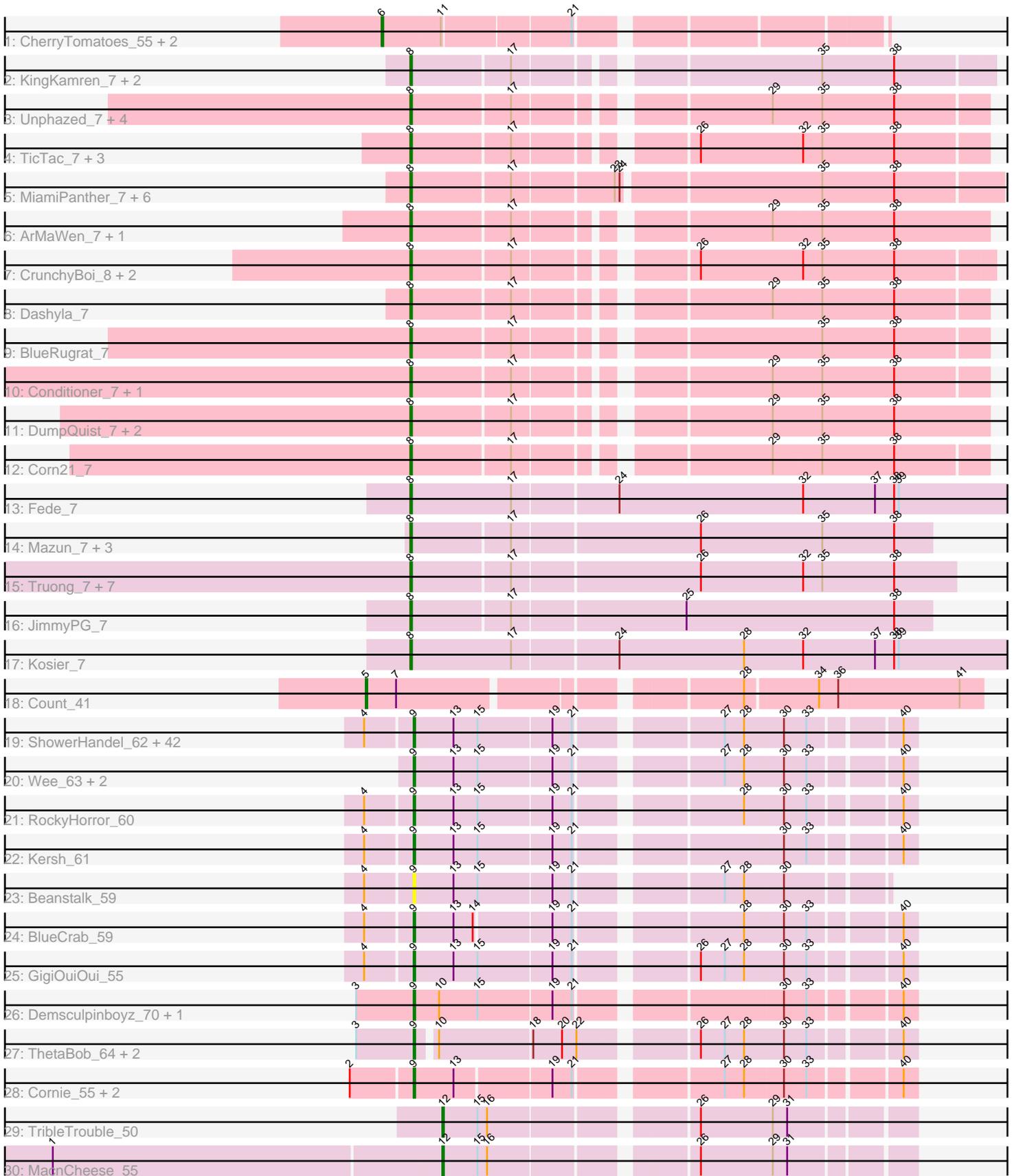# Pham 283643

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 283643 Report

This analysis was run 02/23/26 on database version 636.

Pham number 283643 has 112 members, 9 are drafts.

Phages represented in each track:
• Track 1 : CherryTomatoes_55, SCentae_53, Pupper_53
• Track 2 : KingKamren_7, Zhengyi_7, EugeneKrabs_7
• Track 3 : Unphazed_7, Phogo_7, SwissCheezer_7, TownLake_7, Xitlalli_7
• Track 4 : TicTac_7, HitchHiker_8, Biozilla_7, Oatly_7
• Track 5 : MiamiPanther_7, Sorvannah_7, Salvatore2000_7, JessellCookie_7, TinyTimothy_7, YellowPanda_7, Wesak_7
• Track 6 : ArMaWen_7, Stormbreaker_7
• Track 7 : CrunchyBoi_8, PineapplePluto_8, Pabst_7
• Track 8 : Dashyla_7
• Track 9 : BlueRugrat_7
• Track 10 : Conditioner_7, Birdfeeder_7
• Track 11 : DumpQuist_7, LilyLou_7, LesNorah_7
• Track 12 : Corn21_7
• Track 13 : Fede_7
• Track 14 : Mazun_7, Phedro_7, Phractured_7, Pharky_7
• Track 15 : Truong_7, ShyRosie_7, JordanFarm_7, Barroma_7, Akoni_7, SoilSleuth_7, AloeVera_7, Ashton_7
• Track 16 : JimmyPG_7
• Track 17 : Kosier_7
• Track 18 : Count_41
• Track 19 : ShowerHandel_62, WillSterrel_60, Violac_61, Blexus_57, Sabbb_63, Latretium_61, LastJedi_53, Brocalys_54, Eradicator_52, SwagPigglett_64, Martik_59, GUmbie_57, EleanorGeorge_60, Whouxphf_56, KristaRAM_62, Spartacus_61, Gandalph_62, Byougenkin_57, Mozy_68, Vivum_62, Saal_61, BuzzLyseyear_65, Maravista_60, Clifton_54, Radiance_58, Hlubikazi_55, James_63, Mahavrat_57, Gorge_63, OlympiaSaint_61, Mattes_63, ShroomBoi_61, Pippy_57, VRedHorse_59, Mandlovu_55, IrishSherpFalk_60, Lucia_59, FreddyB_60, Yorick_58, Strokeseat_55, Spikelee_66, Lizziana_65, Hades_60
• Track 20 : Wee_63, MinionDave_58, Hegedechwinu_59
• Track 21 : RockyHorror_60
• Track 22 : Kersh_61
• Track 23 : Beanstalk_59
• Track 24 : BlueCrab_59
• Track 25 : GigiOuiOui_55
• Track 26 : Demsculpinboyz_70, Renaud18_65
• Track 27 : ThetaBob_64, LunaStella_58, Yoshi_72
• Track 28 : Cornie_55, Starcevich_59, Cheesepuff_66

