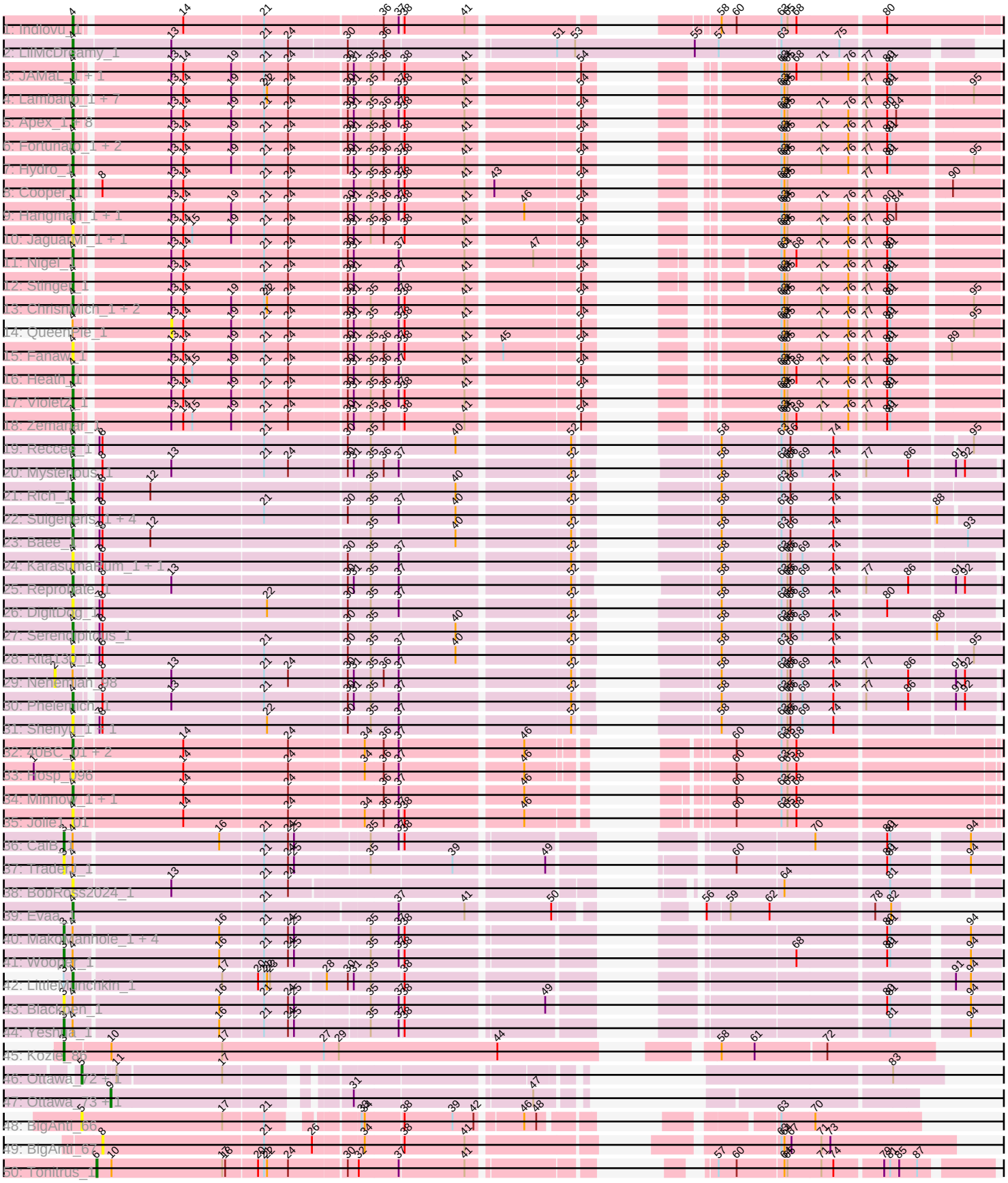
Pham 347500



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 347500 Report

This analysis was run 11/14/26 on database version 672.

Pham number 347500 has 87 members, 29 are drafts.

