

Pham 154680



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 154680 Report

This analysis was run 04/12/24 on database version 558.

Pham number 154680 has 75 members, 9 are drafts.

Phages represented in each track:

- Track 1 : PapayaSalad_40, Austintatious_37, Ididsumtinwong_41, Bioscum_41
- Track 2 : JoeDirt_78, Appletree2_77, DirkDirk_75, OhShagHennessy_75
- Track 3 : Acquire49_78, Zaria_79, Wyatt2_79
- Track 4 : Rose5_78, CicholasNage_75, AvadaKedavra_78, UPIE_77, Wamburgrxpress_78, LeBron_77
- Track 5 : Tyson_79, Silverleaf_78, Halena_76, Calm_80, MAckerman_75
- Track 6 : Enceladus_75
- Track 7 : Gardann_81, Itos_80, Winky_81, Kahlid_81, Miley16_81, Wilder_82, MkaliMitinis3_82, Rumpelstiltskin_78, Zakai_82, Breezona_81, Faith1_81
- Track 8 : Archie_78
- Track 9 : Claus_81, ZhongYanYuan_78, Hafay_82, Wigglewiggle_80
- Track 10 : Bazzle_78
- Track 11 : Crossroads_81, DrSeegs_81, Loadrie_80, BobsGarage_81, BigCheese_81, Netyap_82, Gabriela_80, Nicholasp3_81, Lewan_82, GuuelaD_79
- Track 12 : Vetrax_80, LilDestine_80
- Track 13 : Tourach_80
- Track 14 : Baoshan_78
- Track 15 : Finemlucis_80
- Track 16 : Finnry_79, Nicholas_77, Snenia_78, Clautastrophe_77, Kingsolomon_77, Jobypre_80, Jubie_78, MsGreen_79
- Track 17 : Ellson_78
- Track 18 : Moostard_77, Bellis_77, Samty_78
- Track 19 : Krypton555_80, Whirlwind_80
- Track 20 : MiniLon_83
- Track 21 : DuncansLeg_79
- Track 22 : Bromden_79
- Track 23 : DyoEdafos_83
- Track 24 : Douge_78
- Track 25 : Chaser_77

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

The start number called the most often in the published annotations is 5, it was called in 32 of the 66 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Acquire49_78, Appletree2_77, Archie_78, Bazzle_78, Breezona_81, Clautastrophe_77, DirkDirk_75, DuncansLeg_79, Faith1_81, Finemlucis_80, Finnry_79, Gardann_81, Itos_80, Jobypre_80, JoeDirt_78, Jubie_78, Kahlid_81, Kingsolomon_77, Krypton555_80, Miley16_81, MiniLon_83, MkaliMitinis3_82, MsGreen_79, Nicholas_77, OhShagHennessy_75, Rumpelstiltskin_78, Snenia_78, Whirlwind_80, Wilder_82, Winky_81, Wyatt2_79, Zakai_82, Zaria_79,

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

- AvadaKedavra_78, Baoshan_78, Bellis_77, BigCheese_81, BobsGarage_81, Calm_80, CicholasNage_75, Claus_81, Crossroads_81, DrSeegs_81, Ellson_78, Enceladus_75, Gabriela_80, GuuelaD_79, Hafay_82, Halena_76, LeBron_77, Lewan_82, LilDestine_80, Loadrie_80, MAckerman_75, Moostard_77, Netyap_82, Nicholasp3_81, Rose5_78, Samty_78, Silverleaf_78, Tourach_80, Tyson_79, UPIE_77, Vetrix_80, Wamburggrxpress_78, Wigglewiggle_80, ZhongYanYuan_78,

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

- Austintatious_37, Bioscum_41, Bromden_79, Chaser_77, Douge_78, DyoEdafos_83, Ididsumtinwong_41, PapayaSalad_40,

Summary by start number:

Start 4:

- Found in 5 of 75 (6.7%) of genes in pham
- Manual Annotations of this start: 4 of 66
- Called 80.0% of time when present
- Phage (with cluster) where this start called: Austintatious_37 (BC3), Bioscum_41 (BC3), Ididsumtinwong_41 (BC3), PapayaSalad_40 (BC3),

Start 5:

