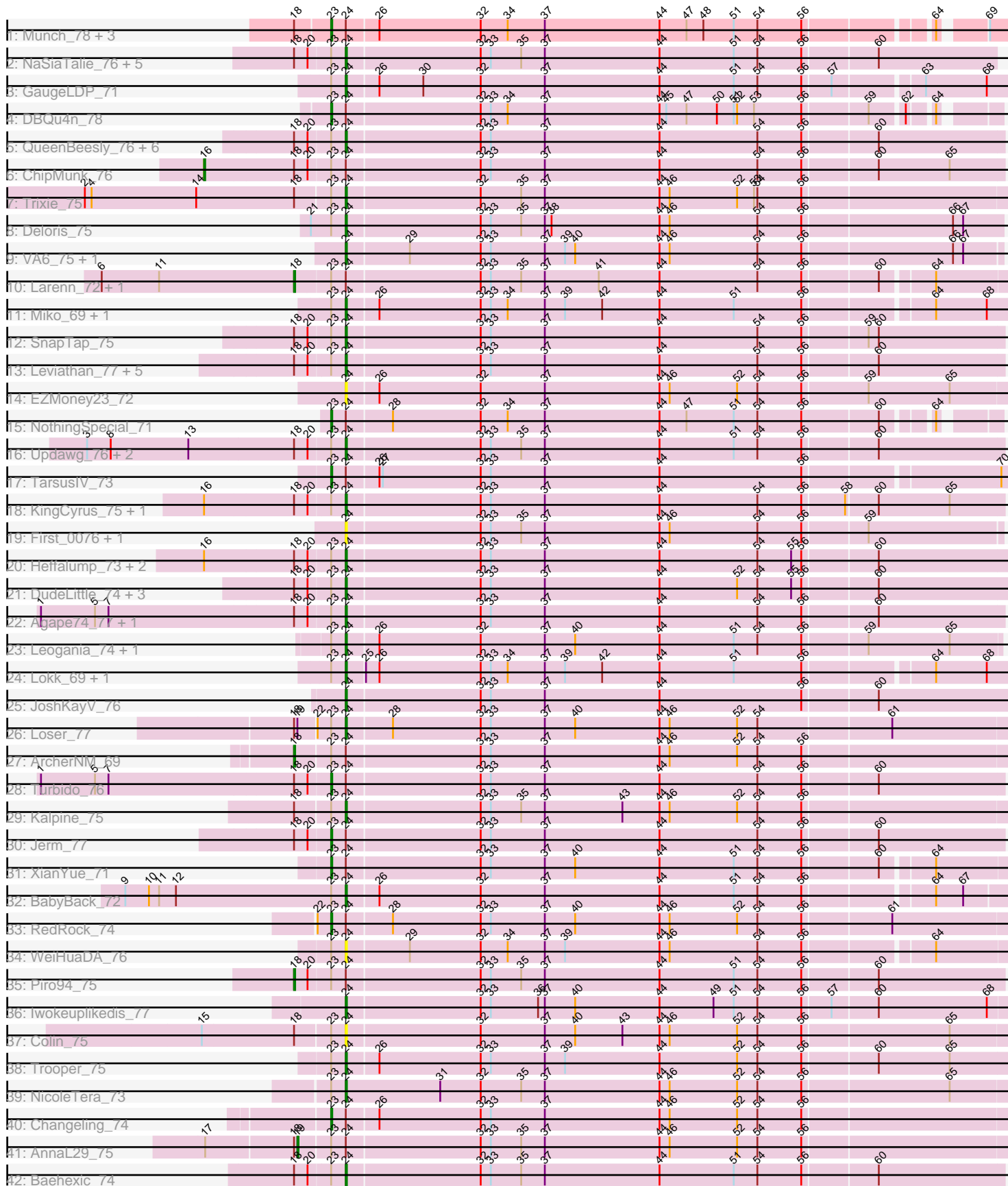


Pham 193957



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 193957 Report

This analysis was run 11/02/24 on database version 579.

Pham number 193957 has 76 members, 5 are drafts.