• Track 29 : TribleTrouble_50
• Track 30 : MacnCheese_55

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

The start number called the most often in the published annotations is 9, it was called in 56 of the 103 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Beanstalk_59, Blexus_57, BlueCrab_59, Brocalys_54, BuzzLyseyear_65, Byougenkin_57, Cheesepuff_66, Clifton_54, Cornie_55, Demsculpinboyz_70, EleanorGeorge_60, Eradicator_52, FreddyB_60, GUmbie_57, Gandalph_62, GigiOuiOui_55, Gorge_63, Hades_60, Hegedechwinu_59, Hlubikazi_55, IrishSherpFalk_60, James_63, Kersh_61, KristaRAM_62, LastJedi_53, Latretium_61, Lizziana_65, Lucia_59, LunaStella_58, Mahavrat_57, Mandlovu_55, Maravista_60, Martik_59, Mattes_63, MinionDave_58, Mozy_68, OlympiaSaint_61, Pippy_57, Radiance_58, Renaud18_65, RockyHorror_60, Saal_61, Sabbb_63, ShowerHandel_62, ShroomBoi_61, Spartacus_61, Spikelee_66, Starcevich_59, Strokeseat_55, SwagPigglett_64, ThetaBob_64, VRedHorse_59, Violac_61, Vivum_62, Wee_63, Whouxphf_56, WillSterrel_60, Yorick_58, Yoshi_72,

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

Genes that do not have the "Most Annotated" start:
• Akoni_7, AloeVera_7, ArMaWen_7, Ashton_7, Barroma_7, Biozilla_7, Birdfeeder_7, BlueRugrat_7, CherryTomatoes_55, Conditioner_7, Corn21_7, Count_41, CrunchyBoi_8, Dashyla_7, DumpQuist_7, EugeneKrabs_7, Fede_7, HitchHiker_8, JessellCookie_7, JimmyPG_7, JordanFarm_7, KingKamren_7, Kosier_7, LesNorah_7, LilyLou_7, MacnCheese_55, Mazun_7, MiamiPanther_7, Oatly_7, Pabst_7, Pharky_7, Phedro_7, Phogo_7, Phractured_7, PineapplePluto_8, Pupper_53, SCentae_53, Salvatore2000_7, ShyRosie_7, SoilSleuth_7, Sorvannah_7, Stormbreaker_7, SwissCheezer_7, TicTac_7, TinyTimothy_7, TownLake_7, TribleTrouble_50, Truong_7, Unphazed_7, Wesak_7, Xitlalli_7, YellowPanda_7, Zhengyi_7,

Summary by start number:

Start 5:
• Found in 1 of 112 (0.9%) of genes in pham
• Manual Annotations of this start: 1 of 103
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Count_41 (EL),

Start 6:
• Found in 3 of 112 (2.7%) of genes in pham
• Manual Annotations of this start: 3 of 103
• Called 100.0% of time when present
• Phage (with cluster) where this start called: CherryTomatoes_55 (DO), Pupper_53 (DO), SCentae_53 (DO),

Start 8:
• Found in 47 of 112 (42.0%) of genes in pham
• Manual Annotations of this start: 41 of 103
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Akoni_7 (EK2), AloeVera_7 (EK2), ArMaWen_7 (EK1), Ashton_7 (EK2), Barroma_7 (EK2), Biozilla_7 (EK1), Birdfeeder_7 (EK1), BlueRugrat_7 (EK1), Conditioner_7 (EK1), Corn21_7 (EK1), CrunchyBoi_8 (EK1), Dashyla_7 (EK1), DumpQuist_7 (EK1), EugeneKrabs_7 (EK), Fede_7 (EK2), HitchHiker_8 (EK1), JessellCookie_7 (EK1), JimmyPG_7 (EK2), JordanFarm_7 (EK2), KingKamren_7 (EK), Kosier_7 (EK2), LesNorah_7 (EK1), LilyLou_7 (EK1), Mazun_7 (EK2), MiamiPanther_7 (EK1), Oatly_7 (EK1), Pabst_7 (EK1), Pharky_7 (EK2), Phedro_7 (EK2), Phogo_7 (EK1), Phractured_7 (EK2), PineapplePluto_8 (EK1), Salvatore2000_7 (EK1), ShyRosie_7 (EK2), SoilSleuth_7 (EK2), Sorvannah_7 (EK1), Stormbreaker_7 (EK1), SwissCheezer_7 (EK1), TicTac_7 (EK1), TinyTimothy_7 (EK1), TownLake_7 (EK1), Truong_7 (EK2), Unphazed_7 (EK1), Wesak_7 (EK1), Xitlalli_7 (EK1), YellowPanda_7 (EK1), Zhengyi_7 (EK),

