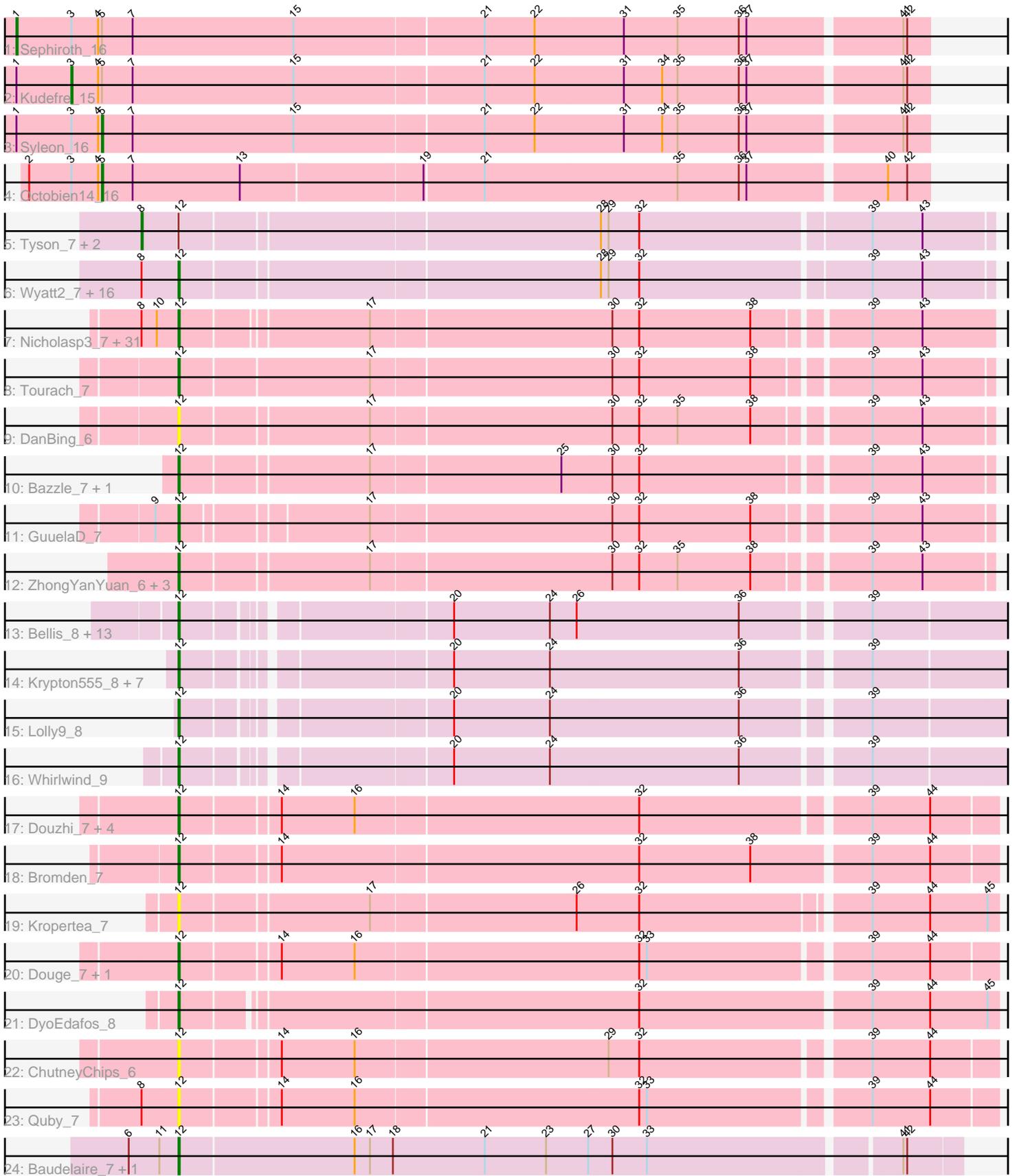Pham 283658

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 283658 Report

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

Pham number 283658 has 103 members, 25 are drafts.

