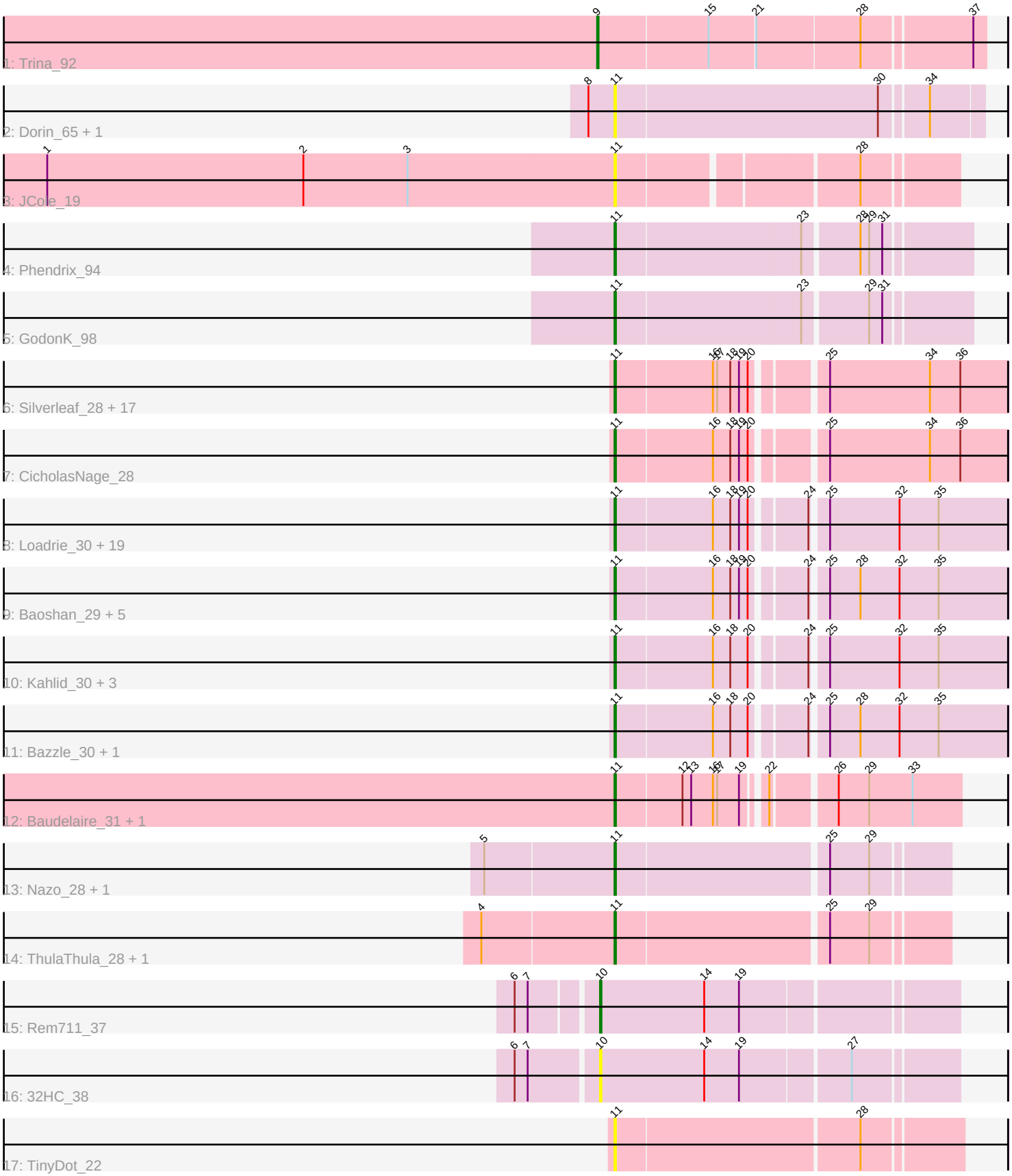
Pham 137908


1: Trina_92
2: Dorin_65 + 1
3: JCole_19
4: Phendrix_94
5: GodonK_98
6: Silverleaf_28 + 17
7: CicholasNage_28
8: Loadrie_30 + 19
9: Baoshan_29 + 5
10: Kahlid_30 + 3
11: Bazzle_30 + 1
12: Baudelaire_31 + 1
13: Nazo_28 + 1
14: ThulaThula_28 + 1
15: Rem711_37
16: 32HC_38
17: TinyDot_22

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 137908 Report

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

Pham number 137908 has 66 members, 10 are drafts.

