start: 34953, Stop: 35168, Start Num: 8

Candidate Starts for Moostard_40:

(Start: 8 @34953 has 103 MA's), (12, 34998), (13, 35001), (20, 35079),

Gene: MsGreen_40 Start: 34951, Stop: 35166, Start Num: 8

Candidate Starts for MsGreen_40:

(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: Nergal_42 Start: 34081, Stop: 34293, Start Num: 8

Candidate Starts for Nergal_42:

(Start: 8 @34081 has 103 MA's), (20, 34201), (21, 34225),

Gene: Netyap_42 Start: 34694, Stop: 34909, Start Num: 8

Candidate Starts for Netyap_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: Nicholas_40 Start: 34951, Stop: 35166, Start Num: 8

Candidate Starts for Nicholas_40:

(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: Nicholasp3_42 Start: 34695, Stop: 34910, Start Num: 8

Candidate Starts for Nicholasp3_42:

(Start: 8 @34695 has 103 MA's), (11, 34737), (13, 34743), (15, 34770), (16, 34782), (21, 34845), (23, 34857),

Gene: November_45 Start: 36096, Stop: 36308, Start Num: 8

Candidate Starts for November_45:

(Start: 8 @36096 has 103 MA's), (27, 36297),

Gene: OhShagHennessy_39 Start: 33300, Stop: 33509, Start Num: 8

Candidate Starts for OhShagHennessy_39:

(6, 33258), (Start: 8 @33300 has 103 MA's), (15, 33369), (20, 33420), (21, 33444), (23, 33456),

Gene: OmniCritical_48 Start: 36311, Stop: 36496, Start Num: 10

Candidate Starts for OmniCritical_48:

(Start: 10 @36311 has 23 MA's), (13, 36329), (14, 36353), (21, 36431),

Gene: OverPar_42 Start: 34726, Stop: 34941, Start Num: 8

Candidate Starts for OverPar_42:

(Start: 8 @34726 has 103 MA's), (11, 34768), (13, 34774), (15, 34801), (16, 34813), (21, 34876), (23, 34888),

Gene: Patt_46 Start: 35525, Stop: 35713, Start Num: 10

Candidate Starts for Patt_46:

(1, 35309), (Start: 10 @35525 has 23 MA's), (14, 35570), (21, 35648),

Gene: Pharb_45 Start: 34846, Stop: 35067, Start Num: 8

Candidate Starts for Pharb_45:

(3, 34756), (Start: 8 @34846 has 103 MA's), (20, 34966), (21, 34990),

Gene: PhelpsODU_47 Start: 35370, Stop: 35582, Start Num: 8

Candidate Starts for PhelpsODU_47:

(3, 35280), (Start: 8 @35370 has 103 MA's), (Start: 10 @35385 has 23 MA's), (14, 35436), (15, 35439), (21, 35514),

Gene: Phrank_48 Start: 35327, Stop: 35539, Start Num: 8

Candidate Starts for Phrank_48:

(3, 35237), (Start: 8 @35327 has 103 MA's), (Start: 10 @35342 has 23 MA's), (14, 35393), (15, 35396), (21, 35471),

Gene: Pixie_47 Start: 35607, Stop: 35819, Start Num: 8

Candidate Starts for Pixie_47:

(Start: 8 @35607 has 103 MA's), (12, 35646), (20, 35727), (21, 35751),

Gene: Poochiewood_39 Start: 33328, Stop: 33537, Start Num: 8

Candidate Starts for Poochiewood_39:

(6, 33286), (Start: 8 @33328 has 103 MA's), (15, 33397), (20, 33448), (21, 33472), (23, 33484),

Gene: Qhanda_51 Start: 36423, Stop: 36608, Start Num: 10

Candidate Starts for Qhanda_51:

(Start: 10 @36423 has 23 MA's), (13, 36441), (14, 36465), (21, 36543),

Gene: Red305_40 Start: 34951, Stop: 35166, Start Num: 8

Candidate Starts for Red305_40:

(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: Reptar3000_47 Start: 35516, Stop: 35701, Start Num: 10

Candidate Starts for Reptar3000_47:

(Start: 10 @35516 has 23 MA's), (21, 35636),

Gene: Rose5_39 Start: 33342, Stop: 33551, Start Num: 8

Candidate Starts for Rose5_39:

(6, 33285), (Start: 8 @33342 has 103 MA's), (20, 33462),

Gene: Rossetti_42 Start: 34961, Stop: 35176, Start Num: 8

Candidate Starts for Rossetti_42:

(Start: 8 @34961 has 103 MA's), (11, 35003), (13, 35009), (21, 35111), (23, 35123),

Gene: Rumpelstiltskin_42 Start: 34961, Stop: 35173, Start Num: 8

Candidate Starts for Rumpelstiltskin_42:

(Start: 8 @34961 has 103 MA's), (11, 35003), (13, 35009), (15, 35036), (16, 35048), (21, 35111), (23, 35123),

Gene: Ruthiejr_50 Start: 36376, Stop: 36561, Start Num: 10

Candidate Starts for Ruthiejr_50:

(Start: 10 @36376 has 23 MA's), (13, 36394), (14, 36418), (21, 36496),

Gene: SamScheppers_47 Start: 36805, Stop: 36990, Start Num: 10

Candidate Starts for SamScheppers_47:

(Start: 10 @36805 has 23 MA's), (13, 36823), (14, 36847), (21, 36925),

Gene: Samty_40 Start: 34952, Stop: 35167, Start Num: 8

Candidate Starts for Samty_40:

(Start: 8 @34952 has 103 MA's), (12, 34997), (13, 35000), (20, 35078),

Gene: Shadow1_50 Start: 36488, Stop: 36700, Start Num: 8

Candidate Starts for Shadow1_50:

(Start: 8 @36488 has 103 MA's), (Start: 10 @36503 has 23 MA's), (21, 36632), (27, 36689),

Gene: ShedlockHolmes_48 Start: 36132, Stop: 36344, Start Num: 8

Candidate Starts for ShedlockHolmes_48:

(Start: 8 @36132 has 103 MA's), (20, 36252), (21, 36276),

Gene: Sheng711_40 Start: 33476, Stop: 33703, Start Num: 8

Candidate Starts for Sheng711_40:

(Start: 8 @33476 has 103 MA's), (11, 33518), (17, 33572), (20, 33602), (21, 33626),

Gene: Silverleaf_39 Start: 33342, Stop: 33551, Start Num: 8

Candidate Starts for Silverleaf_39:

(6, 33285), (Start: 8 @33342 has 103 MA's), (20, 33462),

Gene: SirPhilip_47 Start: 36707, Stop: 36919, Start Num: 8

Candidate Starts for SirPhilip_47:

(2, 36575), (Start: 8 @36707 has 103 MA's), (15, 36776), (21, 36851),

Gene: Slarp_49 Start: 36414, Stop: 36599, Start Num: 10

Candidate Starts for Slarp_49:

(Start: 10 @36414 has 23 MA's), (13, 36432), (14, 36456), (21, 36534),

Gene: Snenia_40 Start: 34952, Stop: 35167, Start Num: 8

Candidate Starts for Snenia_40:

(Start: 8 @34952 has 103 MA's), (12, 34997), (13, 35000), (20, 35078),

Gene: Sunflower1121_51 Start: 36589, Stop: 36801, Start Num: 8

Candidate Starts for Sunflower1121_51:

(Start: 8 @36589 has 103 MA's), (Start: 10 @36604 has 23 MA's), (21, 36733), (27, 36790),

Gene: Syra333_50 Start: 36256, Stop: 36468, Start Num: 8

Candidate Starts for Syra333_50:

(Start: 8 @36256 has 103 MA's), (Start: 10 @36271 has 23 MA's), (21, 36400), (27, 36457),

Gene: TBond007_47 Start: 35606, Stop: 35818, Start Num: 8

Candidate Starts for TBond007_47:

(Start: 8 @35606 has 103 MA's), (12, 35645), (20, 35726), (21, 35750),

Gene: Taquito_49 Start: 36661, Stop: 36846, Start Num: 10

Candidate Starts for Taquito_49:

(Start: 10 @36661 has 23 MA's), (13, 36679), (14, 36703), (21, 36781),

Gene: Tierra_48 Start: 36138, Stop: 36350, Start Num: 8

Candidate Starts for Tierra_48:

(3, 36048), (Start: 8 @36138 has 103 MA's), (Start: 10 @36153 has 23 MA's), (14, 36204), (15, 36207), (21, 36282),

Gene: Tigress9_50 Start: 36343, Stop: 36555, Start Num: 8

Candidate Starts for Tigress9_50:

(Start: 8 @36343 has 103 MA's), (Start: 10 @36358 has 23 MA's), (14, 36409), (15, 36412), (21, 36487),

Gene: Tourach_42 Start: 34709, Stop: 34924, Start Num: 8

Candidate Starts for Tourach_42:

(Start: 8 @34709 has 103 MA's), (11, 34751), (13, 34757), (14, 34781), (21, 34859), (23, 34871),

Gene: TriFive_40 Start: 34951, Stop: 35166, Start Num: 8

Candidate Starts for TriFive_40:

(Start: 8 @34951 has 103 MA's), (12, 34996), (13, 34999), (20, 35077),

Gene: TribbleTrouble_45 Start: 35497, Stop: 35709, Start Num: 8

Candidate Starts for TribbleTrouble_45:

(Start: 8 @35497 has 103 MA's), (Start: 10 @35512 has 23 MA's), (21, 35641),

Gene: Tyson_39 Start: 33343, Stop: 33552, Start Num: 8

Candidate Starts for Tyson_39:

(6, 33286), (Start: 8 @33343 has 103 MA's), (20, 33463),

Gene: UPIE_40 Start: 33326, Stop: 33535, Start Num: 8

Candidate Starts for UPIE_40:

(6, 33284), (Start: 8 @33326 has 103 MA's), (15, 33395), (20, 33446), (21, 33470), (23, 33482),

Gene: Underpass_42 Start: 34695, Stop: 34910, Start Num: 8

Candidate Starts for Underpass_42:

(Start: 8 @34695 has 103 MA's), (11, 34737), (13, 34743), (15, 34770), (16, 34782), (21, 34845), (23, 34857),

Gene: Unicorn_47 Start: 35370, Stop: 35582, Start Num: 8

Candidate Starts for Unicorn_47:

(3, 35280), (Start: 8 @35370 has 103 MA's), (Start: 10 @35385 has 23 MA's), (14, 35436), (15, 35439), (21, 35514),

Gene: Vetrix_42 Start: 34701, Stop: 34916, Start Num: 8

Candidate Starts for Vetrix_42:

(Start: 8 @34701 has 103 MA's), (11, 34743), (13, 34749), (15, 34776), (16, 34788), (21, 34851), (23, 34863),

Gene: Wamburgexpress_40 Start: 33341, Stop: 33550, Start Num: 8

Candidate Starts for Wamburgexpress_40:

(6, 33299), (Start: 8 @33341 has 103 MA's), (15, 33410), (20, 33461), (21, 33485), (23, 33497),

Gene: Wigglewobble_42 Start: 34727, Stop: 34942, Start Num: 8

Candidate Starts for Wigglewobble_42:

(Start: 8 @34727 has 103 MA's), (11, 34769), (13, 34775), (15, 34802), (16, 34814), (21, 34877), (23, 34889),

Gene: Wilder_42 Start: 34700, Stop: 34915, Start Num: 8

Candidate Starts for Wilder_42:

(Start: 8 @34700 has 103 MA's), (11, 34742), (13, 34748), (15, 34775), (16, 34787), (21, 34850), (23, 34862),

Gene: Winky_42 Start: 34694, Stop: 34909, Start Num: 8

Candidate Starts for Winky_42:

(Start: 8 @34694 has 103 MA's), (11, 34736), (13, 34742), (15, 34769), (16, 34781), (21, 34844), (23, 34856),

Gene: Wintermute_49 Start: 36563, Stop: 36748, Start Num: 10

Candidate Starts for Wintermute_49:

(Start: 10 @36563 has 23 MA's), (13, 36581), (14, 36605), (21, 36683),

Gene: Wyatt2_40 Start: 33342, Stop: 33551, Start Num: 8

Candidate Starts for Wyatt2_40:

(6, 33285), (Start: 8 @33342 has 103 MA's), (20, 33462),

Gene: Ximenita_51 Start: 36442, Stop: 36654, Start Num: 8

Candidate Starts for Ximenita_51:

(Start: 8 @36442 has 103 MA's), (Start: 10 @36457 has 23 MA's), (21, 36586), (25, 36628), (27, 36643),

Gene: Y10_48 Start: 36482, Stop: 36667, Start Num: 10

Candidate Starts for Y10_48:

(Start: 10 @36482 has 23 MA's), (13, 36500), (14, 36524), (21, 36602),

Gene: Y2_48 Start: 36482, Stop: 36667, Start Num: 10

Candidate Starts for Y2_48:

(Start: 10 @36482 has 23 MA's), (13, 36500), (14, 36524), (21, 36602),

Gene: YasnayaPolyana_49 Start: 36413, Stop: 36598, Start Num: 10

Candidate Starts for YasnayaPolyana_49:

(Start: 10 @36413 has 23 MA's), (13, 36431), (14, 36455), (21, 36533),

Gene: Yuna_51 Start: 37201, Stop: 37413, Start Num: 8

Candidate Starts for Yuna_51:

(Start: 8 @37201 has 103 MA's), (21, 37345), (27, 37402),

Gene: Zakai_42 Start: 34952, Stop: 35167, Start Num: 8

Candidate Starts for Zakai_42:

(Start: 8 @34952 has 103 MA's), (11, 34994), (13, 35000), (15, 35027), (16, 35039), (21, 35102), (23, 35114),

Gene: Zaria_40 Start: 33357, Stop: 33566, Start Num: 8

Candidate Starts for Zaria_40:

(6, 33300), (Start: 8 @33357 has 103 MA's), (20, 33477),