Start 9:
• Found in 59 of 112 (52.7%) of genes in pham
• Manual Annotations of this start: 56 of 103
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Beanstalk_59 (F1), Blexus_57 (F1), BlueCrab_59 (F1), Brocalys_54 (F1), BuzzLyseyear_65 (F1), Byougenkin_57 (F1), Cheesepuff_66 (F1), Clifton_54 (F1), Cornie_55 (F5), Demsculpinboyz_70 (F2), EleanorGeorge_60 (F1), Eradicator_52 (F1), FreddyB_60 (F1), GUmbie_57 (F1), Gandalph_62 (F1), GigiOuiOui_55 (F1), Gorge_63 (F1), Hades_60 (F1), Hegedechwinu_59 (F1), Hlubikazi_55 (F1), IrishSherpFalk_60 (F1), James_63 (F1), Kersh_61 (F1), KristaRAM_62 (F1), LastJedi_53 (F1), Latretium_61 (F1), Lizziana_65 (F1), Lucia_59 (F1), LunaStella_58 (F4), Mahavrat_57 (F1), Mandlovu_55 (F1), Maravista_60 (F1), Martik_59 (F1), Mattes_63 (F1), MinionDave_58 (F1), Mozy_68 (F1), OlympiaSaint_61 (F1), Pippy_57 (F1), Radiance_58 (F1), Renaud18_65 (F4), RockyHorror_60 (F1), Saal_61 (F1), Sabbb_63 (F1), ShowerHandel_62 (F1), ShroomBoi_61 (F1), Spartacus_61 (F1), Spikelee_66 (F1), Starcevich_59 (F1), Strokeseat_55 (F1), SwagPigglett_64 (F1), ThetaBob_64 (F4), VRedHorse_59 (F1), Violac_61 (F1), Vivum_62 (F1), Wee_63 (F1), Whouxphf_56 (F1), WillSterrel_60 (F1), Yorick_58 (F1), Yoshi_72 (F2),

Start 12:
• Found in 2 of 112 (1.8%) of genes in pham
• Manual Annotations of this start: 2 of 103
• Called 100.0% of time when present
• Phage (with cluster) where this start called: MacnCheese_55 (K3), TribleTrouble_50 (K3),

Summary by clusters:

There are 10 clusters represented in this pham: F1, F2, F4, F5, EK, DO, K3, EL, EK2, EK1,

Info for manual annotations of cluster DO:
•Start number 6 was manually annotated 3 times for cluster DO.

Info for manual annotations of cluster EK:
•Start number 8 was manually annotated 3 times for cluster EK.

Info for manual annotations of cluster EK1:
•Start number 8 was manually annotated 24 times for cluster EK1.

Info for manual annotations of cluster EK2:
•Start number 8 was manually annotated 14 times for cluster EK2.

Info for manual annotations of cluster EL:
•Start number 5 was manually annotated 1 time for cluster EL.

Info for manual annotations of cluster F1:
•Start number 9 was manually annotated 50 times for cluster F1.

Info for manual annotations of cluster F2:
•Start number 9 was manually annotated 2 times for cluster F2.

Info for manual annotations of cluster F4:
•Start number 9 was manually annotated 3 times for cluster F4.

Info for manual annotations of cluster F5:
•Start number 9 was manually annotated 1 time for cluster F5.

Info for manual annotations of cluster K3:
•Start number 12 was manually annotated 2 times for cluster K3.

Gene Information:
Gene: Akoni_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for Akoni_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: AloeVera_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for AloeVera_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: ArMaWen_7 Start: 5522, Stop: 5190, Start Num: 8
Candidate Starts for ArMaWen_7:
(Start: 8 @5522 has 41 MA's), (17, 5462), (29, 5324), (35, 5294), (38, 5249),

Gene: Ashton_7 Start: 5259, Stop: 4927, Start Num: 8
Candidate Starts for Ashton_7:
(Start: 8 @5259 has 41 MA's), (17, 5199), (26, 5085), (32, 5022), (35, 5010), (38, 4965),

Gene: Barroma_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for Barroma_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: Beanstalk_59 Start: 38741, Stop: 39007, Start Num: 9
Candidate Starts for Beanstalk_59:

(4, 38714), (Start: 9 @38741 has 56 MA's), (13, 38765), (15, 38780), (19, 38825), (21, 38837), (27, 38915), (28, 38927), (30, 38951),

Gene: Biozilla_7 Start: 5476, Stop: 5144, Start Num: 8
Candidate Starts for Biozilla_7:
(Start: 8 @5476 has 41 MA's), (17, 5416), (26, 5323), (32, 5260), (35, 5248), (38, 5203),

Gene: Birdfeeder_7 Start: 5534, Stop: 5205, Start Num: 8
Candidate Starts for Birdfeeder_7:
(Start: 8 @5534 has 41 MA's), (17, 5474), (29, 5336), (35, 5306), (38, 5261),

Gene: Blexus_57 Start: 40392, Stop: 40673, Start Num: 9
Candidate Starts for Blexus_57:
(4, 40365), (Start: 9 @40392 has 56 MA's), (13, 40416), (15, 40431), (19, 40476), (21, 40488), (27, 40566), (28, 40578), (30, 40602), (33, 40614), (40, 40665),

Gene: BlueCrab_59 Start: 40700, Stop: 40978, Start Num: 9
Candidate Starts for BlueCrab_59:
(4, 40673), (Start: 9 @40700 has 56 MA's), (13, 40724), (14, 40736), (19, 40781), (21, 40793), (28, 40883), (30, 40907), (33, 40919), (40, 40970),

Gene: BlueRugrat_7 Start: 5531, Stop: 5202, Start Num: 8
Candidate Starts for BlueRugrat_7:
(Start: 8 @5531 has 41 MA's), (17, 5471), (35, 5303), (38, 5258),