- Found in 67 of 75 (89.3%) of genes in pham
- Manual Annotations of this start: 32 of 66
- Called 49.3% of time when present
- Phage (with cluster) where this start called: Acquire49_78 (L1), Appletree2_77 (L1), Archie_78 (L2), Bazzle_78 (L2), Breezona_81 (L2), Clautastrophe_77 (L3), DirkDirk_75 (L1), DuncansLeg_79 (L3), Faith1_81 (L2), Finemlucis_80 (L2), Finnry_79 (L3), Gardann_81 (L2), Itos_80 (L2), Jobypre_80 (L3), JoeDirt_78 (L1), Jubie_78 (L3), Kahlid_81 (L2), Kingsolomon_77 (L3), Krypton555_80 (L3), Miley16_81 (L2), MiniLon_83 (L3), MkaliMitinis3_82 (L2), MsGreen_79 (L3), Nicholas_77 (L3), OhShagHennessy_75 (L1), Rumpelstiltskin_78 (L2), Snenia_78 (L3), Whirlwind_80 (L3), Wilder_82 (L2), Winky_81 (L2), Wyatt2_79 (L1), Zakai_82 (L2), Zaria_79 (L1),

Start 6:

- Found in 4 of 75 (5.3%) of genes in pham
- Manual Annotations of this start: 3 of 66
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Bromden_79 (L4), Chaser_77 (L4), Douge_78 (L4), DyoEdafos_83 (L4),

Start 7:

- Found in 38 of 75 (50.7%) of genes in pham

- Manual Annotations of this start: 8 of 66
- Called 28.9% of time when present
- Phage (with cluster) where this start called: Bellis_77 (L3), Calm_80 (L1), Ellson_78 (L3), Enceladus_75 (L1), Halena_76 (L1), MAckerman_75 (L1), Moostard_77 (L3), Samty_78 (L3), Silverleaf_78 (L1), Tourach_80 (L2), Tyson_79 (L1),

Start 9:

- Found in 52 of 75 (69.3%) of genes in pham
- Manual Annotations of this start: 19 of 66
- Called 44.2% of time when present
- Phage (with cluster) where this start called: AvadaKedavra_78 (L1), Baoshan_78 (L2), BigCheese_81 (L2), BobsGarage_81 (L2), CicholasNage_75 (L1), Claus_81 (L2), Crossroads_81 (L2), DrSeegs_81 (L2), Gabriela_80 (L2), GuuelaD_79 (L2), Hafay_82 (L2), LeBron_77 (L1), Lewan_82 (L2), LilDestine_80 (L2), Loadrie_80 (L2), Netyap_82 (L2), Nicholasp3_81 (L2), Rose5_78 (L1), UPIE_77 (L1), Vetrix_80 (L2), Wamburgxpress_78 (L1), Wigglewiggles_80 (L2), ZhongYanYuan_78 (L2),

Summary by clusters:

There are 5 clusters represented in this pham: L4, BC3, L2, L3, L1,

Info for manual annotations of cluster BC3:

- Start number 4 was manually annotated 4 times for cluster BC3.

Info for manual annotations of cluster L1:

- Start number 5 was manually annotated 7 times for cluster L1.
- Start number 7 was manually annotated 5 times for cluster L1.
- Start number 9 was manually annotated 6 times for cluster L1.

Info for manual annotations of cluster L2:

- Start number 5 was manually annotated 14 times for cluster L2.
- Start number 7 was manually annotated 1 time for cluster L2.
- Start number 9 was manually annotated 13 times for cluster L2.

Info for manual annotations of cluster L3:

- Start number 5 was manually annotated 11 times for cluster L3.
- Start number 7 was manually annotated 2 times for cluster L3.

Info for manual annotations of cluster L4:

- Start number 6 was manually annotated 3 times for cluster L4.

Gene Information:

Gene: Acquire49_78 Start: 52009, Stop: 52314, Start Num: 5

Candidate Starts for Acquire49_78:

(Start: 5 @52009 has 32 MA's), (Start: 7 @52024 has 8 MA's), (Start: 9 @52084 has 19 MA's), (12, 52147), (13, 52174), (24, 52297), (25, 52300),

Gene: Appletree2_77 Start: 51620, Stop: 51925, Start Num: 5

Candidate Starts for Appletree2_77:

(Start: 5 @51620 has 32 MA's), (Start: 7 @51635 has 8 MA's), (Start: 9 @51695 has 19 MA's), (12, 51758), (13, 51785), (17, 51839), (24, 51908), (25, 51911),