Phages represented in each track:
• Track 1 : Sephiroth_16
• Track 2 : Kudefre_15
• Track 3 : Syleon_16
• Track 4 : Octobien14_16
• Track 5 : Tyson_7, LeBron_7, UPIE_7
• Track 6 : Wyatt2_7, Zaria_7, CicholasNage_7, AvadaKedavra_7, JoeDirt_7, Wamburgrxpress_7, Appletree2_7, Rose5_7, Silverleaf_7, MAckerman_7, Enceladus_7, DirkDirk_7, Poochiewood_7, Calm_7, Halena_7, Acquire49_7, OhShagHennessy_7
• Track 7 : Nicholasp3_7, Underpass_7, Vetrix_7, Soap141_7, BobsGarage_7, Lynnae_7, OverPar_7, Kahlid_7, Netyap_7, Miley16_7, Gabriela_7, LilDestine_7, Faith1_7, Winky_7, Sarshaun_7, Finemlucis_7, Zakai_7, Rossetti_7, Lewan_7, Loadrie_7, Gardann_7, DrSeegs_7, Wilder_7, Breezona_7, SoJulia_7, MkaliMitinis3_7, Hafay_7, Itos_7, BigCheese_7, Crossroads_7, Wigglewiggle_7, Rumpelstiltskin_7
• Track 8 : Tourach_7
• Track 9 : DanBing_6
• Track 10 : Bazzle_7, Archie_7
• Track 11 : GuuelaD_7
• Track 12 : ZhongYanYuan_6, Claus_7, Baoshan_6, DHan_7
• Track 13 : Bellis_8, Nicholas_8, Lumos_8, Red305_8, Moostard_8, TriFive_8, Snenia_8, MsGreen_8, Kingsolomon_8, Jubie_8, Samty_8, Clautastrophe_8, Jobypre_8, Finnry_8
• Track 14 : Krypton555_8, DuncansLeg_8, MiniLon_8, Ellson_8, MiniMac_8, KirDoubleO7_6, BourbonZero_7, LiyuLake_8
• Track 15 : Lolly9_8
• Track 16 : Whirlwind_9
• Track 17 : Douzhi_7, BrainDrainer_8, PYPDinur_7, Chaser_7, Sheng711_7
• Track 18 : Bromden_7
• Track 19 : Kropertea_7
• Track 20 : Douge_7, FarmResident_7
• Track 21 : DyoEdafos_8
• Track 22 : ChutneyChips_6
• Track 23 : Quby_7
• Track 24 : Baudelaire_7, Aegeus_7

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

The start number called the most often in the published annotations is 12, it was called in 71 of the 78 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• Acquire49_7, Aegeus_7, Appletree2_7, Archie_7, AvadaKedavra_7, Baoshan_6, Baudelaire_7, Bazzle_7, Bellis_8, BigCheese_7, BobsGarage_7, BourbonZero_7, BrainDrainer_8, Breezona_7, Bromden_7, Calm_7, Chaser_7, ChutneyChips_6, CicholasNage_7, Claus_7, Clautastrophe_8, Crossroads_7, DHan_7, DanBing_6, DirkDirk_7, Douge_7, Douzhi_7, DrSeegs_7, DuncansLeg_8, DyoEdafos_8, Ellson_8, Enceladus_7, Faith1_7, FarmResident_7, Finemlucis_7, Finnry_8, Gabriela_7, Gardann_7, GuuelaD_7, Hafay_7, Halena_7, Itos_7, Jobypre_8, JoeDirt_7, Jubie_8, Kahlid_7, Kingsolomon_8, KirDoubleO7_6, Kropertea_7, Krypton555_8, Lewan_7, LilDestine_7, LiyuLake_8, Loadrie_7, Lolly9_8, Lumos_8, Lynnae_7, MAckerman_7, Miley16_7, MiniLon_8, MiniMac_8, MkaliMitinis3_7, Moostard_8, MsGreen_8, Netyap_7, Nicholas_8, Nicholasp3_7, OhShagHennessy_7, OverPar_7, PYPDinur_7, Poochiewood_7, Quby_7, Red305_8, Rose5_7, Rossetti_7, Rumpelstiltskin_7, Samty_8, Sarshaun_7, Sheng711_7, Silverleaf_7, Snenia_8, SoJulia_7, Soap141_7, Tourach_7, TriFive_8, Underpass_7, Vetrix_7, Wamburgrxpress_7, Whirlwind_9, Wigglewiggle_7, Wilder_7, Winky_7, Wyatt2_7, Zakai_7, Zaria_7, ZhongYanYuan_6,

Genes that have the "Most Annotated" start but do not call it:
• LeBron_7, Tyson_7, UPIE_7,