Phages represented in each track:
• Track 1 : Trina_92
• Track 2 : Dorin_65, Francesca_65
• Track 3 : JCole_19
• Track 4 : Phendrix_94
• Track 5 : GodonK_98
• Track 6 : Silverleaf_28, Halena_28, Tyson_28, Zaria_28, AvadaKedavra_28, DirkDirk_28, JoeDirt_28, Rose5_28, Enceladus_28, OhShagHennessy_28, Wyatt2_28, Appletree2_28, Acquire49_28, Calm_28, MAckerman_28, UPIE_28, Wamburgrxpress_28, LeBron_28
• Track 7 : CicholasNage_28
• Track 8 : Loadrie_30, Gabriela_30, Zakai_30, LilDestine_30, BigCheese_30, Rumpelstiltskin_30, Hafay_30, Itos_30, DrSeegs_30, Breezona_30, Lewan_30, Winky_30, BobsGarage_30, GuuelaD_30, Gardann_30, Faith1_30, Netyap_30, Nicholasp3_30, Miley16_30, Crossroads_30
• Track 9 : Baoshan_29, ZhongYanYuan_29, Tourach_30, Finemlucis_30, Vetrix_30, Claus_30
• Track 10 : Kahlid_30, Wigglewiggle_30, Wilder_30, MkaliMitinis3_30
• Track 11 : Bazzle_30, Archie_30
• Track 12 : Baudelaire_31, Aegeus_31
• Track 13 : Nazo_28, BigNuz_28
• Track 14 : ThulaThula_28, Phayonce_28
• Track 15 : Rem711_37
• Track 16 : 32HC_38
• Track 17 : TinyDot_22

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

The start number called the most often in the published annotations is 11, it was called in 54 of the 56 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acquire49_28, Aegeus_31, Appletree2_28, Archie_30, AvadaKedavra_28, Baoshan_29, Baudelaire_31, Bazzle_30, BigCheese_30, BigNuz_28, BobsGarage_30, Breezona_30, Calm_28, CicholasNage_28, Claus_30,

Crossroads_30, DirkDirk_28, Dorin_65, DrSeegs_30, Enceladus_28, Faith1_30, Finemlucis_30, Francesca_65, Gabriela_30, Gardann_30, GodonK_98, GuuelaD_30, Hafay_30, Halena_28, Itos_30, JCole_19, JoeDirt_28, Kahlid_30, LeBron_28, Lewan_30, LilDestine_30, Loadrie_30, MAckerman_28, Miley16_30, MkaliMitinis3_30, Nazo_28, Netyap_30, Nicholasp3_30, OhShagHennessy_28, Phayonce_28, Phendrix_94, Rose5_28, Rumpelstiltskin_30, Silverleaf_28, ThulaThula_28, TinyDot_22, Tourach_30, Tyson_28, UPIE_28, Vetrix_30, Wamburgrxpress_28, Wigglewiggle_30, Wilder_30, Winky_30, Wyatt2_28, Zakai_30, Zaria_28, ZhongYanYuan_29,

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

Genes that do not have the "Most Annotated" start:
• 32HC_38, Rem711_37, Trina_92,

Summary by start number:

Start 9:
• Found in 1 of 66 (1.5%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Trina_92 (CE),

Start 10:
• Found in 2 of 66 (3.0%) of genes in pham
• Manual Annotations of this start: 1 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: 32HC_38 (Z), Rem711_37 (Z),