Gene: Brocalys_54 Start: 36836, Stop: 37117, Start Num: 9
Candidate Starts for Brocalys_54:
(4, 36809), (Start: 9 @36836 has 56 MA's), (13, 36860), (15, 36875), (19, 36920), (21, 36932), (27, 37010), (28, 37022), (30, 37046), (33, 37058), (40, 37109),

Gene: BuzzLyseyear_65 Start: 41358, Stop: 41639, Start Num: 9
Candidate Starts for BuzzLyseyear_65:
(4, 41331), (Start: 9 @41358 has 56 MA's), (13, 41382), (15, 41397), (19, 41442), (21, 41454), (27, 41532), (28, 41544), (30, 41568), (33, 41580), (40, 41631),

Gene: Byougenkin_57 Start: 39701, Stop: 39982, Start Num: 9
Candidate Starts for Byougenkin_57:
(4, 39674), (Start: 9 @39701 has 56 MA's), (13, 39725), (15, 39740), (19, 39785), (21, 39797), (27, 39875), (28, 39887), (30, 39911), (33, 39923), (40, 39974),

Gene: Cheesepuff_66 Start: 41977, Stop: 42255, Start Num: 9
Candidate Starts for Cheesepuff_66:
(2, 41941), (Start: 9 @41977 has 56 MA's), (13, 42001), (19, 42058), (21, 42070), (27, 42148), (28, 42160), (30, 42184), (33, 42196), (40, 42247),

Gene: CherryTomatoes_55 Start: 18497, Stop: 18778, Start Num: 6
Candidate Starts for CherryTomatoes_55:
(Start: 6 @18497 has 3 MA's), (11, 18533), (21, 18608),

Gene: Clifton_54 Start: 37187, Stop: 37468, Start Num: 9
Candidate Starts for Clifton_54:
(4, 37160), (Start: 9 @37187 has 56 MA's), (13, 37211), (15, 37226), (19, 37271), (21, 37283), (27, 37361), (28, 37373), (30, 37397), (33, 37409), (40, 37460),

Gene: Conditioner_7 Start: 5522, Stop: 5193, Start Num: 8
Candidate Starts for Conditioner_7:
(Start: 8 @5522 has 41 MA's), (17, 5462), (29, 5324), (35, 5294), (38, 5249),

Gene: Corn21_7 Start: 5550, Stop: 5221, Start Num: 8
Candidate Starts for Corn21_7:
(Start: 8 @5550 has 41 MA's), (17, 5490), (29, 5352), (35, 5322), (38, 5277),

Gene: Cornie_55 Start: 38439, Stop: 38717, Start Num: 9
Candidate Starts for Cornie_55:
(2, 38403), (Start: 9 @38439 has 56 MA's), (13, 38463), (19, 38520), (21, 38532), (27, 38610), (28, 38622), (30, 38646), (33, 38658), (40, 38709),

Gene: Count_41 Start: 32857, Stop: 33210, Start Num: 5
Candidate Starts for Count_41:
(Start: 5 @32857 has 1 MA's), (7, 32875), (28, 33067), (34, 33109), (36, 33121), (41, 33196),

Gene: CrunchyBoi_8 Start: 5611, Stop: 5279, Start Num: 8
Candidate Starts for CrunchyBoi_8:
(Start: 8 @5611 has 41 MA's), (17, 5551), (26, 5458), (32, 5395), (35, 5383), (38, 5338),

Gene: Dashyla_7 Start: 5531, Stop: 5202, Start Num: 8
Candidate Starts for Dashyla_7:
(Start: 8 @5531 has 41 MA's), (17, 5471), (29, 5333), (35, 5303), (38, 5258),

Gene: Demsculpinboyz_70 Start: 39936, Stop: 40217, Start Num: 9
Candidate Starts for Demsculpinboyz_70:
(3, 39900), (Start: 9 @39936 has 56 MA's), (10, 39951), (15, 39975), (19, 40020), (21, 40032), (30, 40146), (33, 40158), (40, 40209),

Gene: DumpQuist_7 Start: 5525, Stop: 5193, Start Num: 8
Candidate Starts for DumpQuist_7:
(Start: 8 @5525 has 41 MA's), (17, 5465), (29, 5327), (35, 5297), (38, 5252),

Gene: EleanorGeorge_60 Start: 40795, Stop: 41076, Start Num: 9
Candidate Starts for EleanorGeorge_60:
(4, 40768), (Start: 9 @40795 has 56 MA's), (13, 40819), (15, 40834), (19, 40879), (21, 40891), (27, 40969), (28, 40981), (30, 41005), (33, 41017), (40, 41068),

Gene: Eradicator_52 Start: 38208, Stop: 38489, Start Num: 9
Candidate Starts for Eradicator_52:
(4, 38181), (Start: 9 @38208 has 56 MA's), (13, 38232), (15, 38247), (19, 38292), (21, 38304), (27, 38382), (28, 38394), (30, 38418), (33, 38430), (40, 38481),

Gene: EugeneKrabs_7 Start: 5287, Stop: 4955, Start Num: 8
Candidate Starts for EugeneKrabs_7:
(Start: 8 @5287 has 41 MA's), (17, 5227), (35, 5059), (38, 5014),

Gene: Fede_7 Start: 5514, Stop: 5119, Start Num: 8
Candidate Starts for Fede_7:
(Start: 8 @5514 has 41 MA's), (17, 5451), (24, 5388), (32, 5274), (37, 5229), (38, 5217), (39, 5214),

Gene: FreddyB_60 Start: 38860, Stop: 39141, Start Num: 9
Candidate Starts for FreddyB_60:
(4, 38833), (Start: 9 @38860 has 56 MA's), (13, 38884), (15, 38899), (19, 38944), (21, 38956), (27, 39034), (28, 39046), (30, 39070), (33, 39082), (40, 39133),

Gene: GUmbie_57 Start: 39435, Stop: 39716, Start Num: 9
Candidate Starts for GUmbie_57:
(4, 39408), (Start: 9 @39435 has 56 MA's), (13, 39459), (15, 39474), (19, 39519), (21, 39531), (27, 39609), (28, 39621), (30, 39645), (33, 39657), (40, 39708),