Genes that do not have the "Most Annotated" start:
• Kudefre_15, Octobien14_16, Sephiroth_16, Syleon_16,

Summary by start number:

Start 1:
• Found in 3 of 103 (2.9%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Sephiroth_16 (DU1),

Start 3:
• Found in 4 of 103 (3.9%) of genes in pham
• Manual Annotations of this start: 1 of 78
• Called 25.0% of time when present
• Phage (with cluster) where this start called: Kudefre_15 (DU1),

Start 5:
• Found in 4 of 103 (3.9%) of genes in pham
• Manual Annotations of this start: 2 of 78
• Called 50.0% of time when present
• Phage (with cluster) where this start called: Octobien14_16 (DU1), Syleon_16 (DU1),

Start 8:
• Found in 53 of 103 (51.5%) of genes in pham

• Manual Annotations of this start: 3 of 78
• Called 5.7% of time when present
• Phage (with cluster) where this start called: LeBron_7 (L1), Tyson_7 (L1), UPIE_7 (L1),

Start 12:
• Found in 99 of 103 (96.1%) of genes in pham
• Manual Annotations of this start: 71 of 78
• Called 97.0% of time when present
• Phage (with cluster) where this start called: Acquire49_7 (L1), Aegeus_7 (L5), Appletree2_7 (L1), Archie_7 (L2), AvadaKedavra_7 (L1), Baoshan_6 (L2), Baudelaire_7 (L5), Bazzle_7 (L2), Bellis_8 (L3), BigCheese_7 (L2), BobsGarage_7 (L2), BourbonZero_7 (L3), BrainDrainer_8 (L4), Breezona_7 (L2), Bromden_7 (L4), Calm_7 (L1), Chaser_7 (L4), ChutneyChips_6 (L4), CicholasNage_7 (L1), Claus_7 (L2), Clautastrophe_8 (L3), Crossroads_7 (L2), DHan_7 (L2), DanBing_6 (L2), DirkDirk_7 (L1), Douge_7 (L4), Douzhi_7 (L4), DrSeegs_7 (L2), DuncansLeg_8 (L3), DyoEdafos_8 (L4), Ellson_8 (L3), Enceladus_7 (L1), Faith1_7 (L2), FarmResident_7 (L4), Finemlucis_7 (L2), Finnry_8 (L3), Gabriela_7 (L2), Gardann_7 (L2), GuuelaD_7 (L2), Hafay_7 (L2), Halena_7 (L1), Itos_7 (L2), Jobypre_8 (L3), JoeDirt_7 (L1), Jubie_8 (L3), Kahlid_7 (L2), Kingsolomon_8 (L3), KirDoubleO7_6 (L3), Kropertea_7 (L4), Krypton555_8 (L3), Lewan_7 (L2), LilDestine_7 (L2), LiyuLake_8 (L3), Loadrie_7 (L2), Lolly9_8 (L3), Lumos_8 (L3), Lynnae_7 (L2), MAckerman_7 (L1), Miley16_7 (L2), MiniLon_8 (L3), MiniMac_8 (L3), MkaliMitinis3_7 (L2), Moostard_8 (L3), MsGreen_8 (L3), Netyap_7 (L2), Nicholas_8 (L3), Nicholasp3_7 (L2), OhShagHennessy_7 (L1), OverPar_7 (L2), PYPDinur_7 (L4), Poochiewood_7 (L1), Quby_7 (L4), Red305_8 (L3), Rose5_7 (L1), Rossetti_7 (L2), Rumpelstiltskin_7 (L2), Samty_8 (L3), Sarshaun_7 (L2), Sheng711_7 (L4), Silverleaf_7 (L1), Snenia_8 (L3), SoJulia_7 (L2), Soap141_7 (L2), Tourach_7 (L2), TriFive_8 (L3), Underpass_7 (L2), Vetrix_7 (L2), Wamburgrxpress_7 (L1), Whirlwind_9 (L3), Wigglewiggle_7 (L2), Wilder_7 (L2), Winky_7 (L2), Wyatt2_7 (L1), Zakai_7 (L2), Zaria_7 (L1), ZhongYanYuan_6 (L2),

Summary by clusters:

There are 6 clusters represented in this pham: L4, L5, L2, L3, L1, DU1,

Info for manual annotations of cluster DU1:
•Start number 1 was manually annotated 1 time for cluster DU1.
•Start number 3 was manually annotated 1 time for cluster DU1.
•Start number 5 was manually annotated 2 times for cluster DU1.