Start 11:
• Found in 63 of 66 (95.5%) of genes in pham
• Manual Annotations of this start: 54 of 56
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Acquire49_28 (L1), Aegeus_31 (L5), Appletree2_28 (L1), Archie_30 (L2), AvadaKedavra_28 (L1), Baoshan_29 (L2), Baudelaire_31 (L5), Bazzle_30 (L2), BigCheese_30 (L2), BigNuz_28 (P4), BobsGarage_30 (L2), Breezona_30 (L2), Calm_28 (L1), CicholasNage_28 (L1), Claus_30 (L2), Crossroads_30 (L2), DirkDirk_28 (L1), Dorin_65 (CG), DrSeegs_30 (L2), Enceladus_28 (L1), Faith1_30 (L2), Finemlucis_30 (L2), Francesca_65 (CG), Gabriela_30 (L2), Gardann_30 (L2), GodonK_98 (DK), GuuelaD_30 (L2), Hafay_30 (L2), Halena_28 (L1), Itos_30 (L2), JCole_19 (CZ2), JoeDirt_28 (L1), Kahlid_30 (L2), LeBron_28 (L1), Lewan_30 (L2), LilDestine_30 (L2), Loadrie_30 (L2), MAckerman_28 (L1), Miley16_30 (L2), MkaliMitinis3_30 (L2), Nazo_28 (P4), Netyap_30 (L2), Nicholasp3_30 (L2), OhShagHennessy_28 (L1), Phayonce_28 (P5), Phendrix_94 (DK), Rose5_28 (L1), Rumpelstiltskin_30 (L2), Silverleaf_28 (L1), ThulaThula_28 (P5), TinyDot_22 (singleton), Tourach_30 (L2), Tyson_28 (L1), UPIE_28 (L1), Vetrix_30 (L2), Wamburgrxpress_28 (L1), Wigglewiggle_30 (L2), Wilder_30 (L2), Winky_30 (L2), Wyatt2_28 (L1), Zakai_30 (L2), Zaria_28 (L1), ZhongYanYuan_29 (L2),

Summary by clusters:

There are 11 clusters represented in this pham: singleton, DK, P4, P5, CZ2, CG, CE, L5, L2, L1, Z,

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

Info for manual annotations of cluster DK:
•Start number 11 was manually annotated 2 times for cluster DK.

Info for manual annotations of cluster L1:
•Start number 11 was manually annotated 18 times for cluster L1.

Info for manual annotations of cluster L2:
•Start number 11 was manually annotated 28 times for cluster L2.

Info for manual annotations of cluster L5:
•Start number 11 was manually annotated 2 times for cluster L5.

Info for manual annotations of cluster P4:
•Start number 11 was manually annotated 2 times for cluster P4.

Info for manual annotations of cluster P5:
•Start number 11 was manually annotated 2 times for cluster P5.

Info for manual annotations of cluster Z:
•Start number 10 was manually annotated 1 time for cluster Z.

Gene Information:

Gene: 32HC_38 Start: 29968, Stop: 30204, Start Num: 10
Candidate Starts for 32HC_38:
(6, 29914), (7, 29923), (Start: 10 @29968 has 1 MA's), (14, 30040), (19, 30064), (27, 30136),

Gene: Acquire49_28 Start: 27022, Stop: 27276, Start Num: 11
Candidate Starts for Acquire49_28:
(Start: 11 @27022 has 54 MA's), (16, 27088), (17, 27091), (18, 27100), (19, 27106), (20, 27112), (25, 27154), (34, 27223), (36, 27244),

Gene: Aegeus_31 Start: 27144, Stop: 27362, Start Num: 11
Candidate Starts for Aegeus_31:
(Start: 11 @27144 has 54 MA's), (12, 27189), (13, 27195), (16, 27210), (17, 27213), (19, 27228), (22, 27240), (26, 27279), (29, 27300), (33, 27330),

Gene: Appletree2_28 Start: 26965, Stop: 27219, Start Num: 11
Candidate Starts for Appletree2_28:
(Start: 11 @26965 has 54 MA's), (16, 27031), (17, 27034), (18, 27043), (19, 27049), (20, 27055), (25, 27097), (34, 27166), (36, 27187),