Phages represented in each track:
• Track 1 : Indlovu_1
• Track 2 : LilMcDreamy_1
• Track 3 : JAMaL_1, BobbyK_1
• Track 4 : Lambano_1, Hally898_1, Antihero_1, Epah_1, Ahwei_1, GinPorsche_1, Nanao_1, Poster_1
• Track 5 : Apex_1, Lolalove_1, Prince_1, Mithril_1, Mudslide_1, Waleliano_1, BrownCNA_1, Austelle_1, Frederick_1
• Track 6 : Fortunato_1, Magpie_1, RawrgerThat_1
• Track 7 : Hydro_1
• Track 8 : Cooper_1
• Track 9 : Hangman_1, JoyceMaria_1
• Track 10 : JaguarMi_1, Xincheng_1
• Track 11 : Nigel_1
• Track 12 : Stinger_1
• Track 13 : ChrisnMich_1, LittleDigger_1, Renkei_1
• Track 14 : QueenPie_1
• Track 15 : Fanaw_1
• Track 16 : Heath_1
• Track 17 : VioletZ_1
• Track 18 : Zemanar_1
• Track 19 : Reccee_1
• Track 20 : Mysterious_1
• Track 21 : Rich_1
• Track 22 : Suigeneris_1, EastView9101_1, Acadian_1, SirJeffery_1, Donny_1
• Track 23 : Baee_1
• Track 24 : KarasumaRum_1, StinkyVeggy_1
• Track 25 : Reprobate_1
• Track 26 : DigitDog_1
• Track 27 : Serendipitous_1
• Track 28 : Rita130_1
• Track 29 : Nehemiah_98
• Track 30 : Phelemich_1
• Track 31 : Shenyu_1, Nangang_1
• Track 32 : 40BC_01, ForDig_1, 39HC_01
• Track 33 : Hosp_096
• Track 34 : Minnow_1, KayaCho_1
• Track 35 : Jolie1_01

• Track 36 : CaiB_1
• Track 37 : TraderJ_1
• Track 38 : BobRoss2024_1
• Track 39 : Evaa_1
• Track 40 : MakoManhole_1, MossRose_1, CloverMinnie_1, FelixTres_1, AnarQue_1
• Track 41 : Wooper_1
• Track 42 : LittleMunchkin_1
• Track 43 : Blackpen_1
• Track 44 : Yeshua_1
• Track 45 : Kozie_86
• Track 46 : Ottawa_72, Kharcho_72
• Track 47 : Ottawa_73, Kharcho_73
• Track 48 : BigAnti_66
• Track 49 : BigAnti_67
• Track 50 : Tonitrus_1

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

The start number called the most often in the published annotations is 4, it was called in 44 of the 58 non-draft genes in the pham.

Genes that call this "Most Annotated" start:
• 39HC_01, 40BC_01, Acadian_1, Ahwei_1, Antihero_1, Apex_1, Austelle_1, Baee_1, BobRoss2024_1, BobbyK_1, BrownCNA_1, ChrisnMich_1, Cooper_1, DigitDog_1, Donny_1, EastView9101_1, Epah_1, Evaa_1, Fanaw_1, ForDig_1, Fortunato_1, Frederick_1, GinPorsche_1, Hally898_1, Hangman_1, Heath_1, Hosp_096, Hydro_1, Indlovu_1, JAMaL_1, JaguarMi_1, Jolie1_01, JoyceMaria_1, KarasumaRum_1, KayaCho_1, Lambano_1, LilMcDreamy_1, LittleDigger_1, LittleMunchkin_1, Lolalove_1, Magpie_1, Minnow_1, Mithril_1, Mudslide_1, Mysterious_1, Nanao_1, Nangang_1, Nigel_1, Phelemich_1, Poster_1, Prince_1, RawrgerThat_1, Reccee_1, Renkei_1, Reprobate_1, Rich_1, Rita130_1, Serendipitous_1, Shenyu_1, SirJeffery_1, Stinger_1, StinkyVeggy_1, Suigeneris_1, VioletZ_1, Waleliano_1, Xincheng_1, Zemanar_1,

Genes that have the "Most Annotated" start but do not call it:
• AnarQue_1, Blackpen_1, CaiB_1, CloverMinnie_1, FelixTres_1, MakoManhole_1, MossRose_1, Nehemiah_98, QueenPie_1, TraderJ_1, Wooper_1, Yeshua_1,

