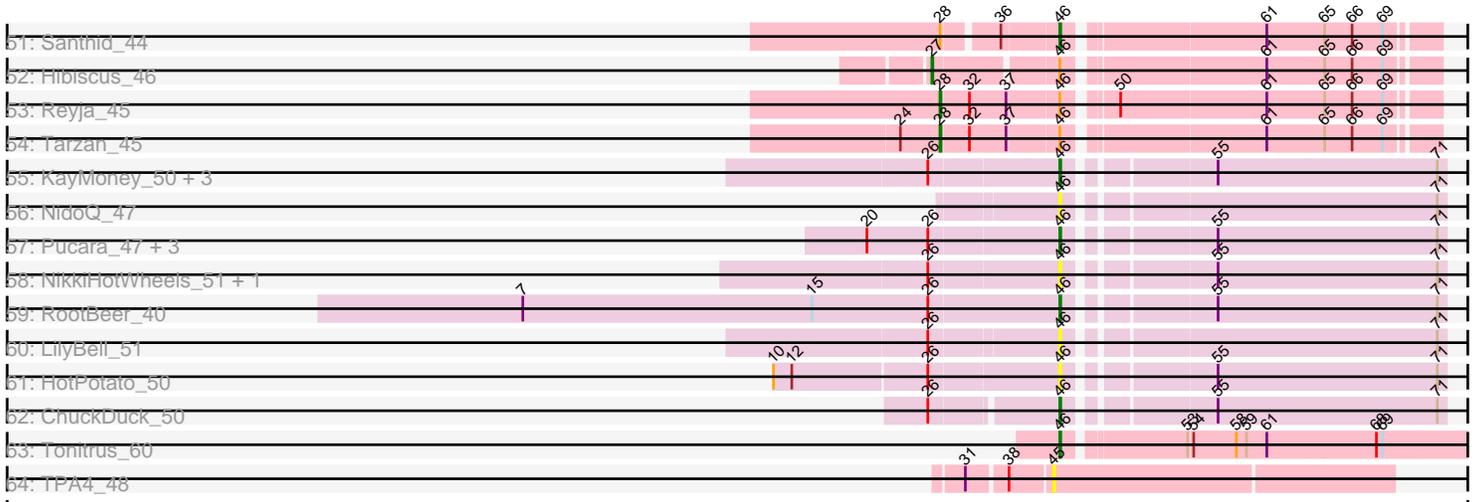# Pham 287722

Pham 287722

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 287722 Report

This analysis was run 03/28/26 on database version 641.

Pham number 287722 has 115 members, 19 are drafts.

Phages represented in each track:
• Track 1 : Mao1_67, Phayonce_49
• Track 2 : Dori_65, Mask_65
• Track 3 : Sparky_69, Farewell_70
• Track 4 : WST1_46
• Track 5 : IdentityCrisis_45
• Track 6 : Amo99_74, Sting_72, Purplicious_72, Stillion_73, KingstonB_74, Grumio_73, DonTron_73, Jollymon_73, ColdSoup_74, Soos_69
• Track 7 : Clawz_73
• Track 8 : Makar_74
• Track 9 : EMsquaredA_50, Marteena_49, Bradissa_49, Eviarto_53, Lilas_51, Hugley_49, TimTam_53
• Track 10 : Angelique_52
• Track 11 : EnalisNailo_49, Pollux_52, Floral_50
• Track 12 : Confidence_52
• Track 13 : Jablanski_53, Pytheas_53
• Track 14 : Wrigley_58
• Track 15 : Posh_56
• Track 16 : BeeGee_58
• Track 17 : Cashline_50
• Track 18 : Neobush_52, Suscepit_52, Trumpet_52, Tayonia_52, Zameen_52
• Track 19 : Antonio_52, Kita_53
• Track 20 : Bialota_50, Pickett_45, Yeet412_47, Zirinka_49, EdnaMode_46
• Track 21 : Madavieve_47
• Track 22 : Manasvini_53, Polly_49, Eudoria_52
• Track 23 : Hyzer_58
• Track 24 : Herod_52, BatStarr_52, Nymphadora_53
• Track 25 : Madeline_50
• Track 26 : BoyNamedSue_52, AlumE_52
• Track 27 : Maridalia_53, Bunnybear_45
• Track 28 : WelcomeAyanna_51, ThankyouJordi_51
• Track 29 : LordFarquaad_49, SoilAssassin_47, Attis_47
• Track 30 : Vasanti_49
• Track 31 : BaxterFox_53
• Track 32 : Yeezy_50
• Track 33 : PantheRoc_53
• Track 34 : Thimann_50
• Track 35 : RavenCo17_50

- Track 36 : GrandSlam_49, Hamood_49, Chop_49
- Track 37 : Pimento_50
- Track 38 : Nadeem_49, Mulch_49, Parada_49, Brylie_49
- Track 39 : Bock_49
- Track 40 : Ayotoya_49
- Track 41 : BetterKatz_49
- Track 42 : Francois_48
- Track 43 : DelRio_50
- Track 44 : Malibo_53
- Track 45 : DumpsterDude_51
- Track 46 : Ruthy_49
- Track 47 : Zodiariah_51
- Track 48 : ArchiDore_49
- Track 49 : Jojo24_44
- Track 50 : Heinz_45
- Track 51 : Santhid_44
- Track 52 : Hibiscus_46
- Track 53 : Reyja_45
- Track 54 : Tarzan_45
- Track 55 : KayMoney_50, LittleRon_47, Constance_50, Bridgette_52
- Track 56 : NidoQ_47
- Track 57 : Pucara_47, PeggyLeg03_50, Judy_53, GlobiWarming_52
- Track 58 : NikkiHotWheels_51, Henrique_50
- Track 59 : RootBeer_40
- Track 60 : LilyBell_51
- Track 61 : HotPotato_50
- Track 62 : ChuckDuck_50
- Track 63 : Tonitrus_60
- Track 64 : TPA4_48

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

The start number called the most often in the published annotations is 46, it was called in 58 of the 96 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
- AlumE_52, Angelique_52, ArchiDore_49, BaxterFox_53, BeeGee_58, Bialota_50, BoyNamedSue_52, Bradissa_49, Bridgette_52, Bunnybear_45, Cashline_50, ChuckDuck_50, Confidence_52, Constance_50, DumpsterDude_51, EMsquaredA_50, EdnaMode_46, EnalisNailo_49, Eudoria_52, Eviarto_53, Farewell_70, Floral_50, GlobiWarming_52, Heinz_45, Henrique_50, HotPotato_50, Hugley_49, Hyzer_58, IdentityCrisis_45, Jablanski_53, Jojo24_44, Judy_53, KayMoney_50, Lilas_51, LilyBell_51, LittleRon_47, Madavieve_47, Madeline_50, Malibo_53, Manasvini_53, Maridalia_53, Marteena_49, NidoQ_47, NikkiHotWheels_51, PantheRoc_53, PeggyLeg03_50, Pickett_45, Pollux_52, Polly_49, Posh_56, Pucara_47, Pytheas_53, RavenCo17_50, RootBeer_40, Ruthy_49, Santhid_44, Sparky_69, ThankyouJordi_51, Thimann_50, TimTam_53, Tonitrus_60, Vasanti_49, WST1_46, WelcomeAyanna_51, Wrigley_58, Yeet412_47, Yeezy_50, Zirinka_49, Zodiariah_51,