Gene: Archie_30 Start: 28241, Stop: 28495, Start Num: 11

Candidate Starts for Archie_30:
(Start: 11 @28241 has 54 MA's), (16, 28307), (18, 28319), (20, 28331), (24, 28364), (25, 28373), (28, 28394), (32, 28421), (35, 28448),

Gene: AvadaKedavra_28 Start: 27032, Stop: 27286, Start Num: 11
Candidate Starts for AvadaKedavra_28:
(Start: 11 @27032 has 54 MA's), (16, 27098), (17, 27101), (18, 27110), (19, 27116), (20, 27122), (25, 27164), (34, 27233), (36, 27254),

Gene: Baoshan_29 Start: 27573, Stop: 27827, Start Num: 11
Candidate Starts for Baoshan_29:
(Start: 11 @27573 has 54 MA's), (16, 27639), (18, 27651), (19, 27657), (20, 27663), (24, 27696), (25, 27705), (28, 27726), (32, 27753), (35, 27780),

Gene: Baudelaire_31 Start: 27144, Stop: 27362, Start Num: 11
Candidate Starts for Baudelaire_31:
(Start: 11 @27144 has 54 MA's), (12, 27189), (13, 27195), (16, 27210), (17, 27213), (19, 27228), (22, 27240), (26, 27279), (29, 27300), (33, 27330),

Gene: Bazzle_30 Start: 27990, Stop: 28244, Start Num: 11
Candidate Starts for Bazzle_30:
(Start: 11 @27990 has 54 MA's), (16, 28056), (18, 28068), (20, 28080), (24, 28113), (25, 28122), (28, 28143), (32, 28170), (35, 28197),

Gene: BigCheese_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for BigCheese_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: BigNuz_28 Start: 26128, Stop: 26346, Start Num: 11
Candidate Starts for BigNuz_28:
(5, 26041), (Start: 11 @26128 has 54 MA's), (25, 26269), (29, 26296),

Gene: BobsGarage_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for BobsGarage_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Breezona_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Breezona_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Calm_28 Start: 27036, Stop: 27290, Start Num: 11
Candidate Starts for Calm_28:
(Start: 11 @27036 has 54 MA's), (16, 27102), (17, 27105), (18, 27114), (19, 27120), (20, 27126), (25, 27168), (34, 27237), (36, 27258),

Gene: CicholasNage_28 Start: 27024, Stop: 27278, Start Num: 11
Candidate Starts for CicholasNage_28:
(Start: 11 @27024 has 54 MA's), (16, 27090), (18, 27102), (19, 27108), (20, 27114), (25, 27156), (34, 27225), (36, 27246),

Gene: Claus_30 Start: 27729, Stop: 27983, Start Num: 11
Candidate Starts for Claus_30:
(Start: 11 @27729 has 54 MA's), (16, 27795), (18, 27807), (19, 27813), (20, 27819), (24, 27852), (25, 27861), (28, 27882), (32, 27909), (35, 27936),

Gene: Crossroads_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Crossroads_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: DirkDirk_28 Start: 27005, Stop: 27259, Start Num: 11
Candidate Starts for DirkDirk_28:
(Start: 11 @27005 has 54 MA's), (16, 27071), (17, 27074), (18, 27083), (19, 27089), (20, 27095), (25, 27137), (34, 27206), (36, 27227),

Gene: Dorin_65 Start: 54891, Stop: 55136, Start Num: 11
Candidate Starts for Dorin_65:
(8, 54873), (Start: 11 @54891 has 54 MA's), (30, 55071), (34, 55101),

Gene: DrSeegs_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for DrSeegs_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Enceladus_28 Start: 27006, Stop: 27260, Start Num: 11
Candidate Starts for Enceladus_28:
(Start: 11 @27006 has 54 MA's), (16, 27072), (17, 27075), (18, 27084), (19, 27090), (20, 27096), (25, 27138), (34, 27207), (36, 27228),