Gene: Archie_78 Start: 53502, Stop: 53798, Start Num: 5

Candidate Starts for Archie_78:

(Start: 5 @53502 has 32 MA's), (10, 53607), (11, 53619), (13, 53655), (18, 53712),

Gene: Austintatious_37 Start: 25254, Stop: 25553, Start Num: 4

Candidate Starts for Austintatious_37:

(1, 24966), (2, 25011), (3, 25185), (Start: 4 @25254 has 4 MA's), (13, 25416),

Gene: AvadaKedavra_78 Start: 52163, Stop: 52393, Start Num: 9

Candidate Starts for AvadaKedavra_78:

(Start: 5 @52088 has 32 MA's), (Start: 7 @52103 has 8 MA's), (Start: 9 @52163 has 19 MA's), (12, 52226), (13, 52253), (24, 52376), (25, 52379),

Gene: Baoshan_78 Start: 53848, Stop: 54084, Start Num: 9

Candidate Starts for Baoshan_78:

(Start: 5 @53788 has 32 MA's), (Start: 9 @53848 has 19 MA's), (10, 53893), (11, 53905), (13, 53941), (16, 53983),

Gene: Bazzle_78 Start: 53691, Stop: 53987, Start Num: 5

Candidate Starts for Bazzle_78:

(Start: 5 @53691 has 32 MA's), (Start: 7 @53706 has 8 MA's), (Start: 9 @53751 has 19 MA's), (11, 53808), (12, 53817), (13, 53844), (18, 53901), (20, 53928),

Gene: Bellis_77 Start: 53811, Stop: 54065, Start Num: 7

Candidate Starts for Bellis_77:

(Start: 5 @53796 has 32 MA's), (Start: 7 @53811 has 8 MA's), (13, 53946), (16, 53988), (19, 54024), (21, 54048),

Gene: BigCheese_81 Start: 53978, Stop: 54214, Start Num: 9

Candidate Starts for BigCheese_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: Bioscum_41 Start: 27555, Stop: 27854, Start Num: 4

Candidate Starts for Bioscum_41:

(1, 27267), (2, 27312), (3, 27486), (Start: 4 @27555 has 4 MA's), (13, 27717),

Gene: BobsGarage_81 Start: 53978, Stop: 54214, Start Num: 9

Candidate Starts for BobsGarage_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: Breezona_81 Start: 53918, Stop: 54214, Start Num: 5

Candidate Starts for Breezona_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: Bromden_79 Start: 53366, Stop: 53650, Start Num: 6

Candidate Starts for Bromden_79:

(Start: 4 @53357 has 4 MA's), (Start: 6 @53366 has 3 MA's), (Start: 9 @53420 has 19 MA's), (11, 53477), (12, 53486), (13, 53513), (15, 53543), (18, 53570),

Gene: Calm_80 Start: 52346, Stop: 52636, Start Num: 7

Candidate Starts for Calm_80:

(Start: 5 @52331 has 32 MA's), (Start: 7 @52346 has 8 MA's), (Start: 9 @52406 has 19 MA's), (12, 52469), (13, 52496), (24, 52619), (25, 52622),

Gene: Chaser_77 Start: 52365, Stop: 52655, Start Num: 6

Candidate Starts for Chaser_77:

(Start: 6 @52365 has 3 MA's), (Start: 7 @52374 has 8 MA's), (Start: 9 @52419 has 19 MA's), (10, 52464), (11, 52476), (13, 52512), (14, 52530), (18, 52569),

Gene: CicholasNage_75 Start: 51748, Stop: 51978, Start Num: 9

Candidate Starts for CicholasNage_75:

(Start: 5 @51673 has 32 MA's), (Start: 7 @51688 has 8 MA's), (Start: 9 @51748 has 19 MA's), (12, 51811), (13, 51838), (24, 51961), (25, 51964),

Gene: Claus_81 Start: 53913, Stop: 54149, Start Num: 9

Candidate Starts for Claus_81:

(Start: 5 @53853 has 32 MA's), (Start: 9 @53913 has 19 MA's), (10, 53958), (11, 53970), (13, 54006), (16, 54048), (17, 54060), (18, 54063),

Gene: Clautastrophe_77 Start: 53794, Stop: 54063, Start Num: 5

Candidate Starts for Clautastrophe_77:

(Start: 5 @53794 has 32 MA's), (Start: 7 @53809 has 8 MA's), (13, 53944), (16, 53986), (19, 54022), (21, 54046),