Genes that have the "Most Annotated" start but do not call it:
• Antonio_52, Attis_47, BatStarr_52, Herod_52, Hibiscus_46, Kita_53, LordFarquaad_49, Neobush_52, Nymphadora_53, Reyja_45, SoilAssassin_47, Suscepit_52, Tarzan_45, Tayonia_52, Trumpet_52, Zameen_52,

Genes that do not have the "Most Annotated" start:
• Amo99_74, Ayotoya_49, BetterKatz_49, Bock_49, Brylie_49, Chop_49, Clawz_73, ColdSoup_74, DelRio_50, DonTron_73, Dori_65, Francois_48, GrandSlam_49, Grumio_73, Hamood_49, Jollymon_73, KingstonB_74, Makar_74, Mao1_67, Mask_65, Mulch_49, Nadeem_49, Parada_49, Phayonce_49, Pimento_50, Purplicious_72, Soos_69, Stillion_73, Sting_72, TPA4_48,

Summary by start number:

Start 27:
• Found in 2 of 115 (1.7%) of genes in pham
• Manual Annotations of this start: 1 of 96
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Hibiscus_46 (DY),

Start 28:
• Found in 4 of 115 (3.5%) of genes in pham
• Manual Annotations of this start: 2 of 96
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Reyja_45 (DY), Tarzan_45 (DY),

Start 31:
• Found in 41 of 115 (35.7%) of genes in pham
• Manual Annotations of this start: 5 of 96
• Called 12.2% of time when present
• Phage (with cluster) where this start called: Antonio_52 (CZ1), Attis_47 (CZ2), Kita_53 (CZ1), LordFarquaad_49 (CZ2), SoilAssassin_47 (CZ2),

Start 35:
• Found in 58 of 115 (50.4%) of genes in pham
• Manual Annotations of this start: 8 of 96
• Called 13.8% of time when present
• Phage (with cluster) where this start called: BatStarr_52 (CZ1), Herod_52 (CZ1), Neobush_52 (CZ1), Nymphadora_53 (CZ1), Suscepit_52 (CZ1), Tayonia_52 (CZ1), Trumpet_52 (CZ1), Zameen_52 (CZ1),

Start 42:
• Found in 20 of 115 (17.4%) of genes in pham
• Manual Annotations of this start: 17 of 96
• Called 85.0% of time when present
• Phage (with cluster) where this start called: Ayotoya_49 (DI), BetterKatz_49 (DI), Bock_49 (DI), Brylie_49 (DI), Chop_49 (DI), DelRio_50 (DI), Dori_65 (AD), Francois_48 (DI), GrandSlam_49 (DI), Hamood_49 (DI), Mao1_67 (AD), Mask_65 (AD), Mulch_49 (DI), Nadeem_49 (DI), Parada_49 (DI), Phayonce_49 (P5), Pimento_50 (DI),

Start 44:
• Found in 12 of 115 (10.4%) of genes in pham

• Manual Annotations of this start: 5 of 96
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Amo99_74 (CP), Clawz_73 (CP), ColdSoup_74 (CP), DonTron_73 (CP), Grumio_73 (CP), Jollymon_73 (CP), KingstonB_74 (CP), Makar_74 (CP), Purplicious_72 (CP), Soos_69 (CP), Stillion_73 (CP), Sting_72 (CP),

Start 45:
• Found in 2 of 115 (1.7%) of genes in pham
• No Manual Annotations of this start.
• Called 50.0% of time when present
• Phage (with cluster) where this start called: TPA4_48 (singleton),

Start 46:
• Found in 85 of 115 (73.9%) of genes in pham
• Manual Annotations of this start: 58 of 96
• Called 81.2% of time when present
• Phage (with cluster) where this start called: AlumE_52 (CZ1), Angelique_52 (CY1), ArchiDore_49 (DW), BaxterFox_53 (CZ3), BeeGee_58 (CY5), Bialota_50 (CZ1), BoyNamedSue_52 (CZ1), Bradissa_49 (CY1), Bridgette_52 (FA), Bunnybear_45 (CZ), Cashline_50 (CY6), ChuckDuck_50 (FA), Confidence_52 (CY1), Constance_50 (FA), DumpsterDude_51 (DW), EMsquaredA_50 (CY1), EdnaMode_46 (CZ2), EnalisNailo_49 (CY1), Eudoria_52 (CZ1), Eviarto_53 (CZ1), Farewell_70 (AF), Floral_50 (CY1), GlobiWarming_52 (FA), Heinz_45 (DY), Henrique_50 (FA), HotPotato_50 (FA), Hugley_49 (CZ1), Hyzer_58 (CZ1), IdentityCrisis_45 (AJ), Jablanski_53 (CY3), Jojo24_44 (DY), Judy_53 (FA), KayMoney_50 (FA), Lilas_51 (CY1), LilyBell_51 (FA), LittleRon_47 (FA), Madavieve_47 (CZ1), Madeline_50 (CZ1), Malibo_53 (DW), Manasvini_53 (CZ1), Maridalia_53 (CZ1), Marteena_49 (CY1), NidoQ_47 (FA), NikkiHotWheels_51 (FA), PantheRoc_53 (CZ3), PeggyLeg03_50 (FA), Pickett_45 (CZ2), Pollux_52 (CY1), Polly_49 (CZ1), Posh_56 (CY4), Pucara_47 (FA), Pytheas_53 (CY3), RavenCo17_50 (CZ8), RootBeer_40 (FA), Ruthy_49 (DW), Santhid_44 (DY), Sparky_69 (AF), ThankyouJordi_51 (CZ1), Thimann_50 (CZ4), TimTam_53 (CZ1), Tonitrus_60 (singleton), Vasanti_49 (CZ2), WST1_46 (AJ), WelcomeAyanna_51 (CZ1), Wrigley_58 (CY4), Yeet412_47 (CZ2), Yeezy_50 (CZ3), Zirinka_49 (CZ1), Zodiariah_51 (DW),

Summary by clusters:

There are 21 clusters represented in this pham: CY3, CZ8, AJ, CY6, CY5, DI, CZ2, CZ3, CZ1, CY1, CZ4, FA, CY4, DY, CZ, DW, singleton, CP, AF, P5, AD,

Info for manual annotations of cluster AD:
•Start number 42 was manually annotated 3 times for cluster AD.