Phages represented in each track:

- Track 1 : Munch_78, Bud_73, Fibonacci_77, Mulciber_76
- Track 2 : NaSiaTalie_76, Drake55_77, HarryHoudini_76, Centaur_76, Flare16_76, MiculUcigas_76
- Track 3 : GaugeLDP_71
- Track 4 : DBQu4n_78
- Track 5 : QueenBeesly_76, Georgie2_77, Crucio_76, SemperFi_76, FiringLine_76, SweetiePie_75, Power_75
- Track 6 : ChipMunk_76
- Track 7 : Trixie_75
- Track 8 : Deloris_75
- Track 9 : VA6_75, AN3_77
- Track 10 : Larenn_72, Malec_73
- Track 11 : Miko_69, BobSwaget_68
- Track 12 : SnapTap_75
- Track 13 : Leviathan_77, Whabigail7_76, Dignity_77, LilTurb_76, Smeagan_78, Buggy_77
- Track 14 : EZMoney23_72
- Track 15 : NothingSpecial_71
- Track 16 : Updawg_76, Equemioh13_75, WideWale_76
- Track 17 : TarsusIV_73
- Track 18 : KingCyrus_75, EvilGenius_75
- Track 19 : First_0076, 20ES_77
- Track 20 : Heffalump_73, Fameo_74, QueenB2_73
- Track 21 : DudeLittle_74, Retro23_76, Anselm_77, Dalmatian_76
- Track 22 : Agape74_77, AbbyPaige_77
- Track 23 : Leogania_74, BiancaTri92_74
- Track 24 : Lokk_69, Rachaly_71
- Track 25 : JoshKayV_76
- Track 26 : Loser_77
- Track 27 : ArcherNM_69
- Track 28 : Turbido_76
- Track 29 : Kalpine_75
- Track 30 : Jerm_77
- Track 31 : XianYue_71
- Track 32 : BabyBack_72
- Track 33 : RedRock_74
- Track 34 : WeiHuaDA_76

- Track 35 : Piro94_75
- Track 36 : Iwokeuplikedis_77
- Track 37 : Colin_75
- Track 38 : Trooper_75
- Track 39 : NicoleTera_73
- Track 40 : Changeling_74
- Track 41 : AnnaL29_75
- Track 42 : Baehexic_74

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

The start number called the most often in the published annotations is 24, it was called in 53 of the 71 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- 20ES_77, AN3_77, AbbyPaige_77, Agape74_77, Anselm_77, BabyBack_72, Baehexic_74, BiancaTri92_74, BobSwaget_68, Buggy_77, Centaur_76, Colin_75, Crucio_76, Dalmatian_76, Deloris_75, Dignity_77, Drake55_77, DudeLittle_74, EZMoney23_72, Equemioh13_75, EvilGenius_75, Fameo_74, FiringLine_76, First_0076, Flare16_76, GaugeLDP_71, Georgie2_77, HarryHoudini_76, Heffalump_73, Iwokeuplikedis_77, JoshKayV_76, Kalpine_75, KingCyrus_75, Leogania_74, Leviathan_77, LilTurb_76, Lokk_69, Loser_77, MiculUcigas_76, Miko_69, NaSiaTalie_76, NicoleTera_73, Power_75, QueenB2_73, QueenBeesly_76, Rachaly_71, Retro23_76, SemperFi_76, Smeagan_78, SnapTap_75, SweetiePie_75, Trixie_75, Trooper_75, Updawg_76, VA6_75, WeiHuaDA_76, Whabigail7_76, WideWale_76,

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

- AnnaL29_75, ArcherNM_69, Bud_73, Changeling_74, ChipMunk_76, DBQu4n_78, Fibonacci_77, Jerm_77, Larenn_72, Malec_73, Mulciber_76, Munch_78, NothingSpecial_71, Piro94_75, RedRock_74, TarsusIV_73, Turbido_76, XianYue_71,

Genes that do not have the "Most Annotated" start:

-

Summary by start number:

Start 16:

- Found in 6 of 76 (7.9%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 16.7% of time when present
- Phage (with cluster) where this start called: ChipMunk_76 (A2),

Start 18:

- Found in 51 of 76 (67.1%) of genes in pham
- Manual Annotations of this start: 4 of 71
- Called 7.8% of time when present
- Phage (with cluster) where this start called: ArcherNM_69 (A2), Larenn_72 (A2), Malec_73 (A2), Piro94_75 (A2),

Start 19:

- Found in 2 of 76 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 71
- Called 50.0% of time when present
- Phage (with cluster) where this start called: AnnaL29_75 (A2),

Start 23:

- Found in 69 of 76 (90.8%) of genes in pham
- Manual Annotations of this start: 12 of 71
- Called 17.4% of time when present
- Phage (with cluster) where this start called: Bud_73 (A11), Changeling_74 (A2), DBQu4n_78 (A2), Fibonacci_77 (A11), Jerm_77 (A2), Mulciber_76 (A11), Munch_78 (A11), NothingSpecial_71 (A2), RedRock_74 (A2), TarsusIV_73 (A2), Turbido_76 (A2), XianYue_71 (A2),

Start 24:

- Found in 76 of 76 (100.0%) of genes in pham
- Manual Annotations of this start: 53 of 71
- Called 76.3% of time when present
- Phage (with cluster) where this start called: 20ES_77 (A2), AN3_77 (A2), AbbyPaige_77 (A2), Agape74_77 (A2), Anselm_77 (A2), BabyBack_72 (A2), Baehexic_74 (A2), BiancaTri92_74 (A2), BobSwaget_68 (A2), Buggy_77 (A2), Centaur_76 (A2), Colin_75 (A2), Crucio_76 (A2), Dalmatian_76 (A2), Deloris_75 (A2), Dignity_77 (A2), Drake55_77 (A2), DudeLittle_74 (A2), EZMoney23_72 (A2), Equemioh13_75 (A2), EvilGenius_75 (A2), Fameo_74 (A2), FiringLine_76 (A2), First_0076 (A2), Flare16_76 (A2), GaugeLDP_71 (A2), Georgie2_77 (A2), HarryHoudini_76 (A2), Heffalump_73 (A2), Iwokeuplieddis_77 (A2), JoshKayV_76 (A2), Kalpine_75 (A2), KingCyrus_75 (A2), Leogania_74 (A2), Leviathan_77 (A2), LilTurb_76 (A2), Lokk_69 (A2), Loser_77 (A2), MiculUcigas_76 (A2), Miko_69 (A2), NaSiaTalie_76 (A2), NicoleTera_73 (A2), Power_75 (A2), QueenB2_73 (A2), QueenBeesly_76 (A2), Rachaly_71 (A2), Retro23_76 (A2), SemperFi_76 (A2), Smeagan_78 (A2), SnapTap_75 (A2), SweetiePie_75 (A2), Trixie_75 (A2), Trooper_75 (A2), Updawg_76 (A2), VA6_75 (A2), WeiHuaDA_76 (A2), Whabigail7_76 (A2), WideWale_76 (A2),

Summary by clusters:

There are 2 clusters represented in this pham: A2, A11,

Info for manual annotations of cluster A11:

- Start number 23 was manually annotated 4 times for cluster A11.

Info for manual annotations of cluster A2:

- Start number 16 was manually annotated 1 time for cluster A2.
- Start number 18 was manually annotated 4 times for cluster A2.
- Start number 19 was manually annotated 1 time for cluster A2.
- Start number 23 was manually annotated 8 times for cluster A2.
- Start number 24 was manually annotated 53 times for cluster A2.