Genes that do not have the "Most Annotated" start:
• BigAnti_66, BigAnti_67, Kharcho_72, Kharcho_73, Kozie_86, Ottawa_72, Ottawa_73, Tonitrus_1,

Summary by start number:

Start 2:
• Found in 1 of 87 (1.1%) of genes in pham
• No Manual Annotations of this start.
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Nehemiah_98 (B5),

Start 3:
• Found in 12 of 87 (13.8%) of genes in pham
• Manual Annotations of this start: 9 of 58
• Called 91.7% of time when present
• Phage (with cluster) where this start called: AnarQue_1 (DR), Blackpen_1 (DR), CaiB_1 (DR), CloverMinnie_1 (DR), FelixTres_1 (DR), Kozie_86 (EI), MakoManhole_1 (DR), MossRose_1 (DR), TraderJ_1 (DR), Wooper_1 (DR), Yeshua_1 (DR),

Start 4:
• Found in 79 of 87 (90.8%) of genes in pham
• Manual Annotations of this start: 44 of 58
• Called 84.8% of time when present
• Phage (with cluster) where this start called: 39HC_01 (B6), 40BC_01 (B6), Acadian_1 (B5), Ahwei_1 (B4), Antihero_1 (B4), Apex_1 (B4), Austelle_1 (B4), Baee_1 (B5), BobRoss2024_1 (DR), BobbyK_1 (B4), BrownCNA_1 (B4), ChrisnMich_1 (B4), Cooper_1 (B4), DigitDog_1 (B5), Donny_1 (B5), EastView9101_1 (B5), Epah_1 (B4), Evaa_1 (DR), Fanaw_1 (B4), ForDig_1 (B6), Fortunato_1 (B4), Frederick_1 (B4), GinPorsche_1 (B4), Hally898_1 (B4), Hangman_1 (B4), Heath_1 (B4), Hosp_096 (B6), Hydro_1 (B4), Indlovu_1 (B11), JAMaL_1 (B4), JaguarMi_1 (B4), Jolie1_01 (B6), JoyceMaria_1 (B4), KarasumaRum_1 (B5), KayaCho_1 (B6), Lambano_1 (B4), LilMcDreamy_1 (B12), LittleDigger_1 (B4), LittleMunchkin_1 (DR), Lolalove_1 (B4), Magpie_1 (B4), Minnow_1 (B6), Mithril_1 (B4), Mudslide_1 (B4), Mysterious_1 (B5), Nanao_1 (B4), Nangang_1 (B5), Nigel_1 (B4), Phelemich_1 (B5), Poster_1 (B4), Prince_1 (B4), RawrgerThat_1 (B4), Reccee_1 (B5), Renkei_1 (B4), Reprobate_1 (B5), Rich_1 (B5), Rita130_1 (B5), Serendipitous_1 (B5), Shenyu_1 (B5), SirJeffery_1 (B5), Stinger_1 (B4), StinkyVeggy_1 (B5), Suigeneris_1 (B5), VioletZ_1 (B4), Waleliano_1 (B4), Xincheng_1 (B4), Zemanar_1 (B4),

Start 5:
• Found in 3 of 87 (3.4%) of genes in pham
• Manual Annotations of this start: 2 of 58
• Called 100.0% of time when present
• Phage (with cluster) where this start called: BigAnti_66 (singleton), Kharcho_72 (FM), Ottawa_72 (FM),

Start 6:
• Found in 1 of 87 (1.1%) of genes in pham
• Manual Annotations of this start: 1 of 58
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Tonitrus_1 (singleton),

Start 8:
• Found in 21 of 87 (24.1%) of genes in pham
• No Manual Annotations of this start.
• Called 4.8% of time when present
• Phage (with cluster) where this start called: BigAnti_67 (singleton),

Start 9:
• Found in 2 of 87 (2.3%) of genes in pham
• Manual Annotations of this start: 2 of 58
• Called 100.0% of time when present
• Phage (with cluster) where this start called: Kharcho_73 (FM), Ottawa_73 (FM),

Start 13:
• Found in 44 of 87 (50.6%) of genes in pham
• No Manual Annotations of this start.
• Called 2.3% of time when present
• Phage (with cluster) where this start called: QueenPie_1 (B4),

Summary by clusters:

There are 9 clusters represented in this pham: singleton, EI, B4, B5, B6, B12, B11, DR, FM,

Info for manual annotations of cluster B11:
•Start number 4 was manually annotated 1 time for cluster B11.