Info for manual annotations of cluster AF:
•Start number 46 was manually annotated 2 times for cluster AF.

Info for manual annotations of cluster AJ:
•Start number 46 was manually annotated 1 time for cluster AJ.

Info for manual annotations of cluster CP:
•Start number 44 was manually annotated 5 times for cluster CP.

Info for manual annotations of cluster CY1:
•Start number 46 was manually annotated 9 times for cluster CY1.

Info for manual annotations of cluster CY3:
•Start number 46 was manually annotated 2 times for cluster CY3.

Info for manual annotations of cluster CY4:
•Start number 46 was manually annotated 2 times for cluster CY4.

Info for manual annotations of cluster CY5:
•Start number 46 was manually annotated 1 time for cluster CY5.

Info for manual annotations of cluster CY6:
•Start number 46 was manually annotated 1 time for cluster CY6.

Info for manual annotations of cluster CZ:
•Start number 46 was manually annotated 1 time for cluster CZ.

Info for manual annotations of cluster CZ1:
•Start number 31 was manually annotated 2 times for cluster CZ1.
•Start number 35 was manually annotated 8 times for cluster CZ1.
•Start number 46 was manually annotated 13 times for cluster CZ1.

Info for manual annotations of cluster CZ2:
•Start number 31 was manually annotated 3 times for cluster CZ2.
•Start number 46 was manually annotated 4 times for cluster CZ2.

Info for manual annotations of cluster CZ3:
•Start number 46 was manually annotated 3 times for cluster CZ3.

Info for manual annotations of cluster CZ4:
•Start number 46 was manually annotated 1 time for cluster CZ4.

Info for manual annotations of cluster CZ8:
•Start number 46 was manually annotated 1 time for cluster CZ8.

Info for manual annotations of cluster DI:
•Start number 42 was manually annotated 13 times for cluster DI.

Info for manual annotations of cluster DW:
•Start number 46 was manually annotated 5 times for cluster DW.

Info for manual annotations of cluster DY:
•Start number 27 was manually annotated 1 time for cluster DY.
•Start number 28 was manually annotated 2 times for cluster DY.
•Start number 46 was manually annotated 3 times for cluster DY.

Info for manual annotations of cluster FA:
•Start number 46 was manually annotated 8 times for cluster FA.

Info for manual annotations of cluster P5:
•Start number 42 was manually annotated 1 time for cluster P5.

Gene Information:

Gene: AlumE_52 Start: 37713, Stop: 38051, Start Num: 46
Candidate Starts for AlumE_52:
(Start: 35 @37653 has 8 MA's), (Start: 46 @37713 has 58 MA's), (49, 37746), (50, 37752), (53, 37818), (54, 37821), (56, 37851), (60, 37890), (65, 37947),

Gene: Amo99_74 Start: 48498, Stop: 48875, Start Num: 44
Candidate Starts for Amo99_74:
(Start: 44 @48498 has 5 MA's), (56, 48642), (57, 48651), (61, 48684), (62, 48690), (65, 48738), (69, 48795),

Gene: Angelique_52 Start: 38928, Stop: 39269, Start Num: 46
Candidate Starts for Angelique_52:
(19, 38796), (Start: 31 @38847 has 5 MA's), (Start: 35 @38868 has 8 MA's), (Start: 46 @38928 has 58 MA's), (49, 38961), (50, 38967), (54, 39036), (56, 39066), (61, 39108), (65, 39162),

Gene: Antonio_52 Start: 36902, Stop: 37324, Start Num: 31
Candidate Starts for Antonio_52:
(Start: 31 @36902 has 5 MA's), (Start: 35 @36923 has 8 MA's), (43, 36968), (Start: 46 @36983 has 58 MA's), (49, 37016), (50, 37022), (54, 37091), (61, 37163), (65, 37217),

Gene: ArchiDore_49 Start: 38018, Stop: 38356, Start Num: 46
Candidate Starts for ArchiDore_49:
(Start: 31 @37937 has 5 MA's), (34, 37946), (Start: 35 @37958 has 8 MA's), (39, 37973), (Start: 42 @37982 has 17 MA's), (Start: 46 @38018 has 58 MA's), (49, 38051), (53, 38123), (54, 38126), (55, 38150), (56, 38156), (60, 38195), (65, 38252),

Gene: Attis_47 Start: 34035, Stop: 34457, Start Num: 31
Candidate Starts for Attis_47:
(Start: 31 @34035 has 5 MA's), (Start: 35 @34056 has 8 MA's), (Start: 46 @34116 has 58 MA's), (49, 34149), (50, 34155), (54, 34224), (61, 34296), (65, 34350),

Gene: Ayotoya_49 Start: 36009, Stop: 36353, Start Num: 42
Candidate Starts for Ayotoya_49:
(8, 35574), (9, 35766), (13, 35799), (Start: 42 @36009 has 17 MA's), (47, 36072), (51, 36150), (52, 36153), (55, 36192), (61, 36234), (63, 36252), (67, 36336),

Gene: BatStarr_52 Start: 38896, Stop: 39297, Start Num: 35
Candidate Starts for BatStarr_52:
(Start: 35 @38896 has 8 MA's), (Start: 46 @38956 has 58 MA's), (49, 38989), (50, 38995), (54, 39064), (56, 39094), (61, 39136), (65, 39190),

Gene: BaxterFox_53 Start: 38788, Stop: 39126, Start Num: 46
Candidate Starts for BaxterFox_53:
(Start: 46 @38788 has 58 MA's), (49, 38821), (50, 38827), (53, 38893), (54, 38896), (56, 38926), (60, 38965), (65, 39022),

Gene: BeeGee_58 Start: 38868, Stop: 39209, Start Num: 46
Candidate Starts for BeeGee_58:

(Start: 31 @38787 has 5 MA's), (Start: 35 @38808 has 8 MA's), (Start: 46 @38868 has 58 MA's), (49, 38901), (50, 38907), (51, 38961), (54, 38976), (56, 39006), (61, 39048), (65, 39102),

Gene: BetterKatz_49 Start: 35495, Stop: 35839, Start Num: 42
Candidate Starts for BetterKatz_49:
(1, 34529), (2, 34556), (3, 34568), (4, 34838), (5, 34940), (6, 34976), (8, 35048), (9, 35240), (13, 35273), (Start: 42 @35495 has 17 MA's), (47, 35558), (51, 35636), (52, 35639), (55, 35678), (61, 35720), (63, 35738), (67, 35822),

Gene: Bialota_50 Start: 37615, Stop: 37956, Start Num: 46
Candidate Starts for Bialota_50:
(Start: 31 @37534 has 5 MA's), (Start: 35 @37555 has 8 MA's), (Start: 46 @37615 has 58 MA's), (49, 37648), (50, 37654), (54, 37723), (61, 37795), (65, 37849),