Gene: Gandalph_62 Start: 40257, Stop: 40538, Start Num: 9
Candidate Starts for Gandalph_62:
(4, 40230), (Start: 9 @40257 has 56 MA's), (13, 40281), (15, 40296), (19, 40341), (21, 40353), (27, 40431), (28, 40443), (30, 40467), (33, 40479), (40, 40530),

Gene: GigiOuiOui_55 Start: 38875, Stop: 39156, Start Num: 9
Candidate Starts for GigiOuiOui_55:
(4, 38848), (Start: 9 @38875 has 56 MA's), (13, 38899), (15, 38914), (19, 38959), (21, 38971), (26, 39034), (27, 39049), (28, 39061), (30, 39085), (33, 39097), (40, 39148),

Gene: Gorge_63 Start: 41377, Stop: 41658, Start Num: 9
Candidate Starts for Gorge_63:
(4, 41350), (Start: 9 @41377 has 56 MA's), (13, 41401), (15, 41416), (19, 41461), (21, 41473), (27, 41551), (28, 41563), (30, 41587), (33, 41599), (40, 41650),

Gene: Hades_60 Start: 40833, Stop: 41114, Start Num: 9
Candidate Starts for Hades_60:
(4, 40806), (Start: 9 @40833 has 56 MA's), (13, 40857), (15, 40872), (19, 40917), (21, 40929), (27, 41007), (28, 41019), (30, 41043), (33, 41055), (40, 41106),

Gene: Hegedechwinu_59 Start: 39047, Stop: 39328, Start Num: 9
Candidate Starts for Hegedechwinu_59:
(Start: 9 @39047 has 56 MA's), (13, 39071), (15, 39086), (19, 39131), (21, 39143), (27, 39221), (28, 39233), (30, 39257), (33, 39269), (40, 39320),

Gene: HitchHiker_8 Start: 5476, Stop: 5144, Start Num: 8
Candidate Starts for HitchHiker_8:
(Start: 8 @5476 has 41 MA's), (17, 5416), (26, 5323), (32, 5260), (35, 5248), (38, 5203),

Gene: Hlubikazi_55 Start: 38053, Stop: 38334, Start Num: 9
Candidate Starts for Hlubikazi_55:
(4, 38026), (Start: 9 @38053 has 56 MA's), (13, 38077), (15, 38092), (19, 38137), (21, 38149), (27, 38227), (28, 38239), (30, 38263), (33, 38275), (40, 38326),

Gene: IrishSherpFalk_60 Start: 41690, Stop: 41971, Start Num: 9
Candidate Starts for IrishSherpFalk_60:
(4, 41663), (Start: 9 @41690 has 56 MA's), (13, 41714), (15, 41729), (19, 41774), (21, 41786), (27, 41864), (28, 41876), (30, 41900), (33, 41912), (40, 41963),

Gene: James_63 Start: 41502, Stop: 41783, Start Num: 9
Candidate Starts for James_63:
(4, 41475), (Start: 9 @41502 has 56 MA's), (13, 41526), (15, 41541), (19, 41586), (21, 41598), (27, 41676), (28, 41688), (30, 41712), (33, 41724), (40, 41775),

Gene: JessellCookie_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for JessellCookie_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: JimmyPG_7 Start: 5256, Stop: 4939, Start Num: 8
Candidate Starts for JimmyPG_7:
(Start: 8 @5256 has 41 MA's), (17, 5196), (25, 5091), (38, 4962),

Gene: JordanFarm_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for JordanFarm_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: Kersh_61 Start: 42278, Stop: 42559, Start Num: 9
Candidate Starts for Kersh_61:
(4, 42251), (Start: 9 @42278 has 56 MA's), (13, 42302), (15, 42317), (19, 42362), (21, 42374), (30, 42488), (33, 42500), (40, 42551),

Gene: KingKamren_7 Start: 5287, Stop: 4955, Start Num: 8
Candidate Starts for KingKamren_7:
(Start: 8 @5287 has 41 MA's), (17, 5227), (35, 5059), (38, 5014),

Gene: Kosier_7 Start: 5514, Stop: 5119, Start Num: 8
Candidate Starts for Kosier_7:
(Start: 8 @5514 has 41 MA's), (17, 5451), (24, 5388), (28, 5310), (32, 5274), (37, 5229), (38, 5217), (39, 5214),

Gene: KristaRAM_62 Start: 42482, Stop: 42763, Start Num: 9
Candidate Starts for KristaRAM_62:
(4, 42455), (Start: 9 @42482 has 56 MA's), (13, 42506), (15, 42521), (19, 42566), (21, 42578), (27, 42656), (28, 42668), (30, 42692), (33, 42704), (40, 42755),

Gene: LastJedi_53 Start: 37230, Stop: 37511, Start Num: 9
Candidate Starts for LastJedi_53:
(4, 37203), (Start: 9 @37230 has 56 MA's), (13, 37254), (15, 37269), (19, 37314), (21, 37326), (27, 37404), (28, 37416), (30, 37440), (33, 37452), (40, 37503),

Gene: Latretium_61 Start: 40556, Stop: 40837, Start Num: 9
Candidate Starts for Latretium_61:
(4, 40529), (Start: 9 @40556 has 56 MA's), (13, 40580), (15, 40595), (19, 40640), (21, 40652), (27, 40730), (28, 40742), (30, 40766), (33, 40778), (40, 40829),

Gene: LesNorah_7 Start: 5606, Stop: 5277, Start Num: 8
Candidate Starts for LesNorah_7:
(Start: 8 @5606 has 41 MA's), (17, 5546), (29, 5408), (35, 5378), (38, 5333),