Info for manual annotations of cluster L1:
•Start number 8 was manually annotated 3 times for cluster L1.
•Start number 12 was manually annotated 16 times for cluster L1.

Info for manual annotations of cluster L2:
•Start number 12 was manually annotated 30 times for cluster L2.

Info for manual annotations of cluster L3:
•Start number 12 was manually annotated 19 times for cluster L3.

Info for manual annotations of cluster L4:
•Start number 12 was manually annotated 4 times for cluster L4.

Info for manual annotations of cluster L5:
•Start number 12 was manually annotated 2 times for cluster L5.

Gene Information:

Gene: Acquire49_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for Acquire49_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Aegeus_7 Start: 5028, Stop: 5621, Start Num: 12
Candidate Starts for Aegeus_7:
(6, 4989), (11, 5013), (Start: 12 @5028 has 71 MA's), (16, 5163), (17, 5175), (18, 5193), (21, 5265), (23, 5313), (27, 5346), (30, 5364), (33, 5391), (41, 5577), (42, 5580),

Gene: Appletree2_7 Start: 5403, Stop: 6014, Start Num: 12
Candidate Starts for Appletree2_7:
(Start: 8 @5376 has 3 MA's), (Start: 12 @5403 has 71 MA's), (28, 5718), (29, 5724), (32, 5748), (39, 5922), (43, 5961),

Gene: Archie_7 Start: 5396, Stop: 6001, Start Num: 12
Candidate Starts for Archie_7:
(Start: 12 @5396 has 71 MA's), (17, 5537), (25, 5681), (30, 5720), (32, 5741), (39, 5909), (43, 5948),

Gene: AvadaKedavra_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for AvadaKedavra_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Baoshan_6 Start: 5250, Stop: 5855, Start Num: 12
Candidate Starts for Baoshan_6:
(Start: 12 @5250 has 71 MA's), (17, 5391), (30, 5574), (32, 5595), (35, 5625), (38, 5682), (39, 5763), (43, 5802),

Gene: Baudelaire_7 Start: 5028, Stop: 5621, Start Num: 12
Candidate Starts for Baudelaire_7:
(6, 4989), (11, 5013), (Start: 12 @5028 has 71 MA's), (16, 5163), (17, 5175), (18, 5193), (21, 5265), (23, 5313), (27, 5346), (30, 5364), (33, 5391), (41, 5577), (42, 5580),

Gene: Bazzle_7 Start: 5372, Stop: 5977, Start Num: 12
Candidate Starts for Bazzle_7:
(Start: 12 @5372 has 71 MA's), (17, 5513), (25, 5657), (30, 5696), (32, 5717), (39, 5885), (43, 5924),

Gene: Bellis_8 Start: 5538, Stop: 6137, Start Num: 12
Candidate Starts for Bellis_8:
(Start: 12 @5538 has 71 MA's), (20, 5724), (24, 5799), (26, 5820), (36, 5946), (39, 6036),

Gene: BigCheese_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for BigCheese_7:

(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: BobsGarage_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for BobsGarage_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: BourbonZero_7 Start: 5543, Stop: 6142, Start Num: 12
Candidate Starts for BourbonZero_7:
(Start: 12 @5543 has 71 MA's), (20, 5729), (24, 5804), (36, 5951), (39, 6041),

Gene: BrainDrainer_8 Start: 5236, Stop: 5844, Start Num: 12
Candidate Starts for BrainDrainer_8:
(Start: 12 @5236 has 71 MA's), (14, 5308), (16, 5365), (32, 5581), (39, 5749), (44, 5794),

Gene: Breezona_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Breezona_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Bromden_7 Start: 5140, Stop: 5754, Start Num: 12
Candidate Starts for Bromden_7:
(Start: 12 @5140 has 71 MA's), (14, 5212), (32, 5485), (38, 5572), (39, 5659), (44, 5704),

Gene: Calm_7 Start: 5430, Stop: 6041, Start Num: 12
Candidate Starts for Calm_7:
(Start: 8 @5403 has 3 MA's), (Start: 12 @5430 has 71 MA's), (28, 5745), (29, 5751), (32, 5775), (39, 5949), (43, 5988),