Gene: Bock_49 Start: 35232, Stop: 35576, Start Num: 42
Candidate Starts for Bock_49:
(8, 34797), (9, 34989), (13, 35022), (Start: 42 @35232 has 17 MA's), (45, 35262), (47, 35295), (51, 35373), (52, 35376), (55, 35415), (61, 35457), (63, 35475), (67, 35559),

Gene: BoyNamedSue_52 Start: 37713, Stop: 38051, Start Num: 46
Candidate Starts for BoyNamedSue_52:
(Start: 35 @37653 has 8 MA's), (Start: 46 @37713 has 58 MA's), (49, 37746), (50, 37752), (53, 37818), (54, 37821), (56, 37851), (60, 37890), (65, 37947),

Gene: Bradissa_49 Start: 38078, Stop: 38419, Start Num: 46
Candidate Starts for Bradissa_49:
(Start: 35 @38018 has 8 MA's), (Start: 46 @38078 has 58 MA's), (49, 38111), (50, 38117), (54, 38186), (56, 38216), (61, 38258), (65, 38312),

Gene: Bridgette_52 Start: 33338, Stop: 33688, Start Num: 46
Candidate Starts for Bridgette_52:
(26, 33215), (Start: 46 @33338 has 58 MA's), (55, 33464), (71, 33680),

Gene: Brylie_49 Start: 35279, Stop: 35623, Start Num: 42
Candidate Starts for Brylie_49:
(8, 34844), (9, 35036), (13, 35069), (Start: 42 @35279 has 17 MA's), (47, 35342), (51, 35420), (52, 35423), (55, 35462), (63, 35522), (67, 35606),

Gene: Bunnybear_45 Start: 35410, Stop: 35751, Start Num: 46
Candidate Starts for Bunnybear_45:
(Start: 31 @35329 has 5 MA's), (Start: 35 @35350 has 8 MA's), (Start: 46 @35410 has 58 MA's), (49, 35443), (50, 35449), (53, 35515), (54, 35518), (56, 35548), (61, 35590), (65, 35644),

Gene: Cashline_50 Start: 38219, Stop: 38560, Start Num: 46
Candidate Starts for Cashline_50:
(21, 38072), (Start: 31 @38138 has 5 MA's), (33, 38144), (Start: 35 @38159 has 8 MA's), (Start: 46 @38219 has 58 MA's), (49, 38252), (50, 38258), (51, 38312), (54, 38327), (56, 38357), (61, 38399), (65, 38453),

Gene: Chop_49 Start: 35762, Stop: 36106, Start Num: 42
Candidate Starts for Chop_49:
(8, 35321), (9, 35513), (13, 35546), (Start: 42 @35762 has 17 MA's), (47, 35825), (51, 35903), (52, 35906), (55, 35945), (61, 35987), (63, 36005), (67, 36089),

Gene: ChuckDuck_50 Start: 32348, Stop: 32698, Start Num: 46
Candidate Starts for ChuckDuck_50:
(26, 32234), (Start: 46 @32348 has 58 MA's), (55, 32474), (71, 32690),

Gene: Clawz_73 Start: 48376, Stop: 48753, Start Num: 44
Candidate Starts for Clawz_73:
(23, 48235), (Start: 35 @48319 has 8 MA's), (Start: 44 @48376 has 5 MA's), (52, 48478), (57, 48529), (61, 48562), (62, 48568), (65, 48616), (69, 48673),

Gene: ColdSoup_74 Start: 48579, Stop: 48956, Start Num: 44
Candidate Starts for ColdSoup_74:
(Start: 44 @48579 has 5 MA's), (56, 48723), (57, 48732), (61, 48765), (62, 48771), (65, 48819), (69, 48876),

Gene: Confidence_52 Start: 36375, Stop: 36716, Start Num: 46
Candidate Starts for Confidence_52:
(Start: 31 @36294 has 5 MA's), (Start: 35 @36315 has 8 MA's), (Start: 46 @36375 has 58 MA's), (49, 36408), (50, 36414), (51, 36468), (54, 36483), (56, 36513), (61, 36555), (65, 36609),

Gene: Constance_50 Start: 32973, Stop: 33323, Start Num: 46
Candidate Starts for Constance_50:
(26, 32850), (Start: 46 @32973 has 58 MA's), (55, 33099), (71, 33315),

Gene: DelRio_50 Start: 36473, Stop: 36817, Start Num: 42
Candidate Starts for DelRio_50:
(Start: 42 @36473 has 17 MA's), (47, 36536), (51, 36614), (52, 36617), (55, 36656), (61, 36698), (63, 36716), (67, 36800),

Gene: DonTron_73 Start: 48616, Stop: 48993, Start Num: 44
Candidate Starts for DonTron_73:
(Start: 44 @48616 has 5 MA's), (56, 48760), (57, 48769), (61, 48802), (62, 48808), (65, 48856), (69, 48913),

Gene: Dori_65 Start: 51304, Stop: 51642, Start Num: 42
Candidate Starts for Dori_65:
(Start: 42 @51304 has 17 MA's), (48, 51373), (49, 51376), (61, 51520), (62, 51526),

Gene: DumpsterDude_51 Start: 40243, Stop: 40581, Start Num: 46
Candidate Starts for DumpsterDude_51:
(Start: 31 @40162 has 5 MA's), (34, 40171), (Start: 35 @40183 has 8 MA's), (39, 40198), (Start: 42 @40207 has 17 MA's), (Start: 46 @40243 has 58 MA's), (49, 40276), (53, 40348), (54, 40351), (55, 40375), (56, 40381), (60, 40420), (61, 40423), (65, 40477),

Gene: EMsquaredA_50 Start: 36879, Stop: 37220, Start Num: 46
Candidate Starts for EMsquaredA_50:
(Start: 35 @36819 has 8 MA's), (Start: 46 @36879 has 58 MA's), (49, 36912), (50, 36918), (54, 36987), (56, 37017), (61, 37059), (65, 37113),

Gene: EdnaMode_46 Start: 32804, Stop: 33145, Start Num: 46
Candidate Starts for EdnaMode_46:
(Start: 31 @32723 has 5 MA's), (Start: 35 @32744 has 8 MA's), (Start: 46 @32804 has 58 MA's), (49, 32837), (50, 32843), (54, 32912), (61, 32984), (65, 33038),

Gene: EnalisNailo_49 Start: 37591, Stop: 37932, Start Num: 46
Candidate Starts for EnalisNailo_49:
(Start: 35 @37531 has 8 MA's), (Start: 46 @37591 has 58 MA's), (49, 37624), (50, 37630), (51, 37684), (53, 37696), (54, 37699), (56, 37729), (61, 37771), (65, 37825),