Gene: LilyLou_7 Start: 5534, Stop: 5205, Start Num: 8
Candidate Starts for LilyLou_7:
(Start: 8 @5534 has 41 MA's), (17, 5474), (29, 5336), (35, 5306), (38, 5261),

Gene: Lizziana_65 Start: 40983, Stop: 41264, Start Num: 9
Candidate Starts for Lizziana_65:

(4, 40956), (Start: 9 @40983 has 56 MA's), (13, 41007), (15, 41022), (19, 41067), (21, 41079), (27, 41157), (28, 41169), (30, 41193), (33, 41205), (40, 41256),

Gene: Lucia_59 Start: 38977, Stop: 39258, Start Num: 9
Candidate Starts for Lucia_59:
(4, 38950), (Start: 9 @38977 has 56 MA's), (13, 39001), (15, 39016), (19, 39061), (21, 39073), (27, 39151), (28, 39163), (30, 39187), (33, 39199), (40, 39250),

Gene: LunaStella_58 Start: 39407, Stop: 39685, Start Num: 9
Candidate Starts for LunaStella_58:
(3, 39371), (Start: 9 @39407 has 56 MA's), (10, 39416), (18, 39473), (20, 39491), (22, 39500), (26, 39563), (27, 39578), (28, 39590), (30, 39614), (33, 39626), (40, 39677),

Gene: MacnCheese_55 Start: 38928, Stop: 39194, Start Num: 12
Candidate Starts for MacnCheese_55:
(1, 38688), (Start: 12 @38928 has 2 MA's), (15, 38949), (16, 38955), (26, 39069), (29, 39114), (31, 39123),

Gene: Mahavrat_57 Start: 39385, Stop: 39666, Start Num: 9
Candidate Starts for Mahavrat_57:
(4, 39358), (Start: 9 @39385 has 56 MA's), (13, 39409), (15, 39424), (19, 39469), (21, 39481), (27, 39559), (28, 39571), (30, 39595), (33, 39607), (40, 39658),

Gene: Mandlovu_55 Start: 37995, Stop: 38276, Start Num: 9
Candidate Starts for Mandlovu_55:
(4, 37968), (Start: 9 @37995 has 56 MA's), (13, 38019), (15, 38034), (19, 38079), (21, 38091), (27, 38169), (28, 38181), (30, 38205), (33, 38217), (40, 38268),

Gene: Maravista_60 Start: 41432, Stop: 41713, Start Num: 9
Candidate Starts for Maravista_60:
(4, 41405), (Start: 9 @41432 has 56 MA's), (13, 41456), (15, 41471), (19, 41516), (21, 41528), (27, 41606), (28, 41618), (30, 41642), (33, 41654), (40, 41705),

Gene: Martik_59 Start: 39936, Stop: 40217, Start Num: 9
Candidate Starts for Martik_59:
(4, 39909), (Start: 9 @39936 has 56 MA's), (13, 39960), (15, 39975), (19, 40020), (21, 40032), (27, 40110), (28, 40122), (30, 40146), (33, 40158), (40, 40209),

Gene: Mattes_63 Start: 41502, Stop: 41783, Start Num: 9
Candidate Starts for Mattes_63:
(4, 41475), (Start: 9 @41502 has 56 MA's), (13, 41526), (15, 41541), (19, 41586), (21, 41598), (27, 41676), (28, 41688), (30, 41712), (33, 41724), (40, 41775),

Gene: Mazun_7 Start: 5279, Stop: 4962, Start Num: 8
Candidate Starts for Mazun_7:
(Start: 8 @5279 has 41 MA's), (17, 5219), (26, 5105), (35, 5030), (38, 4985),

Gene: MiamiPanther_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for MiamiPanther_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: MinionDave_58 Start: 40283, Stop: 40564, Start Num: 9
Candidate Starts for MinionDave_58:

(Start: 9 @40283 has 56 MA's), (13, 40307), (15, 40322), (19, 40367), (21, 40379), (27, 40457), (28, 40469), (30, 40493), (33, 40505), (40, 40556),

Gene: Mozy_68 Start: 42517, Stop: 42798, Start Num: 9
Candidate Starts for Mozy_68:
(4, 42490), (Start: 9 @42517 has 56 MA's), (13, 42541), (15, 42556), (19, 42601), (21, 42613), (27, 42691), (28, 42703), (30, 42727), (33, 42739), (40, 42790),

Gene: Oatly_7 Start: 5476, Stop: 5144, Start Num: 8
Candidate Starts for Oatly_7:
(Start: 8 @5476 has 41 MA's), (17, 5416), (26, 5323), (32, 5260), (35, 5248), (38, 5203),

Gene: OlympiaSaint_61 Start: 40444, Stop: 40725, Start Num: 9
Candidate Starts for OlympiaSaint_61:
(4, 40417), (Start: 9 @40444 has 56 MA's), (13, 40468), (15, 40483), (19, 40528), (21, 40540), (27, 40618), (28, 40630), (30, 40654), (33, 40666), (40, 40717),

Gene: Pabst_7 Start: 5337, Stop: 5005, Start Num: 8
Candidate Starts for Pabst_7:
(Start: 8 @5337 has 41 MA's), (17, 5277), (26, 5184), (32, 5121), (35, 5109), (38, 5064),

Gene: Pharky_7 Start: 5240, Stop: 4923, Start Num: 8
Candidate Starts for Pharky_7:
(Start: 8 @5240 has 41 MA's), (17, 5180), (26, 5066), (35, 4991), (38, 4946),

Gene: Phedro_7 Start: 5240, Stop: 4923, Start Num: 8
Candidate Starts for Phedro_7:
(Start: 8 @5240 has 41 MA's), (17, 5180), (26, 5066), (35, 4991), (38, 4946),

Gene: Phogo_7 Start: 5534, Stop: 5205, Start Num: 8
Candidate Starts for Phogo_7:
(Start: 8 @5534 has 41 MA's), (17, 5474), (29, 5336), (35, 5306), (38, 5261),