Info for manual annotations of cluster B12:
•Start number 4 was manually annotated 1 time for cluster B12.

Info for manual annotations of cluster B4:
•Start number 4 was manually annotated 27 times for cluster B4.

Info for manual annotations of cluster B5:
•Start number 4 was manually annotated 11 times for cluster B5.

Info for manual annotations of cluster B6:
•Start number 4 was manually annotated 2 times for cluster B6.

Info for manual annotations of cluster DR:
•Start number 3 was manually annotated 8 times for cluster DR.
•Start number 4 was manually annotated 2 times for cluster DR.

Info for manual annotations of cluster EI:
•Start number 3 was manually annotated 1 time for cluster EI.

Info for manual annotations of cluster FM:
•Start number 5 was manually annotated 2 times for cluster FM.
•Start number 9 was manually annotated 2 times for cluster FM.

Gene Information:

Gene: 39HC_01 Start: 1, Stop: 810, Start Num: 4
Candidate Starts for 39HC_01:
(Start: 4 @1 has 44 MA's), (14, 106), (24, 208), (34, 277), (36, 295), (37, 310), (46, 424), (60, 541), (63, 586), (65, 592), (68, 601),

Gene: 40BC_01 Start: 1, Stop: 810, Start Num: 4
Candidate Starts for 40BC_01:
(Start: 4 @1 has 44 MA's), (14, 106), (24, 208), (34, 277), (36, 295), (37, 310), (46, 424), (60, 541), (63, 586), (65, 592), (68, 601),

Gene: Acadian_1 Start: 1, Stop: 816, Start Num: 4

Candidate Starts for Acadian_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (37, 304), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (88, 739),

Gene: Ahwei_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Ahwei_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: AnarQue_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for AnarQue_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (80, 703), (81, 706), (94, 775),

Gene: Antihero_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Antihero_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Apex_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Apex_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: Austelle_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Austelle_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: Baee_1 Start: 1, Stop: 822, Start Num: 4
Candidate Starts for Baee_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (12, 67), (35, 277), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (93, 769),

Gene: BigAnti_66 Start: 50973, Stop: 51656, Start Num: 5
Candidate Starts for BigAnti_66:
(Start: 5 @50973 has 2 MA's), (17, 51114), (21, 51153), (33, 51219), (34, 51222), (38, 51258), (39, 51306), (42, 51327), (46, 51366), (48, 51378), (63, 51519), (70, 51552),

Gene: BigAnti_67 Start: 51667, Stop: 52422, Start Num: 8
Candidate Starts for BigAnti_67:
(8, 51667), (21, 51826), (26, 51874), (34, 51919), (38, 51955), (41, 52015), (63, 52249), (64, 52252), (67, 52258), (71, 52288), (73, 52297),

Gene: Blackpen_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for Blackpen_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (49, 451), (80, 703), (81, 706), (94, 775),

Gene: BobRoss2024_1 Start: 1, Stop: 780, Start Num: 4
Candidate Starts for BobRoss2024_1:
(Start: 4 @1 has 44 MA's), (13, 97), (21, 187), (24, 211), (64, 589), (81, 688),

Gene: BobbyK_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for BobbyK_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (68, 592), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: BrownCNA_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for BrownCNA_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: CaiB_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for CaiB_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (70, 637), (80, 703), (81, 706), (94, 775),

Gene: ChrisnMich_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for ChrisnMich_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: CloverMinnie_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for CloverMinnie_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (80, 703), (81, 706), (94, 775),

Gene: Cooper_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Cooper_1:
(Start: 4 @1 has 44 MA's), (8, 19), (13, 88), (14, 100), (21, 178), (24, 202), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (43, 388), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (90, 733),

Gene: DigitDog_1 Start: 1, Stop: 807, Start Num: 4
Candidate Starts for DigitDog_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (22, 181), (30, 256), (35, 277), (37, 304), (52, 463), (58, 538), (63, 595), (65, 601), (66, 604), (69, 616), (74, 646), (80, 694),