Gene: Eudoria_52 Start: 36983, Stop: 37324, Start Num: 46
Candidate Starts for Eudoria_52:
(Start: 31 @36902 has 5 MA's), (Start: 35 @36923 has 8 MA's), (43, 36968), (Start: 46 @36983 has 58 MA's), (49, 37016), (50, 37022), (54, 37091), (61, 37163), (65, 37217),

Gene: Eviarto_53 Start: 38931, Stop: 39272, Start Num: 46
Candidate Starts for Eviarto_53:
(Start: 35 @38871 has 8 MA's), (Start: 46 @38931 has 58 MA's), (49, 38964), (50, 38970), (54, 39039), (56, 39069), (61, 39111), (65, 39165),

Gene: Farewell_70 Start: 47627, Stop: 47992, Start Num: 46
Candidate Starts for Farewell_70:
(Start: 46 @47627 has 58 MA's), (58, 47789), (65, 47873), (70, 47948),

Gene: Floral_50 Start: 38339, Stop: 38680, Start Num: 46
Candidate Starts for Floral_50:
(Start: 35 @38279 has 8 MA's), (Start: 46 @38339 has 58 MA's), (49, 38372), (50, 38378), (51, 38432), (53, 38444), (54, 38447), (56, 38477), (61, 38519), (65, 38573),

Gene: Francois_48 Start: 35275, Stop: 35625, Start Num: 42
Candidate Starts for Francois_48:
(Start: 42 @35275 has 17 MA's), (47, 35344), (51, 35422), (52, 35425), (55, 35464), (63, 35524), (67, 35608),

Gene: GlobiWarming_52 Start: 32737, Stop: 33087, Start Num: 46
Candidate Starts for GlobiWarming_52:
(20, 32554), (26, 32614), (Start: 46 @32737 has 58 MA's), (55, 32863), (71, 33079),

Gene: GrandSlam_49 Start: 35762, Stop: 36106, Start Num: 42
Candidate Starts for GrandSlam_49:
(8, 35321), (9, 35513), (13, 35546), (Start: 42 @35762 has 17 MA's), (47, 35825), (51, 35903), (52, 35906), (55, 35945), (61, 35987), (63, 36005), (67, 36089),

Gene: Grumio_73 Start: 48057, Stop: 48434, Start Num: 44
Candidate Starts for Grumio_73:
(Start: 44 @48057 has 5 MA's), (56, 48201), (57, 48210), (61, 48243), (62, 48249), (65, 48297), (69, 48354),

Gene: Hamood_49 Start: 35762, Stop: 36106, Start Num: 42
Candidate Starts for Hamood_49:
(8, 35321), (9, 35513), (13, 35546), (Start: 42 @35762 has 17 MA's), (47, 35825), (51, 35903), (52, 35906), (55, 35945), (61, 35987), (63, 36005), (67, 36089),

Gene: Heinz_45 Start: 29468, Stop: 29800, Start Num: 46
Candidate Starts for Heinz_45:
(Start: 27 @29363 has 1 MA's), (Start: 46 @29468 has 58 MA's), (61, 29648), (65, 29702), (66, 29729), (69, 29759),

Gene: Henrique_50 Start: 32220, Stop: 32570, Start Num: 46
Candidate Starts for Henrique_50:
(26, 32097), (Start: 46 @32220 has 58 MA's), (55, 32346), (71, 32562),

Gene: Herod_52 Start: 38896, Stop: 39297, Start Num: 35
Candidate Starts for Herod_52:
(Start: 35 @38896 has 8 MA's), (Start: 46 @38956 has 58 MA's), (49, 38989), (50, 38995), (54, 39064),
(56, 39094), (61, 39136), (65, 39190),

Gene: Hibiscus_46 Start: 29312, Stop: 29749, Start Num: 27
Candidate Starts for Hibiscus_46:
(Start: 27 @29312 has 1 MA's), (Start: 46 @29417 has 58 MA's), (61, 29597), (65, 29651), (66, 29678),
(69, 29708),

Gene: HotPotato_50 Start: 33385, Stop: 33735, Start Num: 46
Candidate Starts for HotPotato_50:
(10, 33115), (12, 33133), (26, 33262), (Start: 46 @33385 has 58 MA's), (55, 33511), (71, 33727),

Gene: Hugley_49 Start: 38955, Stop: 39296, Start Num: 46
Candidate Starts for Hugley_49:
(Start: 35 @38895 has 8 MA's), (Start: 46 @38955 has 58 MA's), (49, 38988), (50, 38994), (54, 39063),
(56, 39093), (61, 39135), (65, 39189),

Gene: Hyzer_58 Start: 40287, Stop: 40625, Start Num: 46
Candidate Starts for Hyzer_58:
(11, 40050), (17, 40089), (Start: 46 @40287 has 58 MA's), (49, 40320), (50, 40326), (53, 40392), (54,
40395), (56, 40425), (60, 40464), (65, 40521),

Gene: IdentityCrisis_45 Start: 29783, Stop: 30145, Start Num: 46
Candidate Starts for IdentityCrisis_45:
(30, 29684), (40, 29741), (41, 29744), (Start: 46 @29783 has 58 MA's), (52, 29888), (53, 29897), (56,
29930), (58, 29942), (64, 30002), (65, 30026), (66, 30053),

Gene: Jablanski_53 Start: 39971, Stop: 40309, Start Num: 46
Candidate Starts for Jablanski_53:
(Start: 31 @39890 has 5 MA's), (Start: 35 @39911 has 8 MA's), (Start: 46 @39971 has 58 MA's), (53,
40076), (54, 40079), (55, 40103), (56, 40109), (60, 40148), (65, 40205),

Gene: Jojo24_44 Start: 30101, Stop: 30433, Start Num: 46
Candidate Starts for Jojo24_44:
(Start: 28 @29999 has 2 MA's), (36, 30053), (Start: 46 @30101 has 58 MA's), (61, 30281), (65, 30335),
(66, 30362), (69, 30392),

Gene: Jollymon_73 Start: 48579, Stop: 48956, Start Num: 44
Candidate Starts for Jollymon_73:
(Start: 44 @48579 has 5 MA's), (56, 48723), (57, 48732), (61, 48765), (62, 48771), (65, 48819), (69,
48876),

Gene: Judy_53 Start: 33805, Stop: 34155, Start Num: 46
Candidate Starts for Judy_53:
(20, 33622), (26, 33682), (Start: 46 @33805 has 58 MA's), (55, 33931), (71, 34147),

Gene: KayMoney_50 Start: 32316, Stop: 32666, Start Num: 46
Candidate Starts for KayMoney_50:
(26, 32193), (Start: 46 @32316 has 58 MA's), (55, 32442), (71, 32658),