Gene: Chaser_7 Start: 5142, Stop: 5759, Start Num: 12
Candidate Starts for Chaser_7:
(Start: 12 @5142 has 71 MA's), (14, 5214), (16, 5271), (32, 5487), (39, 5664), (44, 5709),

Gene: ChutneyChips_6 Start: 5139, Stop: 5747, Start Num: 12
Candidate Starts for ChutneyChips_6:
(Start: 12 @5139 has 71 MA's), (14, 5211), (16, 5268), (29, 5460), (32, 5484), (39, 5652), (44, 5697),

Gene: CicholasNage_7 Start: 5430, Stop: 6041, Start Num: 12
Candidate Starts for CicholasNage_7:
(Start: 8 @5403 has 3 MA's), (Start: 12 @5430 has 71 MA's), (28, 5745), (29, 5751), (32, 5775), (39, 5949), (43, 5988),

Gene: Claus_7 Start: 5430, Stop: 6035, Start Num: 12
Candidate Starts for Claus_7:
(Start: 12 @5430 has 71 MA's), (17, 5571), (30, 5754), (32, 5775), (35, 5805), (38, 5862), (39, 5943), (43, 5982),

Gene: Clautastrophe_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Clautastrophe_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Crossroads_7 Start: 5422, Stop: 6027, Start Num: 12

Candidate Starts for Crossroads_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: DHan_7 Start: 5366, Stop: 5971, Start Num: 12
Candidate Starts for DHan_7:
(Start: 12 @5366 has 71 MA's), (17, 5507), (30, 5690), (32, 5711), (35, 5741), (38, 5798), (39, 5879), (43, 5918),

Gene: DanBing_6 Start: 5249, Stop: 5854, Start Num: 12
Candidate Starts for DanBing_6:
(Start: 12 @5249 has 71 MA's), (17, 5390), (30, 5573), (32, 5594), (35, 5624), (38, 5681), (39, 5762), (43, 5801),

Gene: DirkDirk_7 Start: 5431, Stop: 6042, Start Num: 12
Candidate Starts for DirkDirk_7:
(Start: 8 @5404 has 3 MA's), (Start: 12 @5431 has 71 MA's), (28, 5746), (29, 5752), (32, 5776), (39, 5950), (43, 5989),

Gene: Douge_7 Start: 5097, Stop: 5705, Start Num: 12
Candidate Starts for Douge_7:
(Start: 12 @5097 has 71 MA's), (14, 5169), (16, 5226), (32, 5442), (33, 5448), (39, 5610), (44, 5655),

Gene: Douzhi_7 Start: 5097, Stop: 5705, Start Num: 12
Candidate Starts for Douzhi_7:
(Start: 12 @5097 has 71 MA's), (14, 5169), (16, 5226), (32, 5442), (39, 5610), (44, 5655),

Gene: DrSeegs_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for DrSeegs_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: DuncansLeg_8 Start: 5545, Stop: 6144, Start Num: 12
Candidate Starts for DuncansLeg_8:
(Start: 12 @5545 has 71 MA's), (20, 5731), (24, 5806), (36, 5953), (39, 6043),

Gene: DyoEdafos_8 Start: 5282, Stop: 5893, Start Num: 12
Candidate Starts for DyoEdafos_8:
(Start: 12 @5282 has 71 MA's), (32, 5621), (39, 5795), (44, 5840), (45, 5885),

Gene: Ellson_8 Start: 5554, Stop: 6153, Start Num: 12
Candidate Starts for Ellson_8:
(Start: 12 @5554 has 71 MA's), (20, 5740), (24, 5815), (36, 5962), (39, 6052),

Gene: Enceladus_7 Start: 5431, Stop: 6042, Start Num: 12
Candidate Starts for Enceladus_7:
(Start: 8 @5404 has 3 MA's), (Start: 12 @5431 has 71 MA's), (28, 5746), (29, 5752), (32, 5776), (39, 5950), (43, 5989),

Gene: Faith1_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Faith1_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: FarmResident_7 Start: 5136, Stop: 5750, Start Num: 12
Candidate Starts for FarmResident_7:
(Start: 12 @5136 has 71 MA's), (14, 5205), (16, 5262), (32, 5478), (33, 5484), (39, 5655), (44, 5700),