Gene: Crossroads_81 Start: 54053, Stop: 54289, Start Num: 9

Candidate Starts for Crossroads_81:

(Start: 5 @53993 has 32 MA's), (Start: 9 @54053 has 19 MA's), (10, 54098), (11, 54110), (13, 54146), (17, 54200), (18, 54203),

Gene: DirkDirk_75 Start: 51200, Stop: 51505, Start Num: 5

Candidate Starts for DirkDirk_75:

(Start: 5 @51200 has 32 MA's), (Start: 7 @51215 has 8 MA's), (Start: 9 @51275 has 19 MA's), (12, 51338), (13, 51365), (17, 51419), (24, 51488), (25, 51491),

Gene: Douge_78 Start: 52288, Stop: 52587, Start Num: 6

Candidate Starts for Douge_78:

(Start: 6 @52288 has 3 MA's), (8, 52318), (Start: 9 @52342 has 19 MA's), (11, 52399), (12, 52408), (13, 52435), (15, 52465),

Gene: DrSeegs_81 Start: 53978, Stop: 54214, Start Num: 9

Candidate Starts for DrSeegs_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: DuncansLeg_79 Start: 53780, Stop: 54082, Start Num: 5

Candidate Starts for DuncansLeg_79:

(Start: 5 @53780 has 32 MA's), (Start: 7 @53795 has 8 MA's), (13, 53933),

Gene: DyoEdafos_83 Start: 53198, Stop: 53488, Start Num: 6

Candidate Starts for DyoEdafos_83:

(Start: 6 @53198 has 3 MA's), (8, 53228), (Start: 9 @53252 has 19 MA's), (11, 53309), (12, 53318), (13, 53345), (15, 53375), (18, 53402),

Gene: Ellson_78 Start: 54110, Stop: 54397, Start Num: 7

Candidate Starts for Ellson_78:

(Start: 5 @54095 has 32 MA's), (Start: 7 @54110 has 8 MA's), (13, 54248),

Gene: Enceladus_75 Start: 51992, Stop: 52282, Start Num: 7

Candidate Starts for Enceladus_75:

(Start: 5 @51977 has 32 MA's), (Start: 7 @51992 has 8 MA's), (Start: 9 @52052 has 19 MA's), (12, 52115), (13, 52142), (17, 52196), (24, 52265), (25, 52268),

Gene: Faith1_81 Start: 53918, Stop: 54214, Start Num: 5

Candidate Starts for Faith1_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: Finemlucis_80 Start: 54386, Stop: 54682, Start Num: 5

Candidate Starts for Finemlucis_80:

(Start: 5 @54386 has 32 MA's), (12, 54512), (13, 54539), (15, 54569), (17, 54593),

Gene: Finnry_79 Start: 54045, Stop: 54314, Start Num: 5

Candidate Starts for Finnry_79:

(Start: 5 @54045 has 32 MA's), (Start: 7 @54060 has 8 MA's), (13, 54195), (16, 54237), (19, 54273), (21, 54297),

Gene: Gabriela_80 Start: 53324, Stop: 53560, Start Num: 9

Candidate Starts for Gabriela_80:

(Start: 5 @53264 has 32 MA's), (Start: 9 @53324 has 19 MA's), (10, 53369), (11, 53381), (13, 53417), (17, 53471), (18, 53474),

Gene: Gardann_81 Start: 53753, Stop: 54049, Start Num: 5

Candidate Starts for Gardann_81:

(Start: 5 @53753 has 32 MA's), (Start: 9 @53813 has 19 MA's), (10, 53858), (11, 53870), (13, 53906), (17, 53960), (18, 53963),

Gene: GuuelaD_79 Start: 54093, Stop: 54329, Start Num: 9

Candidate Starts for GuuelaD_79:

(Start: 5 @54033 has 32 MA's), (Start: 9 @54093 has 19 MA's), (10, 54138), (11, 54150), (13, 54186), (17, 54240), (18, 54243),

Gene: Hafay_82 Start: 53908, Stop: 54144, Start Num: 9

Candidate Starts for Hafay_82:

(Start: 5 @53848 has 32 MA's), (Start: 9 @53908 has 19 MA's), (10, 53953), (11, 53965), (13, 54001), (16, 54043), (17, 54055), (18, 54058),