Gene: KingstonB_74 Start: 48054, Stop: 48431, Start Num: 44
Candidate Starts for KingstonB_74:
(Start: 44 @48054 has 5 MA's), (56, 48198), (57, 48207), (61, 48240), (62, 48246), (65, 48294), (69, 48351),

Gene: Kita_53 Start: 36911, Stop: 37333, Start Num: 31
Candidate Starts for Kita_53:
(Start: 31 @36911 has 5 MA's), (Start: 35 @36932 has 8 MA's), (43, 36977), (Start: 46 @36992 has 58 MA's), (49, 37025), (50, 37031), (54, 37100), (61, 37172), (65, 37226),

Gene: Lilas_51 Start: 39323, Stop: 39664, Start Num: 46
Candidate Starts for Lilas_51:
(Start: 35 @39263 has 8 MA's), (Start: 46 @39323 has 58 MA's), (49, 39356), (50, 39362), (54, 39431), (56, 39461), (61, 39503), (65, 39557),

Gene: LilyBell_51 Start: 32964, Stop: 33314, Start Num: 46
Candidate Starts for LilyBell_51:
(26, 32844), (Start: 46 @32964 has 58 MA's), (71, 33306),

Gene: LittleRon_47 Start: 31913, Stop: 32263, Start Num: 46
Candidate Starts for LittleRon_47:
(26, 31790), (Start: 46 @31913 has 58 MA's), (55, 32039), (71, 32255),

Gene: LordFarquaad_49 Start: 34016, Stop: 34438, Start Num: 31
Candidate Starts for LordFarquaad_49:
(Start: 31 @34016 has 5 MA's), (Start: 35 @34037 has 8 MA's), (Start: 46 @34097 has 58 MA's), (49, 34130), (50, 34136), (54, 34205), (61, 34277), (65, 34331),

Gene: Madavieve_47 Start: 36324, Stop: 36668, Start Num: 46
Candidate Starts for Madavieve_47:
(Start: 31 @36243 has 5 MA's), (Start: 35 @36264 has 8 MA's), (Start: 46 @36324 has 58 MA's), (49, 36363), (50, 36369), (53, 36435), (54, 36438), (60, 36507), (65, 36564),

Gene: Madeline_50 Start: 37918, Stop: 38256, Start Num: 46
Candidate Starts for Madeline_50:
(Start: 31 @37837 has 5 MA's), (Start: 35 @37858 has 8 MA's), (Start: 46 @37918 has 58 MA's), (49, 37951), (50, 37957), (54, 38026), (56, 38056), (60, 38095), (65, 38152),

Gene: Makar_74 Start: 48403, Stop: 48780, Start Num: 44
Candidate Starts for Makar_74:
(23, 48262), (Start: 35 @48346 has 8 MA's), (Start: 44 @48403 has 5 MA's), (57, 48556), (61, 48589), (62, 48595), (65, 48643), (69, 48700),

Gene: Malibo_53 Start: 37659, Stop: 37997, Start Num: 46
Candidate Starts for Malibo_53:
(Start: 31 @37578 has 5 MA's), (Start: 35 @37599 has 8 MA's), (Start: 46 @37659 has 58 MA's), (49, 37692), (53, 37764), (54, 37767), (55, 37791), (56, 37797), (60, 37836), (65, 37893),

Gene: Manasvini_53 Start: 37007, Stop: 37348, Start Num: 46

Candidate Starts for Manasvini_53:
(Start: 31 @36926 has 5 MA's), (Start: 35 @36947 has 8 MA's), (43, 36992), (Start: 46 @37007 has 58 MA's), (49, 37040), (50, 37046), (54, 37115), (61, 37187), (65, 37241),

Gene: Mao1_67 Start: 49765, Stop: 50103, Start Num: 42
Candidate Starts for Mao1_67:
(25, 49660), (Start: 42 @49765 has 17 MA's), (48, 49834), (49, 49837), (61, 49981), (62, 49987),

Gene: Maridalia_53 Start: 37156, Stop: 37497, Start Num: 46
Candidate Starts for Maridalia_53:
(Start: 31 @37075 has 5 MA's), (Start: 35 @37096 has 8 MA's), (Start: 46 @37156 has 58 MA's), (49, 37189), (50, 37195), (53, 37261), (54, 37264), (56, 37294), (61, 37336), (65, 37390),

Gene: Marteena_49 Start: 36879, Stop: 37220, Start Num: 46
Candidate Starts for Marteena_49:
(Start: 35 @36819 has 8 MA's), (Start: 46 @36879 has 58 MA's), (49, 36912), (50, 36918), (54, 36987), (56, 37017), (61, 37059), (65, 37113),

Gene: Mask_65 Start: 52047, Stop: 52385, Start Num: 42
Candidate Starts for Mask_65:
(Start: 42 @52047 has 17 MA's), (48, 52116), (49, 52119), (61, 52263), (62, 52269),

Gene: Mulch_49 Start: 35279, Stop: 35623, Start Num: 42
Candidate Starts for Mulch_49:
(8, 34844), (9, 35036), (13, 35069), (Start: 42 @35279 has 17 MA's), (47, 35342), (51, 35420), (52, 35423), (55, 35462), (63, 35522), (67, 35606),

Gene: Nadeem_49 Start: 35279, Stop: 35623, Start Num: 42
Candidate Starts for Nadeem_49:
(8, 34844), (9, 35036), (13, 35069), (Start: 42 @35279 has 17 MA's), (47, 35342), (51, 35420), (52, 35423), (55, 35462), (63, 35522), (67, 35606),

Gene: Neobush_52 Start: 36917, Stop: 37318, Start Num: 35
Candidate Starts for Neobush_52:
(Start: 31 @36896 has 5 MA's), (Start: 35 @36917 has 8 MA's), (43, 36962), (Start: 46 @36977 has 58 MA's), (49, 37010), (50, 37016), (54, 37085), (61, 37157), (65, 37211),

Gene: NidoQ_47 Start: 32420, Stop: 32770, Start Num: 46
Candidate Starts for NidoQ_47:
(Start: 46 @32420 has 58 MA's), (71, 32762),

Gene: NikkiHotWheels_51 Start: 32296, Stop: 32646, Start Num: 46
Candidate Starts for NikkiHotWheels_51:
(26, 32173), (Start: 46 @32296 has 58 MA's), (55, 32422), (71, 32638),

Gene: Nymphadora_53 Start: 38895, Stop: 39296, Start Num: 35
Candidate Starts for Nymphadora_53:
(Start: 35 @38895 has 8 MA's), (Start: 46 @38955 has 58 MA's), (49, 38988), (50, 38994), (54, 39063), (56, 39093), (61, 39135), (65, 39189),

Gene: PantheRoc_53 Start: 37764, Stop: 38102, Start Num: 46
Candidate Starts for PantheRoc_53:

(Start: 31 @37683 has 5 MA's), (Start: 35 @37704 has 8 MA's), (Start: 46 @37764 has 58 MA's), (49, 37797), (50, 37803), (53, 37869), (54, 37872), (56, 37902), (60, 37941), (65, 37998),

Gene: Parada_49 Start: 35279, Stop: 35623, Start Num: 42
Candidate Starts for Parada_49:
(8, 34844), (9, 35036), (13, 35069), (Start: 42 @35279 has 17 MA's), (47, 35342), (51, 35420), (52, 35423), (55, 35462), (63, 35522), (67, 35606),

Gene: PeggyLeg03_50 Start: 32983, Stop: 33333, Start Num: 46
Candidate Starts for PeggyLeg03_50:
(20, 32800), (26, 32860), (Start: 46 @32983 has 58 MA's), (55, 33109), (71, 33325),

Gene: Phayonce_49 Start: 35927, Stop: 36265, Start Num: 42
Candidate Starts for Phayonce_49:
(25, 35822), (Start: 42 @35927 has 17 MA's), (48, 35996), (49, 35999), (61, 36143), (62, 36149),

Gene: Pickett_45 Start: 31280, Stop: 31621, Start Num: 46
Candidate Starts for Pickett_45:
(Start: 31 @31199 has 5 MA's), (Start: 35 @31220 has 8 MA's), (Start: 46 @31280 has 58 MA's), (49, 31313), (50, 31319), (54, 31388), (61, 31460), (65, 31514),

Gene: Pimento_50 Start: 34876, Stop: 35220, Start Num: 42
Candidate Starts for Pimento_50:
(8, 34435), (9, 34627), (13, 34660), (Start: 42 @34876 has 17 MA's), (47, 34939), (51, 35017), (52, 35020), (55, 35059), (61, 35101), (63, 35119), (67, 35203),

Gene: Pollux_52 Start: 38339, Stop: 38680, Start Num: 46
Candidate Starts for Pollux_52:
(Start: 35 @38279 has 8 MA's), (Start: 46 @38339 has 58 MA's), (49, 38372), (50, 38378), (51, 38432), (53, 38444), (54, 38447), (56, 38477), (61, 38519), (65, 38573),

Gene: Polly_49 Start: 36426, Stop: 36767, Start Num: 46
Candidate Starts for Polly_49:
(Start: 31 @36345 has 5 MA's), (Start: 35 @36366 has 8 MA's), (43, 36411), (Start: 46 @36426 has 58 MA's), (49, 36459), (50, 36465), (54, 36534), (61, 36606), (65, 36660),

Gene: Posh_56 Start: 39701, Stop: 40042, Start Num: 46
Candidate Starts for Posh_56:
(22, 39548), (Start: 31 @39620 has 5 MA's), (Start: 35 @39641 has 8 MA's), (Start: 46 @39701 has 58 MA's), (49, 39734), (50, 39740), (51, 39794), (54, 39809), (56, 39839), (61, 39881), (65, 39935),

Gene: Pucara_47 Start: 32588, Stop: 32938, Start Num: 46
Candidate Starts for Pucara_47:
(20, 32405), (26, 32465), (Start: 46 @32588 has 58 MA's), (55, 32714), (71, 32930),

Gene: Purplicious_72 Start: 47822, Stop: 48199, Start Num: 44
Candidate Starts for Purplicious_72:
(Start: 44 @47822 has 5 MA's), (56, 47966), (57, 47975), (61, 48008), (62, 48014), (65, 48062), (69, 48119),

Gene: Pytheas_53 Start: 39970, Stop: 40308, Start Num: 46
Candidate Starts for Pytheas_53:

(Start: 31 @39889 has 5 MA's), (Start: 35 @39910 has 8 MA's), (Start: 46 @39970 has 58 MA's), (53, 40075), (54, 40078), (55, 40102), (56, 40108), (60, 40147), (65, 40204),

Gene: RavenCo17_50 Start: 37160, Stop: 37501, Start Num: 46
Candidate Starts for RavenCo17_50:
(Start: 35 @37100 has 8 MA's), (Start: 46 @37160 has 58 MA's), (50, 37199), (54, 37268), (56, 37298), (61, 37340), (65, 37394),

Gene: Reyja_45 Start: 30436, Stop: 30870, Start Num: 28
Candidate Starts for Reyja_45:
(Start: 28 @30436 has 2 MA's), (32, 30460), (37, 30496), (Start: 46 @30538 has 58 MA's), (50, 30577), (61, 30718), (65, 30772), (66, 30799), (69, 30829),

Gene: RootBeer_40 Start: 28714, Stop: 29064, Start Num: 46
Candidate Starts for RootBeer_40:
(7, 28189), (15, 28474), (26, 28588), (Start: 46 @28714 has 58 MA's), (55, 28840), (71, 29056),

Gene: Ruthy_49 Start: 37599, Stop: 37937, Start Num: 46
Candidate Starts for Ruthy_49:
(14, 37404), (Start: 31 @37518 has 5 MA's), (Start: 35 @37539 has 8 MA's), (Start: 46 @37599 has 58 MA's), (53, 37704), (54, 37707), (55, 37731), (56, 37737), (60, 37776), (65, 37833),

Gene: Santhid_44 Start: 28817, Stop: 29149, Start Num: 46
Candidate Starts for Santhid_44:
(Start: 28 @28724 has 2 MA's), (36, 28769), (Start: 46 @28817 has 58 MA's), (61, 28997), (65, 29051), (66, 29078), (69, 29108),

Gene: SoilAssassin_47 Start: 34034, Stop: 34456, Start Num: 31
Candidate Starts for SoilAssassin_47:
(Start: 31 @34034 has 5 MA's), (Start: 35 @34055 has 8 MA's), (Start: 46 @34115 has 58 MA's), (49, 34148), (50, 34154), (54, 34223), (61, 34295), (65, 34349),

Gene: Soos_69 Start: 47783, Stop: 48160, Start Num: 44
Candidate Starts for Soos_69:
(Start: 44 @47783 has 5 MA's), (56, 47927), (57, 47936), (61, 47969), (62, 47975), (65, 48023), (69, 48080),

Gene: Sparky_69 Start: 49221, Stop: 49586, Start Num: 46
Candidate Starts for Sparky_69:
(Start: 46 @49221 has 58 MA's), (58, 49383), (65, 49467), (70, 49542),

Gene: Stillion_73 Start: 48380, Stop: 48757, Start Num: 44
Candidate Starts for Stillion_73:
(Start: 44 @48380 has 5 MA's), (56, 48524), (57, 48533), (61, 48566), (62, 48572), (65, 48620), (69, 48677),