Gene: Donny_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for Donny_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (37, 304), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (88, 739),

Gene: EastView9101_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for EastView9101_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (37, 304), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (88, 739),

Gene: Epah_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Epah_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Evaa_1 Start: 1, Stop: 699, Start Num: 4
Candidate Starts for Evaa_1:
(Start: 4 @1 has 44 MA's), (21, 190), (37, 316), (41, 379), (50, 457), (56, 517), (59, 538), (62, 577), (78, 676), (82, 691),

Gene: Fanaw_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Fanaw_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (45, 397), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679), (89, 733),

Gene: FelixTres_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for FelixTres_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (80, 703), (81, 706), (94, 775),

Gene: ForDig_1 Start: 1, Stop: 810, Start Num: 4
Candidate Starts for ForDig_1:
(Start: 4 @1 has 44 MA's), (14, 106), (24, 208), (34, 277), (36, 295), (37, 310), (46, 424), (60, 541), (63, 586), (65, 592), (68, 601),

Gene: Fortunato_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Fortunato_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: Frederick_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Frederick_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: GinPorsche_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for GinPorsche_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Hally898_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Hally898_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Hangman_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Hangman_1:

(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (46, 418), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: Heath_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Heath_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (15, 109), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (68, 592), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: Hosp_096 Start: 68870, Stop: 69679, Start Num: 4
Candidate Starts for Hosp_096:
(1, 68831), (Start: 4 @68870 has 44 MA's), (14, 68975), (24, 69077), (34, 69146), (36, 69164), (37, 69179), (46, 69293), (60, 69410), (63, 69455), (65, 69461), (68, 69470),

Gene: Hydro_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Hydro_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Indlovu_1 Start: 1, Stop: 825, Start Num: 4
Candidate Starts for Indlovu_1:
(Start: 4 @1 has 44 MA's), (14, 100), (21, 178), (36, 289), (37, 304), (38, 307), (41, 367), (58, 538), (60, 553), (63, 598), (65, 604), (68, 613), (80, 697),

Gene: JAMaL_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for JAMaL_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (68, 592), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: JaguarMi_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for JaguarMi_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (15, 109), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676),

Gene: Jolie1_01 Start: 1, Stop: 810, Start Num: 4
Candidate Starts for Jolie1_01:
(Start: 4 @1 has 44 MA's), (14, 106), (24, 208), (34, 277), (36, 295), (37, 310), (38, 313), (46, 424), (60, 541), (63, 586), (65, 592), (68, 601),

Gene: JoyceMaria_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for JoyceMaria_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (46, 418), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: KarasumaRum_1 Start: 1, Stop: 807, Start Num: 4
Candidate Starts for KarasumaRum_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (30, 256), (35, 277), (37, 304), (52, 463), (58, 538), (63, 595), (65, 601), (66, 604), (69, 616), (74, 646),

Gene: KayaCho_1 Start: 1, Stop: 813, Start Num: 4
Candidate Starts for KayaCho_1:
(Start: 4 @1 has 44 MA's), (14, 106), (24, 208), (36, 295), (37, 310), (46, 424), (60, 544), (63, 589), (65, 595), (68, 604),

Gene: Kharcho_73 Start: 42919, Stop: 43530, Start Num: 9
Candidate Starts for Kharcho_73:
(Start: 9 @42919 has 2 MA's), (31, 43129), (47, 43291),

Gene: Kharcho_72 Start: 42263, Stop: 42922, Start Num: 5
Candidate Starts for Kharcho_72:
(Start: 5 @42263 has 2 MA's), (11, 42293), (17, 42395), (83, 42872),

Gene: Kozie_86 Start: 51332, Stop: 52135, Start Num: 3
Candidate Starts for Kozie_86:
(Start: 3 @51332 has 9 MA's), (10, 51377), (17, 51488), (27, 51590), (29, 51605), (44, 51764), (58, 51926), (61, 51959), (72, 52028),