Gene: Faith1_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Faith1_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Finemlucis_30 Start: 28028, Stop: 28282, Start Num: 11
Candidate Starts for Finemlucis_30:
(Start: 11 @28028 has 54 MA's), (16, 28094), (18, 28106), (19, 28112), (20, 28118), (24, 28151), (25, 28160), (28, 28181), (32, 28208), (35, 28235),

Gene: Francesca_65 Start: 55074, Stop: 55319, Start Num: 11
Candidate Starts for Francesca_65:
(8, 55056), (Start: 11 @55074 has 54 MA's), (30, 55254), (34, 55284),

Gene: Gabriela_30 Start: 28014, Stop: 28268, Start Num: 11
Candidate Starts for Gabriela_30:
(Start: 11 @28014 has 54 MA's), (16, 28080), (18, 28092), (19, 28098), (20, 28104), (24, 28137), (25, 28146), (32, 28194), (35, 28221),

Gene: Gardann_30 Start: 27754, Stop: 28008, Start Num: 11
Candidate Starts for Gardann_30:
(Start: 11 @27754 has 54 MA's), (16, 27820), (18, 27832), (19, 27838), (20, 27844), (24, 27877), (25, 27886), (32, 27934), (35, 27961),

Gene: GodonK_98 Start: 60003, Stop: 60236, Start Num: 11
Candidate Starts for GodonK_98:
(Start: 11 @60003 has 54 MA's), (23, 60129), (29, 60171), (31, 60180),

Gene: GuuelaD_30 Start: 27786, Stop: 28040, Start Num: 11
Candidate Starts for GuuelaD_30:
(Start: 11 @27786 has 54 MA's), (16, 27852), (18, 27864), (19, 27870), (20, 27876), (24, 27909), (25, 27918), (32, 27966), (35, 27993),

Gene: Hafay_30 Start: 27785, Stop: 28039, Start Num: 11
Candidate Starts for Hafay_30:
(Start: 11 @27785 has 54 MA's), (16, 27851), (18, 27863), (19, 27869), (20, 27875), (24, 27908), (25, 27917), (32, 27965), (35, 27992),

Gene: Halena_28 Start: 27033, Stop: 27287, Start Num: 11
Candidate Starts for Halena_28:
(Start: 11 @27033 has 54 MA's), (16, 27099), (17, 27102), (18, 27111), (19, 27117), (20, 27123), (25, 27165), (34, 27234), (36, 27255),

Gene: Itos_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Itos_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: JCole_19 Start: 17673, Stop: 17888, Start Num: 11
Candidate Starts for JCole_19:
(1, 17283), (2, 17460), (3, 17532), (Start: 11 @17673 has 54 MA's), (28, 17826),

Gene: JoeDirt_28 Start: 27004, Stop: 27258, Start Num: 11
Candidate Starts for JoeDirt_28:
(Start: 11 @27004 has 54 MA's), (16, 27070), (17, 27073), (18, 27082), (19, 27088), (20, 27094), (25, 27136), (34, 27205), (36, 27226),

Gene: Kahlid_30 Start: 27757, Stop: 28011, Start Num: 11
Candidate Starts for Kahlid_30:
(Start: 11 @27757 has 54 MA's), (16, 27823), (18, 27835), (20, 27847), (24, 27880), (25, 27889), (32, 27937), (35, 27964),

Gene: LeBron_28 Start: 27048, Stop: 27302, Start Num: 11
Candidate Starts for LeBron_28:
(Start: 11 @27048 has 54 MA's), (16, 27114), (17, 27117), (18, 27126), (19, 27132), (20, 27138), (25, 27180), (34, 27249), (36, 27270),

Gene: Lewan_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Lewan_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: LilDestine_30 Start: 27751, Stop: 28005, Start Num: 11
Candidate Starts for LilDestine_30:
(Start: 11 @27751 has 54 MA's), (16, 27817), (18, 27829), (19, 27835), (20, 27841), (24, 27874), (25, 27883), (32, 27931), (35, 27958),