Gene: Halena_76 Start: 51262, Stop: 51552, Start Num: 7

Candidate Starts for Halena_76:

(Start: 5 @51247 has 32 MA's), (Start: 7 @51262 has 8 MA's), (Start: 9 @51322 has 19 MA's), (12, 51385), (13, 51412), (24, 51535), (25, 51538),

Gene: Ididsumtinwong_41 Start: 27555, Stop: 27854, Start Num: 4

Candidate Starts for Ididsumtinwong_41:

(1, 27267), (2, 27312), (3, 27486), (Start: 4 @27555 has 4 MA's), (13, 27717),

Gene: Itos_80 Start: 52824, Stop: 53120, Start Num: 5

Candidate Starts for Itos_80:

(Start: 5 @52824 has 32 MA's), (Start: 9 @52884 has 19 MA's), (10, 52929), (11, 52941), (13, 52977), (17, 53031), (18, 53034),

Gene: Jobypre_80 Start: 53794, Stop: 54063, Start Num: 5

Candidate Starts for Jobypre_80:

(Start: 5 @53794 has 32 MA's), (Start: 7 @53809 has 8 MA's), (13, 53944), (16, 53986), (19, 54022), (21, 54046),

Gene: JoeDirt_78 Start: 52575, Stop: 52880, Start Num: 5

Candidate Starts for JoeDirt_78:

(Start: 5 @52575 has 32 MA's), (Start: 7 @52590 has 8 MA's), (Start: 9 @52650 has 19 MA's), (12, 52713), (13, 52740), (17, 52794), (24, 52863), (25, 52866),

Gene: Jubie_78 Start: 53929, Stop: 54198, Start Num: 5

Candidate Starts for Jubie_78:

(Start: 5 @53929 has 32 MA's), (Start: 7 @53944 has 8 MA's), (13, 54079), (16, 54121), (19, 54157), (21, 54181),

Gene: Kahlid_81 Start: 53924, Stop: 54220, Start Num: 5

Candidate Starts for Kahlid_81:

(Start: 5 @53924 has 32 MA's), (Start: 9 @53984 has 19 MA's), (10, 54029), (11, 54041), (13, 54077), (17, 54131), (18, 54134),

Gene: Kingsolomon_77 Start: 53801, Stop: 54070, Start Num: 5

Candidate Starts for Kingsolomon_77:

(Start: 5 @53801 has 32 MA's), (Start: 7 @53816 has 8 MA's), (13, 53951), (16, 53993), (19, 54029), (21, 54053),

Gene: Krypton555_80 Start: 54028, Stop: 54342, Start Num: 5

Candidate Starts for Krypton555_80:

(Start: 5 @54028 has 32 MA's), (Start: 7 @54043 has 8 MA's), (11, 54154), (13, 54190), (23, 54322),

Gene: LeBron_77 Start: 51321, Stop: 51551, Start Num: 9

Candidate Starts for LeBron_77:

(Start: 5 @51246 has 32 MA's), (Start: 7 @51261 has 8 MA's), (Start: 9 @51321 has 19 MA's), (12, 51384), (13, 51411), (24, 51534), (25, 51537),

Gene: Lewan_82 Start: 54036, Stop: 54272, Start Num: 9

Candidate Starts for Lewan_82:

(Start: 5 @53976 has 32 MA's), (Start: 9 @54036 has 19 MA's), (10, 54081), (11, 54093), (13, 54129), (17, 54183), (18, 54186),

Gene: LilDestine_80 Start: 53888, Stop: 54124, Start Num: 9

Candidate Starts for LilDestine_80:

(Start: 5 @53828 has 32 MA's), (Start: 9 @53888 has 19 MA's), (10, 53933), (11, 53945), (13, 53981), (18, 54038),

Gene: Loadrie_80 Start: 54063, Stop: 54299, Start Num: 9

Candidate Starts for Loadrie_80:

(Start: 5 @54003 has 32 MA's), (Start: 9 @54063 has 19 MA's), (10, 54108), (11, 54120), (13, 54156), (17, 54210), (18, 54213),

Gene: MAckerman_75 Start: 51255, Stop: 51545, Start Num: 7

Candidate Starts for MAckerman_75:

(Start: 5 @51240 has 32 MA's), (Start: 7 @51255 has 8 MA's), (Start: 9 @51315 has 19 MA's), (12, 51378), (13, 51405), (24, 51528), (25, 51531),