Gene: Sting_72 Start: 48222, Stop: 48599, Start Num: 44
Candidate Starts for Sting_72:
(Start: 44 @48222 has 5 MA's), (56, 48366), (57, 48375), (61, 48408), (62, 48414), (65, 48462), (69, 48519),

Gene: Suscepit_52 Start: 36924, Stop: 37325, Start Num: 35
Candidate Starts for Suscepit_52:

(Start: 31 @36903 has 5 MA's), (Start: 35 @36924 has 8 MA's), (43, 36969), (Start: 46 @36984 has 58 MA's), (49, 37017), (50, 37023), (54, 37092), (61, 37164), (65, 37218),

Gene: TPA4_48 Start: 36926, Stop: 37252, Start Num: 45
Candidate Starts for TPA4_48:
(Start: 31 @36851 has 5 MA's), (38, 36887), (45, 36926),

Gene: Tarzan_45 Start: 29828, Stop: 30262, Start Num: 28
Candidate Starts for Tarzan_45:
(24, 29789), (Start: 28 @29828 has 2 MA's), (32, 29852), (37, 29888), (Start: 46 @29930 has 58 MA's), (61, 30110), (65, 30164), (66, 30191), (69, 30221),

Gene: Tayonia_52 Start: 36923, Stop: 37324, Start Num: 35
Candidate Starts for Tayonia_52:
(Start: 31 @36902 has 5 MA's), (Start: 35 @36923 has 8 MA's), (43, 36968), (Start: 46 @36983 has 58 MA's), (49, 37016), (50, 37022), (54, 37091), (61, 37163), (65, 37217),

Gene: ThankyouJordi_51 Start: 38831, Stop: 39172, Start Num: 46
Candidate Starts for ThankyouJordi_51:
(19, 38699), (Start: 31 @38750 has 5 MA's), (33, 38756), (Start: 35 @38771 has 8 MA's), (Start: 46 @38831 has 58 MA's), (49, 38864), (50, 38870), (54, 38939), (56, 38969), (61, 39011), (65, 39065),

Gene: Thimann_50 Start: 35140, Stop: 35481, Start Num: 46
Candidate Starts for Thimann_50:
(16, 34921), (18, 34945), (29, 35050), (Start: 31 @35059 has 5 MA's), (33, 35065), (Start: 35 @35080 has 8 MA's), (39, 35095), (Start: 42 @35104 has 17 MA's), (Start: 46 @35140 has 58 MA's), (50, 35179), (54, 35248), (56, 35278), (61, 35320), (65, 35374),

Gene: TimTam_53 Start: 38955, Stop: 39296, Start Num: 46
Candidate Starts for TimTam_53:
(Start: 35 @38895 has 8 MA's), (Start: 46 @38955 has 58 MA's), (49, 38988), (50, 38994), (54, 39063), (56, 39093), (61, 39135), (65, 39189),

Gene: Tonitrus_60 Start: 44575, Stop: 44943, Start Num: 46
Candidate Starts for Tonitrus_60:
(Start: 46 @44575 has 58 MA's), (53, 44683), (54, 44686), (58, 44728), (59, 44737), (61, 44755), (68, 44860), (69, 44866),

Gene: Trumpet_52 Start: 36924, Stop: 37325, Start Num: 35
Candidate Starts for Trumpet_52:
(Start: 31 @36903 has 5 MA's), (Start: 35 @36924 has 8 MA's), (43, 36969), (Start: 46 @36984 has 58 MA's), (49, 37017), (50, 37023), (54, 37092), (61, 37164), (65, 37218),

Gene: Vasanti_49 Start: 33529, Stop: 33870, Start Num: 46
Candidate Starts for Vasanti_49:
(Start: 31 @33448 has 5 MA's), (33, 33454), (Start: 35 @33469 has 8 MA's), (Start: 46 @33529 has 58 MA's), (49, 33562), (50, 33568), (54, 33637), (56, 33667), (61, 33709), (65, 33763),

Gene: WST1_46 Start: 29640, Stop: 30002, Start Num: 46
Candidate Starts for WST1_46:
(30, 29541), (40, 29598), (41, 29601), (Start: 46 @29640 has 58 MA's), (53, 29754), (56, 29787), (58, 29799), (64, 29859), (65, 29883), (66, 29910),

Gene: WelcomeAyanna_51 Start: 38978, Stop: 39319, Start Num: 46
Candidate Starts for WelcomeAyanna_51:
(19, 38846), (Start: 31 @38897 has 5 MA's), (33, 38903), (Start: 35 @38918 has 8 MA's), (Start: 46 @38978 has 58 MA's), (49, 39011), (50, 39017), (54, 39086), (56, 39116), (61, 39158), (65, 39212),

Gene: Wrigley_58 Start: 39293, Stop: 39631, Start Num: 46
Candidate Starts for Wrigley_58:
(Start: 31 @39212 has 5 MA's), (Start: 35 @39233 has 8 MA's), (Start: 46 @39293 has 58 MA's), (53, 39398), (54, 39401), (55, 39425), (60, 39470), (65, 39527),

Gene: Yeet412_47 Start: 34116, Stop: 34457, Start Num: 46
Candidate Starts for Yeet412_47:
(Start: 31 @34035 has 5 MA's), (Start: 35 @34056 has 8 MA's), (Start: 46 @34116 has 58 MA's), (49, 34149), (50, 34155), (54, 34224), (61, 34296), (65, 34350),

Gene: Yeezy_50 Start: 35894, Stop: 36232, Start Num: 46
Candidate Starts for Yeezy_50:
(11, 35657), (Start: 46 @35894 has 58 MA's), (49, 35927), (53, 35999), (54, 36002), (55, 36026), (56, 36032), (60, 36071), (65, 36128),

Gene: Zameen_52 Start: 36923, Stop: 37324, Start Num: 35
Candidate Starts for Zameen_52:
(Start: 31 @36902 has 5 MA's), (Start: 35 @36923 has 8 MA's), (43, 36968), (Start: 46 @36983 has 58 MA's), (49, 37016), (50, 37022), (54, 37091), (61, 37163), (65, 37217),

Gene: Zirinka_49 Start: 37603, Stop: 37944, Start Num: 46
Candidate Starts for Zirinka_49:
(Start: 31 @37522 has 5 MA's), (Start: 35 @37543 has 8 MA's), (Start: 46 @37603 has 58 MA's), (49, 37636), (50, 37642), (54, 37711), (61, 37783), (65, 37837),

Gene: Zodiariah_51 Start: 39555, Stop: 39896, Start Num: 46
Candidate Starts for Zodiariah_51:
(Start: 31 @39474 has 5 MA's), (Start: 35 @39495 has 8 MA's), (39, 39510), (Start: 46 @39555 has 58 MA's), (49, 39588), (50, 39594), (53, 39660), (54, 39663), (56, 39693), (61, 39735), (65, 39789),