Gene: Phractured_7 Start: 5240, Stop: 4923, Start Num: 8
Candidate Starts for Phractured_7:
(Start: 8 @5240 has 41 MA's), (17, 5180), (26, 5066), (35, 4991), (38, 4946),

Gene: PineapplePluto_8 Start: 5620, Stop: 5288, Start Num: 8
Candidate Starts for PineapplePluto_8:
(Start: 8 @5620 has 41 MA's), (17, 5560), (26, 5467), (32, 5404), (35, 5392), (38, 5347),

Gene: Pippy_57 Start: 38794, Stop: 39075, Start Num: 9
Candidate Starts for Pippy_57:
(4, 38767), (Start: 9 @38794 has 56 MA's), (13, 38818), (15, 38833), (19, 38878), (21, 38890), (27, 38968), (28, 38980), (30, 39004), (33, 39016), (40, 39067),

Gene: Pupper_53 Start: 18336, Stop: 18617, Start Num: 6
Candidate Starts for Pupper_53:
(Start: 6 @18336 has 3 MA's), (11, 18372), (21, 18447),

Gene: Radiance_58 Start: 40047, Stop: 40328, Start Num: 9
Candidate Starts for Radiance_58:

(4, 40020), (Start: 9 @40047 has 56 MA's), (13, 40071), (15, 40086), (19, 40131), (21, 40143), (27, 40221), (28, 40233), (30, 40257), (33, 40269), (40, 40320),

Gene: Renaud18_65 Start: 40812, Stop: 41093, Start Num: 9
Candidate Starts for Renaud18_65:
(3, 40776), (Start: 9 @40812 has 56 MA's), (10, 40827), (15, 40851), (19, 40896), (21, 40908), (30, 41022), (33, 41034), (40, 41085),

Gene: RockyHorror_60 Start: 39611, Stop: 39892, Start Num: 9
Candidate Starts for RockyHorror_60:
(4, 39584), (Start: 9 @39611 has 56 MA's), (13, 39635), (15, 39650), (19, 39695), (21, 39707), (28, 39797), (30, 39821), (33, 39833), (40, 39884),

Gene: SCentae_53 Start: 18353, Stop: 18634, Start Num: 6
Candidate Starts for SCentae_53:
(Start: 6 @18353 has 3 MA's), (11, 18389), (21, 18464),

Gene: Saal_61 Start: 41196, Stop: 41477, Start Num: 9
Candidate Starts for Saal_61:
(4, 41169), (Start: 9 @41196 has 56 MA's), (13, 41220), (15, 41235), (19, 41280), (21, 41292), (27, 41370), (28, 41382), (30, 41406), (33, 41418), (40, 41469),

Gene: Sabbb_63 Start: 40884, Stop: 41165, Start Num: 9
Candidate Starts for Sabbb_63:
(4, 40857), (Start: 9 @40884 has 56 MA's), (13, 40908), (15, 40923), (19, 40968), (21, 40980), (27, 41058), (28, 41070), (30, 41094), (33, 41106), (40, 41157),

Gene: Salvatore2000_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for Salvatore2000_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: ShowerHandel_62 Start: 39936, Stop: 40217, Start Num: 9
Candidate Starts for ShowerHandel_62:
(4, 39909), (Start: 9 @39936 has 56 MA's), (13, 39960), (15, 39975), (19, 40020), (21, 40032), (27, 40110), (28, 40122), (30, 40146), (33, 40158), (40, 40209),

Gene: ShroomBoi_61 Start: 40896, Stop: 41177, Start Num: 9
Candidate Starts for ShroomBoi_61:
(4, 40869), (Start: 9 @40896 has 56 MA's), (13, 40920), (15, 40935), (19, 40980), (21, 40992), (27, 41070), (28, 41082), (30, 41106), (33, 41118), (40, 41169),

Gene: ShyRosie_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for ShyRosie_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: SoilSleuth_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for SoilSleuth_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: Sorvannah_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for Sorvannah_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: Spartacus_61 Start: 40606, Stop: 40887, Start Num: 9
Candidate Starts for Spartacus_61:
(4, 40579), (Start: 9 @40606 has 56 MA's), (13, 40630), (15, 40645), (19, 40690), (21, 40702), (27, 40780), (28, 40792), (30, 40816), (33, 40828), (40, 40879),

Gene: Spikelee_66 Start: 42226, Stop: 42507, Start Num: 9
Candidate Starts for Spikelee_66:
(4, 42199), (Start: 9 @42226 has 56 MA's), (13, 42250), (15, 42265), (19, 42310), (21, 42322), (27, 42400), (28, 42412), (30, 42436), (33, 42448), (40, 42499),

Gene: Starcevich_59 Start: 40105, Stop: 40383, Start Num: 9
Candidate Starts for Starcevich_59:
(2, 40069), (Start: 9 @40105 has 56 MA's), (13, 40129), (19, 40186), (21, 40198), (27, 40276), (28, 40288), (30, 40312), (33, 40324), (40, 40375),

Gene: Stormbreaker_7 Start: 5516, Stop: 5187, Start Num: 8
Candidate Starts for Stormbreaker_7:
(Start: 8 @5516 has 41 MA's), (17, 5456), (29, 5318), (35, 5288), (38, 5243),

Gene: Strokeseat_55 Start: 38052, Stop: 38333, Start Num: 9
Candidate Starts for Strokeseat_55:
(4, 38025), (Start: 9 @38052 has 56 MA's), (13, 38076), (15, 38091), (19, 38136), (21, 38148), (27, 38226), (28, 38238), (30, 38262), (33, 38274), (40, 38325),