Gene: Finemlucis_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Finemlucis_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Finnry_8 Start: 5539, Stop: 6138, Start Num: 12
Candidate Starts for Finnry_8:
(Start: 12 @5539 has 71 MA's), (20, 5725), (24, 5800), (26, 5821), (36, 5947), (39, 6037),

Gene: Gabriela_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Gabriela_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Gardann_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Gardann_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: GuuelaD_7 Start: 5462, Stop: 6061, Start Num: 12
Candidate Starts for GuuelaD_7:
(9, 5447), (Start: 12 @5462 has 71 MA's), (17, 5597), (30, 5780), (32, 5801), (38, 5888), (39, 5969), (43, 6008),

Gene: Hafay_7 Start: 5455, Stop: 6060, Start Num: 12
Candidate Starts for Hafay_7:
(Start: 8 @5428 has 3 MA's), (10, 5440), (Start: 12 @5455 has 71 MA's), (17, 5593), (30, 5776), (32, 5797), (38, 5884), (39, 5965), (43, 6004),

Gene: Halena_7 Start: 5430, Stop: 6041, Start Num: 12
Candidate Starts for Halena_7:
(Start: 8 @5403 has 3 MA's), (Start: 12 @5430 has 71 MA's), (28, 5745), (29, 5751), (32, 5775), (39, 5949), (43, 5988),

Gene: Itos_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Itos_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Jobypre_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Jobypre_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: JoeDirt_7 Start: 5430, Stop: 6041, Start Num: 12
Candidate Starts for JoeDirt_7:
(Start: 8 @5403 has 3 MA's), (Start: 12 @5430 has 71 MA's), (28, 5745), (29, 5751), (32, 5775), (39, 5949), (43, 5988),

Gene: Jubie_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Jubie_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Kahlid_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Kahlid_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Kingsolomon_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Kingsolomon_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: KirDoubleO7_6 Start: 5554, Stop: 6153, Start Num: 12
Candidate Starts for KirDoubleO7_6:
(Start: 12 @5554 has 71 MA's), (20, 5740), (24, 5815), (36, 5962), (39, 6052),

Gene: Kropertea_7 Start: 5089, Stop: 5700, Start Num: 12
Candidate Starts for Kropertea_7:
(Start: 12 @5089 has 71 MA's), (17, 5230), (26, 5386), (32, 5434), (39, 5602), (44, 5647), (45, 5692),

Gene: Krypton555_8 Start: 5533, Stop: 6132, Start Num: 12
Candidate Starts for Krypton555_8:
(Start: 12 @5533 has 71 MA's), (20, 5719), (24, 5794), (36, 5941), (39, 6031),

Gene: Kudefre_15 Start: 8967, Stop: 9623, Start Num: 3
Candidate Starts for Kudefre_15:
(Start: 1 @8925 has 1 MA's), (Start: 3 @8967 has 1 MA's), (4, 8988), (Start: 5 @8991 has 2 MA's), (7, 9015), (15, 9141), (21, 9285), (22, 9324), (31, 9393), (34, 9423), (35, 9435), (36, 9483), (37, 9489), (41, 9603), (42, 9606),

Gene: LeBron_7 Start: 5403, Stop: 6041, Start Num: 8
Candidate Starts for LeBron_7:
(Start: 8 @5403 has 3 MA's), (Start: 12 @5430 has 71 MA's), (28, 5745), (29, 5751), (32, 5775), (39, 5949), (43, 5988),

Gene: Lewan_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Lewan_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: LilDestine_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for LilDestine_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: LiyuLake_8 Start: 5545, Stop: 6144, Start Num: 12
Candidate Starts for LiyuLake_8:
(Start: 12 @5545 has 71 MA's), (20, 5731), (24, 5806), (36, 5953), (39, 6043),

Gene: Loadrie_7 Start: 5455, Stop: 6060, Start Num: 12
Candidate Starts for Loadrie_7:

(Start: 8 @5428 has 3 MA's), (10, 5440), (Start: 12 @5455 has 71 MA's), (17, 5593), (30, 5776), (32, 5797), (38, 5884), (39, 5965), (43, 6004),

Gene: Lolly9_8 Start: 5548, Stop: 6147, Start Num: 12
Candidate Starts for Lolly9_8:
(Start: 12 @5548 has 71 MA's), (20, 5734), (24, 5809), (36, 5956), (39, 6046),