Gene: Lambano_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Lambano_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: LilMcDreamy_1 Start: 1, Stop: 852, Start Num: 4
Candidate Starts for LilMcDreamy_1:
(Start: 4 @1 has 44 MA's), (13, 97), (21, 187), (24, 211), (30, 265), (36, 298), (51, 457), (53, 475), (55, 595), (57, 619), (63, 679), (75, 736),

Gene: LittleDigger_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for LittleDigger_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: LittleMunchkin_1 Start: 10, Stop: 807, Start Num: 4
Candidate Starts for LittleMunchkin_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (17, 154), (20, 187), (21, 193), (22, 196), (23, 199), (28, 250), (30, 271), (31, 277), (35, 292), (38, 322), (91, 763), (94, 778),

Gene: Lolalove_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Lolalove_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: Magpie_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Magpie_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: MakoManhole_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for MakoManhole_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (80, 703), (81, 706), (94, 775),

Gene: Minnow_1 Start: 1, Stop: 813, Start Num: 4
Candidate Starts for Minnow_1:
(Start: 4 @1 has 44 MA's), (14, 106), (24, 208), (36, 295), (37, 310), (46, 424), (60, 544), (63, 589), (65, 595), (68, 604),

Gene: Mithril_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Mithril_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: MossRose_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for MossRose_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (80, 703), (81, 706), (94, 775),

Gene: Mudslide_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Mudslide_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: Mysterious_1 Start: 1, Stop: 813, Start Num: 4
Candidate Starts for Mysterious_1:
(Start: 4 @1 has 44 MA's), (8, 19), (13, 88), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (52, 463), (58, 535), (63, 592), (65, 598), (66, 601), (69, 613), (74, 643), (77, 670), (86, 712), (91, 754), (92, 763),

Gene: Nanao_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Nanao_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Nangang_1 Start: 1, Stop: 807, Start Num: 4
Candidate Starts for Nangang_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (22, 181), (30, 256), (35, 277), (37, 304), (52, 463), (58, 538), (63, 595), (65, 601), (66, 604), (69, 616), (74, 646),

Gene: Nehemiah_98 Start: 70135, Stop: 813, Start Num: 2
Candidate Starts for Nehemiah_98:
(2, 70135), (Start: 4 @70153 has 44 MA's), (8, 70171), (13, 70240), (21, 70330), (24, 70354), (30, 70408), (31, 70414), (35, 70429), (36, 70441), (37, 70456), (52, 70615), (58, 70687), (63, 70744), (65, 70750), (66, 70753), (69, 70765), (74, 70795), (77, 70822), (86, 70864), (91, 70906), (92, 70915),

Gene: Nigel_1 Start: 1, Stop: 789, Start Num: 4
Candidate Starts for Nigel_1:

(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (21, 178), (24, 202), (30, 256), (31, 262), (37, 304), (41, 367), (47, 427), (54, 466), (63, 568), (64, 571), (68, 583), (71, 607), (76, 634), (77, 646), (80, 667), (81, 670),

Gene: Ottawa_72 Start: 42213, Stop: 42872, Start Num: 5
Candidate Starts for Ottawa_72:
(Start: 5 @42213 has 2 MA's), (11, 42243), (17, 42345), (83, 42822),

Gene: Ottawa_73 Start: 42869, Stop: 43480, Start Num: 9
Candidate Starts for Ottawa_73:
(Start: 9 @42869 has 2 MA's), (31, 43079), (47, 43241),

Gene: Phelemich_1 Start: 1, Stop: 813, Start Num: 4
Candidate Starts for Phelemich_1:
(Start: 4 @1 has 44 MA's), (8, 19), (13, 88), (21, 178), (30, 256), (31, 262), (35, 277), (37, 304), (52, 463), (58, 535), (63, 592), (65, 598), (66, 601), (69, 613), (74, 643), (77, 670), (86, 712), (91, 754), (92, 763),

Gene: Poster_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Poster_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Prince_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Prince_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: QueenPie_1 Start: 88, Stop: 798, Start Num: 13
Candidate Starts for QueenPie_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: RawrgerThat_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for RawrgerThat_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: Reccee_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for Reccee_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (95, 769),

Gene: Renkei_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Renkei_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (22, 181), (24, 202), (30, 256), (31, 262), (35, 277), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679), (95, 754),