Gene: Loadrie_30 Start: 27784, Stop: 28038, Start Num: 11
Candidate Starts for Loadrie_30:
(Start: 11 @27784 has 54 MA's), (16, 27850), (18, 27862), (19, 27868), (20, 27874), (24, 27907), (25, 27916), (32, 27964), (35, 27991),

Gene: MAckerman_28 Start: 27022, Stop: 27276, Start Num: 11
Candidate Starts for MAckerman_28:
(Start: 11 @27022 has 54 MA's), (16, 27088), (17, 27091), (18, 27100), (19, 27106), (20, 27112), (25, 27154), (34, 27223), (36, 27244),

Gene: Miley16_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Miley16_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: MkaliMitinis3_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for MkaliMitinis3_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Nazo_28 Start: 26131, Stop: 26349, Start Num: 11
Candidate Starts for Nazo_28:
(5, 26044), (Start: 11 @26131 has 54 MA's), (25, 26272), (29, 26299),

Gene: Netyap_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Netyap_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Nicholasp3_30 Start: 27754, Stop: 28008, Start Num: 11
Candidate Starts for Nicholasp3_30:
(Start: 11 @27754 has 54 MA's), (16, 27820), (18, 27832), (19, 27838), (20, 27844), (24, 27877), (25, 27886), (32, 27934), (35, 27961),

Gene: OhShagHennessy_28 Start: 26987, Stop: 27241, Start Num: 11
Candidate Starts for OhShagHennessy_28:
(Start: 11 @26987 has 54 MA's), (16, 27053), (17, 27056), (18, 27065), (19, 27071), (20, 27077), (25, 27119), (34, 27188), (36, 27209),

Gene: Phayonce_28 Start: 26051, Stop: 26269, Start Num: 11
Candidate Starts for Phayonce_28:
(4, 25964), (Start: 11 @26051 has 54 MA's), (25, 26192), (29, 26219),

Gene: Phendrix_94 Start: 60246, Stop: 60479, Start Num: 11
Candidate Starts for Phendrix_94:
(Start: 11 @60246 has 54 MA's), (23, 60372), (28, 60408), (29, 60414), (31, 60423),

Gene: Rem711_37 Start: 29949, Stop: 30185, Start Num: 10
Candidate Starts for Rem711_37:
(6, 29898), (7, 29907), (Start: 10 @29949 has 1 MA's), (14, 30021), (19, 30045),

Gene: Rose5_28 Start: 27022, Stop: 27276, Start Num: 11
Candidate Starts for Rose5_28:

(Start: 11 @27022 has 54 MA's), (16, 27088), (17, 27091), (18, 27100), (19, 27106), (20, 27112), (25, 27154), (34, 27223), (36, 27244),

Gene: Rumpelstiltskin_30 Start: 28020, Stop: 28274, Start Num: 11
Candidate Starts for Rumpelstiltskin_30:
(Start: 11 @28020 has 54 MA's), (16, 28086), (18, 28098), (19, 28104), (20, 28110), (24, 28143), (25, 28152), (32, 28200), (35, 28227),

Gene: Silverleaf_28 Start: 27022, Stop: 27276, Start Num: 11
Candidate Starts for Silverleaf_28:
(Start: 11 @27022 has 54 MA's), (16, 27088), (17, 27091), (18, 27100), (19, 27106), (20, 27112), (25, 27154), (34, 27223), (36, 27244),

Gene: ThulaThula_28 Start: 26057, Stop: 26275, Start Num: 11
Candidate Starts for ThulaThula_28:
(4, 25970), (Start: 11 @26057 has 54 MA's), (25, 26198), (29, 26225),

Gene: TinyDot_22 Start: 18064, Stop: 18291, Start Num: 11
Candidate Starts for TinyDot_22:
(Start: 11 @18064 has 54 MA's), (28, 18226),