Gene: Lumos_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Lumos_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Lynnae_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Lynnae_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: MAckerman_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for MAckerman_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Miley16_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Miley16_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: MiniLon_8 Start: 5548, Stop: 6147, Start Num: 12
Candidate Starts for MiniLon_8:
(Start: 12 @5548 has 71 MA's), (20, 5734), (24, 5809), (36, 5956), (39, 6046),

Gene: MiniMac_8 Start: 5548, Stop: 6147, Start Num: 12
Candidate Starts for MiniMac_8:
(Start: 12 @5548 has 71 MA's), (20, 5734), (24, 5809), (36, 5956), (39, 6046),

Gene: MkaliMitinis3_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for MkaliMitinis3_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Moostard_8 Start: 5538, Stop: 6137, Start Num: 12
Candidate Starts for Moostard_8:
(Start: 12 @5538 has 71 MA's), (20, 5724), (24, 5799), (26, 5820), (36, 5946), (39, 6036),

Gene: MsGreen_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for MsGreen_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Netyap_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Netyap_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Nicholas_8 Start: 5542, Stop: 6141, Start Num: 12

Candidate Starts for Nicholas_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Nicholasp3_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Nicholasp3_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Octobien14_16 Start: 10060, Stop: 10689, Start Num: 5
Candidate Starts for Octobien14_16:
(2, 10003), (Start: 3 @10036 has 1 MA's), (4, 10057), (Start: 5 @10060 has 2 MA's), (7, 10084), (13, 10168), (19, 10306), (21, 10351), (35, 10501), (36, 10549), (37, 10555), (40, 10657), (42, 10672),

Gene: OhShagHennessy_7 Start: 5403, Stop: 6014, Start Num: 12
Candidate Starts for OhShagHennessy_7:
(Start: 8 @5376 has 3 MA's), (Start: 12 @5403 has 71 MA's), (28, 5718), (29, 5724), (32, 5748), (39, 5922), (43, 5961),

Gene: OverPar_7 Start: 5455, Stop: 6060, Start Num: 12
Candidate Starts for OverPar_7:
(Start: 8 @5428 has 3 MA's), (10, 5440), (Start: 12 @5455 has 71 MA's), (17, 5593), (30, 5776), (32, 5797), (38, 5884), (39, 5965), (43, 6004),

Gene: PYPDinur_7 Start: 5097, Stop: 5705, Start Num: 12
Candidate Starts for PYPDinur_7:
(Start: 12 @5097 has 71 MA's), (14, 5169), (16, 5226), (32, 5442), (39, 5610), (44, 5655),

Gene: Poochiewood_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for Poochiewood_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Quby_7 Start: 5096, Stop: 5704, Start Num: 12
Candidate Starts for Quby_7:
(Start: 8 @5069 has 3 MA's), (Start: 12 @5096 has 71 MA's), (14, 5168), (16, 5225), (32, 5441), (33, 5447), (39, 5609), (44, 5654),

Gene: Red305_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Red305_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Rose5_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for Rose5_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Rossetti_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Rossetti_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Rumpelstiltskin_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Rumpelstiltskin_7:

(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Samty_8 Start: 5538, Stop: 6137, Start Num: 12
Candidate Starts for Samty_8:
(Start: 12 @5538 has 71 MA's), (20, 5724), (24, 5799), (26, 5820), (36, 5946), (39, 6036),

Gene: Sarshaun_7 Start: 5455, Stop: 6060, Start Num: 12
Candidate Starts for Sarshaun_7:
(Start: 8 @5428 has 3 MA's), (10, 5440), (Start: 12 @5455 has 71 MA's), (17, 5593), (30, 5776), (32, 5797), (38, 5884), (39, 5965), (43, 6004),

Gene: Sephiroth_16 Start: 9096, Stop: 9794, Start Num: 1
Candidate Starts for Sephiroth_16:
(Start: 1 @9096 has 1 MA's), (Start: 3 @9138 has 1 MA's), (4, 9159), (Start: 5 @9162 has 2 MA's), (7, 9186), (15, 9312), (21, 9456), (22, 9495), (31, 9564), (35, 9606), (36, 9654), (37, 9660), (41, 9774), (42, 9777),

Gene: Sheng711_7 Start: 5097, Stop: 5705, Start Num: 12
Candidate Starts for Sheng711_7:
(Start: 12 @5097 has 71 MA's), (14, 5169), (16, 5226), (32, 5442), (39, 5610), (44, 5655),