Gene: Miley16_81 Start: 53918, Stop: 54214, Start Num: 5

Candidate Starts for Miley16_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: MiniLon_83 Start: 53899, Stop: 54165, Start Num: 5

Candidate Starts for MiniLon_83:

(Start: 5 @53899 has 32 MA's), (Start: 7 @53914 has 8 MA's), (16, 54091), (21, 54151),

Gene: MkaliMitinis3_82 Start: 53987, Stop: 54283, Start Num: 5

Candidate Starts for MkaliMitinis3_82:

(Start: 5 @53987 has 32 MA's), (Start: 9 @54047 has 19 MA's), (10, 54092), (11, 54104), (13, 54140), (17, 54194), (18, 54197),

Gene: Moostard_77 Start: 53811, Stop: 54065, Start Num: 7

Candidate Starts for Moostard_77:

(Start: 5 @53796 has 32 MA's), (Start: 7 @53811 has 8 MA's), (13, 53946), (16, 53988), (19, 54024), (21, 54048),

Gene: MsGreen_79 Start: 53793, Stop: 54062, Start Num: 5

Candidate Starts for MsGreen_79:

(Start: 5 @53793 has 32 MA's), (Start: 7 @53808 has 8 MA's), (13, 53943), (16, 53985), (19, 54021), (21, 54045),

Gene: Netyap_82 Start: 53979, Stop: 54215, Start Num: 9

Candidate Starts for Netyap_82:

(Start: 5 @53919 has 32 MA's), (Start: 9 @53979 has 19 MA's), (10, 54024), (11, 54036), (13, 54072), (17, 54126), (18, 54129),

Gene: Nicholas_77 Start: 53801, Stop: 54070, Start Num: 5

Candidate Starts for Nicholas_77:

(Start: 5 @53801 has 32 MA's), (Start: 7 @53816 has 8 MA's), (13, 53951), (16, 53993), (19, 54029), (21, 54053),

Gene: Nicholasp3_81 Start: 53813, Stop: 54049, Start Num: 9

Candidate Starts for Nicholasp3_81:

(Start: 5 @53753 has 32 MA's), (Start: 9 @53813 has 19 MA's), (10, 53858), (11, 53870), (13, 53906), (17, 53960), (18, 53963),

Gene: OhShagHennessy_75 Start: 51278, Stop: 51583, Start Num: 5

Candidate Starts for OhShagHennessy_75:

(Start: 5 @51278 has 32 MA's), (Start: 7 @51293 has 8 MA's), (Start: 9 @51353 has 19 MA's), (12, 51416), (13, 51443), (17, 51497), (24, 51566), (25, 51569),

Gene: PapayaSalad_40 Start: 27840, Stop: 28139, Start Num: 4
Candidate Starts for PapayaSalad_40:
(1, 27552), (2, 27597), (3, 27771), (Start: 4 @27840 has 4 MA's), (13, 28002),

Gene: Rose5_78 Start: 52495, Stop: 52725, Start Num: 9
Candidate Starts for Rose5_78:
(Start: 5 @52420 has 32 MA's), (Start: 7 @52435 has 8 MA's), (Start: 9 @52495 has 19 MA's), (12, 52558), (13, 52585), (24, 52708), (25, 52711),

Gene: Rumpelstiltskin_78 Start: 53546, Stop: 53842, Start Num: 5
Candidate Starts for Rumpelstiltskin_78:
(Start: 5 @53546 has 32 MA's), (Start: 9 @53606 has 19 MA's), (10, 53651), (11, 53663), (13, 53699), (17, 53753), (18, 53756),

Gene: Samty_78 Start: 53804, Stop: 54058, Start Num: 7
Candidate Starts for Samty_78:
(Start: 5 @53789 has 32 MA's), (Start: 7 @53804 has 8 MA's), (13, 53939), (16, 53981), (19, 54017), (21, 54041),

Gene: Silverleaf_78 Start: 51891, Stop: 52181, Start Num: 7
Candidate Starts for Silverleaf_78:
(Start: 5 @51876 has 32 MA's), (Start: 7 @51891 has 8 MA's), (Start: 9 @51951 has 19 MA's), (12, 52014), (13, 52041), (24, 52164), (25, 52167),

Gene: Snenia_78 Start: 53795, Stop: 54064, Start Num: 5
Candidate Starts for Snenia_78:
(Start: 5 @53795 has 32 MA's), (Start: 7 @53810 has 8 MA's), (13, 53945), (16, 53987), (19, 54023), (21, 54047),