Gene: Tourach_30 Start: 27743, Stop: 27997, Start Num: 11
Candidate Starts for Tourach_30:
(Start: 11 @27743 has 54 MA's), (16, 27809), (18, 27821), (19, 27827), (20, 27833), (24, 27866), (25, 27875), (28, 27896), (32, 27923), (35, 27950),

Gene: Trina_92 Start: 62869, Stop: 63123, Start Num: 9
Candidate Starts for Trina_92:
(Start: 9 @62869 has 1 MA's), (15, 62944), (21, 62974), (28, 63043), (37, 63115),

Gene: Tyson_28 Start: 27022, Stop: 27276, Start Num: 11
Candidate Starts for Tyson_28:
(Start: 11 @27022 has 54 MA's), (16, 27088), (17, 27091), (18, 27100), (19, 27106), (20, 27112), (25, 27154), (34, 27223), (36, 27244),

Gene: UPIE_28 Start: 27020, Stop: 27274, Start Num: 11
Candidate Starts for UPIE_28:
(Start: 11 @27020 has 54 MA's), (16, 27086), (17, 27089), (18, 27098), (19, 27104), (20, 27110), (25, 27152), (34, 27221), (36, 27242),

Gene: Vetrix_30 Start: 27758, Stop: 28012, Start Num: 11
Candidate Starts for Vetrix_30:
(Start: 11 @27758 has 54 MA's), (16, 27824), (18, 27836), (19, 27842), (20, 27848), (24, 27881), (25, 27890), (28, 27911), (32, 27938), (35, 27965),

Gene: Wamburgrxpress_28 Start: 27035, Stop: 27289, Start Num: 11
Candidate Starts for Wamburgrxpress_28:
(Start: 11 @27035 has 54 MA's), (16, 27101), (17, 27104), (18, 27113), (19, 27119), (20, 27125), (25, 27167), (34, 27236), (36, 27257),

Gene: Wigglewiggle_30 Start: 27784, Stop: 28038, Start Num: 11
Candidate Starts for Wigglewiggle_30:

(Start: 11 @27784 has 54 MA's), (16, 27850), (18, 27862), (20, 27874), (24, 27907), (25, 27916), (32, 27964), (35, 27991),

Gene: Wilder_30 Start: 27757, Stop: 28011, Start Num: 11
Candidate Starts for Wilder_30:
(Start: 11 @27757 has 54 MA's), (16, 27823), (18, 27835), (20, 27847), (24, 27880), (25, 27889), (32, 27937), (35, 27964),

Gene: Winky_30 Start: 27752, Stop: 28006, Start Num: 11
Candidate Starts for Winky_30:
(Start: 11 @27752 has 54 MA's), (16, 27818), (18, 27830), (19, 27836), (20, 27842), (24, 27875), (25, 27884), (32, 27932), (35, 27959),

Gene: Wyatt2_28 Start: 27022, Stop: 27276, Start Num: 11
Candidate Starts for Wyatt2_28:
(Start: 11 @27022 has 54 MA's), (16, 27088), (17, 27091), (18, 27100), (19, 27106), (20, 27112), (25, 27154), (34, 27223), (36, 27244),

Gene: Zakai_30 Start: 28008, Stop: 28262, Start Num: 11
Candidate Starts for Zakai_30:
(Start: 11 @28008 has 54 MA's), (16, 28074), (18, 28086), (19, 28092), (20, 28098), (24, 28131), (25, 28140), (32, 28188), (35, 28215),

Gene: Zaria_28 Start: 27036, Stop: 27290, Start Num: 11
Candidate Starts for Zaria_28:
(Start: 11 @27036 has 54 MA's), (16, 27102), (17, 27105), (18, 27114), (19, 27120), (20, 27126), (25, 27168), (34, 27237), (36, 27258),

Gene: ZhongYanYuan_29 Start: 27573, Stop: 27827, Start Num: 11
Candidate Starts for ZhongYanYuan_29:
(Start: 11 @27573 has 54 MA's), (16, 27639), (18, 27651), (19, 27657), (20, 27663), (24, 27696), (25, 27705), (28, 27726), (32, 27753), (35, 27780),