Gene: Silverleaf_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for Silverleaf_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Snenia_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for Snenia_8:
(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: SoJulia_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for SoJulia_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Soap141_7 Start: 5455, Stop: 6060, Start Num: 12
Candidate Starts for Soap141_7:
(Start: 8 @5428 has 3 MA's), (10, 5440), (Start: 12 @5455 has 71 MA's), (17, 5593), (30, 5776), (32, 5797), (38, 5884), (39, 5965), (43, 6004),

Gene: Syleon_16 Start: 9084, Stop: 9716, Start Num: 5
Candidate Starts for Syleon_16:
(Start: 1 @9018 has 1 MA's), (Start: 3 @9060 has 1 MA's), (4, 9081), (Start: 5 @9084 has 2 MA's), (7, 9108), (15, 9234), (21, 9378), (22, 9417), (31, 9486), (34, 9516), (35, 9528), (36, 9576), (37, 9582), (41, 9696), (42, 9699),

Gene: Tourach_7 Start: 5433, Stop: 6041, Start Num: 12
Candidate Starts for Tourach_7:
(Start: 12 @5433 has 71 MA's), (17, 5577), (30, 5760), (32, 5781), (38, 5868), (39, 5949), (43, 5988),

Gene: TriFive_8 Start: 5542, Stop: 6141, Start Num: 12
Candidate Starts for TriFive_8:

(Start: 12 @5542 has 71 MA's), (20, 5728), (24, 5803), (26, 5824), (36, 5950), (39, 6040),

Gene: Tyson_7 Start: 5402, Stop: 6040, Start Num: 8
Candidate Starts for Tyson_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: UPIE_7 Start: 5400, Stop: 6038, Start Num: 8
Candidate Starts for UPIE_7:
(Start: 8 @5400 has 3 MA's), (Start: 12 @5427 has 71 MA's), (28, 5742), (29, 5748), (32, 5772), (39, 5946), (43, 5985),

Gene: Underpass_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Underpass_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Vetrix_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Vetrix_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Wamburgrxpress_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for Wamburgrxpress_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Whirlwind_9 Start: 5535, Stop: 6134, Start Num: 12
Candidate Starts for Whirlwind_9:
(Start: 12 @5535 has 71 MA's), (20, 5721), (24, 5796), (36, 5943), (39, 6033),

Gene: Wigglewiggle_7 Start: 5455, Stop: 6060, Start Num: 12
Candidate Starts for Wigglewiggle_7:
(Start: 8 @5428 has 3 MA's), (10, 5440), (Start: 12 @5455 has 71 MA's), (17, 5593), (30, 5776), (32, 5797), (38, 5884), (39, 5965), (43, 6004),

Gene: Wilder_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Wilder_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Winky_7 Start: 5422, Stop: 6027, Start Num: 12
Candidate Starts for Winky_7:
(Start: 8 @5395 has 3 MA's), (10, 5407), (Start: 12 @5422 has 71 MA's), (17, 5560), (30, 5743), (32, 5764), (38, 5851), (39, 5932), (43, 5971),

Gene: Wyatt2_7 Start: 5429, Stop: 6040, Start Num: 12
Candidate Starts for Wyatt2_7:
(Start: 8 @5402 has 3 MA's), (Start: 12 @5429 has 71 MA's), (28, 5744), (29, 5750), (32, 5774), (39, 5948), (43, 5987),

Gene: Zakai_7 Start: 5410, Stop: 6015, Start Num: 12
Candidate Starts for Zakai_7:

(Start: 8 @5383 has 3 MA's), (10, 5395), (Start: 12 @5410 has 71 MA's), (17, 5548), (30, 5731), (32, 5752), (38, 5839), (39, 5920), (43, 5959),

Gene: Zaria_7 Start: 5430, Stop: 6041, Start Num: 12
Candidate Starts for Zaria_7:
(Start: 8 @5403 has 3 MA's), (Start: 12 @5430 has 71 MA's), (28, 5745), (29, 5751), (32, 5775), (39, 5949), (43, 5988),

Gene: ZhongYanYuan_6 Start: 5250, Stop: 5855, Start Num: 12
Candidate Starts for ZhongYanYuan_6:
(Start: 12 @5250 has 71 MA's), (17, 5391), (30, 5574), (32, 5595), (35, 5625), (38, 5682), (39, 5763), (43, 5802),