Gene: Tourach_80 Start: 54051, Stop: 54332, Start Num: 7
Candidate Starts for Tourach_80:
(Start: 5 @54036 has 32 MA's), (Start: 7 @54051 has 8 MA's), (12, 54162), (13, 54189), (15, 54219), (22, 54306),

Gene: Tyson_79 Start: 52361, Stop: 52651, Start Num: 7
Candidate Starts for Tyson_79:
(Start: 5 @52346 has 32 MA's), (Start: 7 @52361 has 8 MA's), (Start: 9 @52421 has 19 MA's), (12, 52484), (13, 52511), (24, 52634), (25, 52637),

Gene: UPIE_77 Start: 52017, Stop: 52247, Start Num: 9
Candidate Starts for UPIE_77:
(Start: 5 @51942 has 32 MA's), (Start: 7 @51957 has 8 MA's), (Start: 9 @52017 has 19 MA's), (12, 52080), (13, 52107), (24, 52230), (25, 52233),

Gene: Vetric_80 Start: 53895, Stop: 54131, Start Num: 9
Candidate Starts for Vetric_80:
(Start: 5 @53835 has 32 MA's), (Start: 9 @53895 has 19 MA's), (10, 53940), (11, 53952), (13, 53988), (18, 54045),

Gene: Wamburgexpress_78 Start: 52456, Stop: 52686, Start Num: 9
Candidate Starts for Wamburgexpress_78:
(Start: 5 @52381 has 32 MA's), (Start: 7 @52396 has 8 MA's), (Start: 9 @52456 has 19 MA's), (12, 52519), (13, 52546), (24, 52669), (25, 52672),

Gene: Whirlwind_80 Start: 53994, Stop: 54305, Start Num: 5

Candidate Starts for Whirlwind_80:

(Start: 5 @53994 has 32 MA's), (Start: 7 @54009 has 8 MA's), (11, 54120), (13, 54156), (23, 54285),

Gene: Wigglewigggle_80 Start: 53840, Stop: 54076, Start Num: 9

Candidate Starts for Wigglewigggle_80:

(Start: 5 @53780 has 32 MA's), (Start: 9 @53840 has 19 MA's), (10, 53885), (11, 53897), (13, 53933), (16, 53975), (17, 53987), (18, 53990),

Gene: Wilder_82 Start: 53924, Stop: 54220, Start Num: 5

Candidate Starts for Wilder_82:

(Start: 5 @53924 has 32 MA's), (Start: 9 @53984 has 19 MA's), (10, 54029), (11, 54041), (13, 54077), (17, 54131), (18, 54134),

Gene: Winky_81 Start: 53918, Stop: 54214, Start Num: 5

Candidate Starts for Winky_81:

(Start: 5 @53918 has 32 MA's), (Start: 9 @53978 has 19 MA's), (10, 54023), (11, 54035), (13, 54071), (17, 54125), (18, 54128),

Gene: Wyatt2_79 Start: 52344, Stop: 52649, Start Num: 5

Candidate Starts for Wyatt2_79:

(Start: 5 @52344 has 32 MA's), (Start: 7 @52359 has 8 MA's), (Start: 9 @52419 has 19 MA's), (12, 52482), (13, 52509), (24, 52632), (25, 52635),

Gene: Zakai_82 Start: 54244, Stop: 54540, Start Num: 5

Candidate Starts for Zakai_82:

(Start: 5 @54244 has 32 MA's), (Start: 9 @54304 has 19 MA's), (10, 54349), (11, 54361), (13, 54397), (17, 54451), (18, 54454),

Gene: Zaria_79 Start: 51796, Stop: 52101, Start Num: 5

Candidate Starts for Zaria_79:

(Start: 5 @51796 has 32 MA's), (Start: 7 @51811 has 8 MA's), (Start: 9 @51871 has 19 MA's), (12, 51934), (13, 51961), (24, 52084), (25, 52087),

Gene: ZhongYanYuan_78 Start: 53431, Stop: 53667, Start Num: 9

Candidate Starts for ZhongYanYuan_78:

(Start: 5 @53371 has 32 MA's), (Start: 9 @53431 has 19 MA's), (10, 53476), (11, 53488), (13, 53524), (16, 53566), (17, 53578), (18, 53581),