Gene: Reprobate_1 Start: 1, Stop: 810, Start Num: 4
Candidate Starts for Reprobate_1:
(Start: 4 @1 has 44 MA's), (8, 19), (13, 88), (30, 256), (31, 262), (35, 277), (37, 304), (52, 463), (58, 532), (63, 589), (65, 595), (66, 598), (69, 610), (74, 640), (77, 667), (86, 709), (91, 751), (92, 760),

Gene: Rich_1 Start: 1, Stop: 819, Start Num: 4
Candidate Starts for Rich_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (12, 67), (35, 277), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646),

Gene: Rita130_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for Rita130_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (37, 304), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (95, 769),

Gene: Serendipitous_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for Serendipitous_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (30, 256), (35, 277), (40, 358), (52, 463), (58, 538), (63, 595), (65, 601), (66, 604), (69, 616), (74, 646), (88, 739),

Gene: Shenyu_1 Start: 1, Stop: 807, Start Num: 4
Candidate Starts for Shenyu_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (22, 181), (30, 256), (35, 277), (37, 304), (52, 463), (58, 538), (63, 595), (65, 601), (66, 604), (69, 616), (74, 646),

Gene: SirJeffery_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for SirJeffery_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (37, 304), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (88, 739),

Gene: Stinger_1 Start: 1, Stop: 789, Start Num: 4
Candidate Starts for Stinger_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (21, 178), (24, 202), (30, 256), (31, 262), (37, 304), (41, 367), (54, 466), (63, 568), (64, 571), (65, 574), (71, 607), (76, 634), (77, 646), (80, 667), (81, 670),

Gene: StinkyVeggy_1 Start: 1, Stop: 807, Start Num: 4
Candidate Starts for StinkyVeggy_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (30, 256), (35, 277), (37, 304), (52, 463), (58, 538), (63, 595), (65, 601), (66, 604), (69, 616), (74, 646),

Gene: Suigeneris_1 Start: 1, Stop: 816, Start Num: 4
Candidate Starts for Suigeneris_1:
(Start: 4 @1 has 44 MA's), (7, 16), (8, 19), (21, 178), (30, 256), (35, 277), (37, 304), (40, 358), (52, 463), (58, 538), (63, 595), (66, 604), (74, 646), (88, 739),

Gene: Tonitrus_1 Start: 1, Stop: 750, Start Num: 6
Candidate Starts for Tonitrus_1:
(Start: 6 @1 has 1 MA's), (10, 16), (17, 127), (18, 130), (20, 160), (21, 166), (22, 169), (24, 190), (30, 244), (32, 253), (37, 292), (41, 355), (57, 496), (60, 514), (64, 559), (65, 562), (71, 595), (74, 607), (79, 652), (81, 658), (85, 667), (87, 685),

Gene: TraderJ_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for TraderJ_1:

(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (21, 193), (24, 217), (25, 223), (35, 292), (39, 370), (49, 451), (60, 562), (80, 703), (81, 706), (94, 775),

Gene: VioletZ_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for VioletZ_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),

Gene: Waleliano_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Waleliano_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (37, 304), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676), (84, 685),

Gene: Wooper_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for Wooper_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (68, 619), (80, 703), (81, 706), (94, 775),

Gene: Xincheng_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Xincheng_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (15, 109), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (71, 616), (76, 643), (77, 655), (80, 676),

Gene: Yeshua_1 Start: 1, Stop: 804, Start Num: 3
Candidate Starts for Yeshua_1:
(Start: 3 @1 has 9 MA's), (Start: 4 @10 has 44 MA's), (16, 151), (21, 193), (24, 217), (25, 223), (35, 292), (37, 319), (38, 322), (81, 706), (94, 775),

Gene: Zemanar_1 Start: 1, Stop: 798, Start Num: 4
Candidate Starts for Zemanar_1:
(Start: 4 @1 has 44 MA's), (13, 88), (14, 100), (15, 109), (19, 148), (21, 178), (24, 202), (30, 256), (31, 262), (35, 277), (36, 289), (38, 307), (41, 367), (54, 466), (63, 577), (64, 580), (65, 583), (68, 592), (71, 616), (76, 643), (77, 655), (80, 676), (81, 679),