Gene: SwagPigglett_64 Start: 42244, Stop: 42525, Start Num: 9
Candidate Starts for SwagPigglett_64:
(4, 42217), (Start: 9 @42244 has 56 MA's), (13, 42268), (15, 42283), (19, 42328), (21, 42340), (27, 42418), (28, 42430), (30, 42454), (33, 42466), (40, 42517),

Gene: SwissCheezer_7 Start: 5525, Stop: 5193, Start Num: 8
Candidate Starts for SwissCheezer_7:
(Start: 8 @5525 has 41 MA's), (17, 5465), (29, 5327), (35, 5297), (38, 5252),

Gene: ThetaBob_64 Start: 41432, Stop: 41710, Start Num: 9
Candidate Starts for ThetaBob_64:
(3, 41396), (Start: 9 @41432 has 56 MA's), (10, 41441), (18, 41498), (20, 41516), (22, 41525), (26, 41588), (27, 41603), (28, 41615), (30, 41639), (33, 41651), (40, 41702),

Gene: TicTac_7 Start: 5485, Stop: 5156, Start Num: 8
Candidate Starts for TicTac_7:
(Start: 8 @5485 has 41 MA's), (17, 5425), (26, 5332), (32, 5269), (35, 5257), (38, 5212),

Gene: TinyTimothy_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for TinyTimothy_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: TownLake_7 Start: 5609, Stop: 5280, Start Num: 8
Candidate Starts for TownLake_7:
(Start: 8 @5609 has 41 MA's), (17, 5549), (29, 5411), (35, 5381), (38, 5336),

Gene: TribleTrouble_50 Start: 37335, Stop: 37601, Start Num: 12
Candidate Starts for TribleTrouble_50:
(Start: 12 @37335 has 2 MA's), (15, 37356), (16, 37362), (26, 37476), (29, 37521), (31, 37530),

Gene: Truong_7 Start: 5255, Stop: 4923, Start Num: 8
Candidate Starts for Truong_7:
(Start: 8 @5255 has 41 MA's), (17, 5195), (26, 5081), (32, 5018), (35, 5006), (38, 4961),

Gene: Unphazed_7 Start: 5534, Stop: 5205, Start Num: 8
Candidate Starts for Unphazed_7:
(Start: 8 @5534 has 41 MA's), (17, 5474), (29, 5336), (35, 5306), (38, 5261),

Gene: VRedHorse_59 Start: 39252, Stop: 39533, Start Num: 9
Candidate Starts for VRedHorse_59:
(4, 39225), (Start: 9 @39252 has 56 MA's), (13, 39276), (15, 39291), (19, 39336), (21, 39348), (27, 39426), (28, 39438), (30, 39462), (33, 39474), (40, 39525),

Gene: Violac_61 Start: 41322, Stop: 41603, Start Num: 9
Candidate Starts for Violac_61:
(4, 41295), (Start: 9 @41322 has 56 MA's), (13, 41346), (15, 41361), (19, 41406), (21, 41418), (27, 41496), (28, 41508), (30, 41532), (33, 41544), (40, 41595),

Gene: Vivum_62 Start: 40254, Stop: 40535, Start Num: 9
Candidate Starts for Vivum_62:
(4, 40227), (Start: 9 @40254 has 56 MA's), (13, 40278), (15, 40293), (19, 40338), (21, 40350), (27, 40428), (28, 40440), (30, 40464), (33, 40476), (40, 40527),

Gene: Wee_63 Start: 41773, Stop: 42054, Start Num: 9
Candidate Starts for Wee_63:
(Start: 9 @41773 has 56 MA's), (13, 41797), (15, 41812), (19, 41857), (21, 41869), (27, 41947), (28, 41959), (30, 41983), (33, 41995), (40, 42046),

Gene: Wesak_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for Wesak_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: Whouxphf_56 Start: 39848, Stop: 40129, Start Num: 9
Candidate Starts for Whouxphf_56:
(4, 39821), (Start: 9 @39848 has 56 MA's), (13, 39872), (15, 39887), (19, 39932), (21, 39944), (27, 40022), (28, 40034), (30, 40058), (33, 40070), (40, 40121),

Gene: WillSterrel_60 Start: 41723, Stop: 42004, Start Num: 9
Candidate Starts for WillSterrel_60:
(4, 41696), (Start: 9 @41723 has 56 MA's), (13, 41747), (15, 41762), (19, 41807), (21, 41819), (27, 41897), (28, 41909), (30, 41933), (33, 41945), (40, 41996),

Gene: Xitlalli_7 Start: 5522, Stop: 5193, Start Num: 8
Candidate Starts for Xitlalli_7:
(Start: 8 @5522 has 41 MA's), (17, 5462), (29, 5324), (35, 5294), (38, 5249),

Gene: YellowPanda_7 Start: 5385, Stop: 5035, Start Num: 8
Candidate Starts for YellowPanda_7:
(Start: 8 @5385 has 41 MA's), (17, 5325), (23, 5265), (24, 5262), (35, 5145), (38, 5100),

Gene: Yorick_58 Start: 40310, Stop: 40591, Start Num: 9
Candidate Starts for Yorick_58:

(4, 40283), (Start: 9 @40310 has 56 MA's), (13, 40334), (15, 40349), (19, 40394), (21, 40406), (27, 40484), (28, 40496), (30, 40520), (33, 40532), (40, 40583),

Gene: Yoshi_72 Start: 41696, Stop: 41974, Start Num: 9
Candidate Starts for Yoshi_72:
(3, 41660), (Start: 9 @41696 has 56 MA's), (10, 41705), (18, 41762), (20, 41780), (22, 41789), (26, 41852), (27, 41867), (28, 41879), (30, 41903), (33, 41915), (40, 41966),

Gene: Zhengyi_7 Start: 5287, Stop: 4955, Start Num: 8
Candidate Starts for Zhengyi_7:
(Start: 8 @5287 has 41 MA's), (17, 5227), (35, 5059), (38, 5014),