Gene Information:

Gene: 20ES_77 Start: 45500, Stop: 44928, Start Num: 24

Candidate Starts for 20ES_77:

(Start: 24 @45500 has 53 MA's), (32, 45383), (33, 45374), (35, 45347), (37, 45326), (44, 45224), (46, 45215), (54, 45137), (56, 45098), (59, 45044),

Gene: AN3_77 Start: 44285, Stop: 43713, Start Num: 24

Candidate Starts for AN3_77:

(Start: 24 @44285 has 53 MA's), (29, 44231), (32, 44168), (33, 44159), (37, 44111), (39, 44093), (40, 44084), (44, 44009), (46, 44000), (54, 43922), (56, 43883), (66, 43754), (67, 43745),

Gene: AbbyPaige_77 Start: 45770, Stop: 45195, Start Num: 24

Candidate Starts for AbbyPaige_77:

(1, 46034), (5, 45986), (7, 45974), (Start: 18 @45812 has 4 MA's), (20, 45800), (Start: 23 @45782 has 12 MA's), (Start: 24 @45770 has 53 MA's), (32, 45653), (33, 45644), (37, 45596), (44, 45494), (54, 45407), (56, 45368), (60, 45305),

Gene: Agape74_77 Start: 45765, Stop: 45190, Start Num: 24

Candidate Starts for Agape74_77:

(1, 46029), (5, 45981), (7, 45969), (Start: 18 @45807 has 4 MA's), (20, 45795), (Start: 23 @45777 has 12 MA's), (Start: 24 @45765 has 53 MA's), (32, 45648), (33, 45639), (37, 45591), (44, 45489), (54, 45402), (56, 45363), (60, 45300),

Gene: AnnaL29_75 Start: 45761, Stop: 45144, Start Num: 19

Candidate Starts for AnnaL29_75:

(17, 45839), (Start: 18 @45764 has 4 MA's), (Start: 19 @45761 has 1 MA's), (Start: 23 @45734 has 12 MA's), (Start: 24 @45722 has 53 MA's), (32, 45605), (33, 45596), (35, 45569), (37, 45548), (44, 45446), (46, 45437), (52, 45377), (54, 45359), (56, 45320),

Gene: Anselm_77 Start: 45836, Stop: 45258, Start Num: 24

Candidate Starts for Anselm_77:

(Start: 18 @45878 has 4 MA's), (20, 45866), (Start: 23 @45848 has 12 MA's), (Start: 24 @45836 has 53 MA's), (32, 45719), (33, 45710), (37, 45662), (44, 45560), (52, 45491), (54, 45473), (55, 45443), (56, 45434), (60, 45371),

Gene: ArcherNM_69 Start: 45032, Stop: 44412, Start Num: 18

Candidate Starts for ArcherNM_69:

(Start: 18 @45032 has 4 MA's), (Start: 23 @45002 has 12 MA's), (Start: 24 @44990 has 53 MA's), (32, 44873), (33, 44864), (37, 44816), (44, 44714), (46, 44705), (52, 44645), (54, 44627), (56, 44588),

Gene: BabyBack_72 Start: 45412, Stop: 44843, Start Num: 24

Candidate Starts for BabyBack_72:

(9, 45607), (10, 45586), (11, 45577), (12, 45562), (Start: 23 @45424 has 12 MA's), (Start: 24 @45412 has 53 MA's), (26, 45385), (32, 45295), (37, 45238), (44, 45136), (51, 45070), (54, 45049), (56, 45010), (64, 44905), (67, 44881),

Gene: Baehexic_74 Start: 45162, Stop: 44587, Start Num: 24

Candidate Starts for Baehexic_74:

(Start: 18 @45204 has 4 MA's), (20, 45192), (Start: 23 @45174 has 12 MA's), (Start: 24 @45162 has 53 MA's), (32, 45045), (33, 45036), (35, 45009), (37, 44988), (44, 44886), (51, 44820), (54, 44799), (56, 44760), (60, 44697),

Gene: BiancaTri92_74 Start: 45410, Stop: 44838, Start Num: 24

Candidate Starts for BiancaTri92_74:

(Start: 23 @45422 has 12 MA's), (Start: 24 @45410 has 53 MA's), (26, 45383), (32, 45293), (37, 45236), (40, 45209), (44, 45134), (51, 45068), (54, 45047), (56, 45008), (59, 44954), (65, 44882),

Gene: BobSwaget_68 Start: 43285, Stop: 42713, Start Num: 24

Candidate Starts for BobSwaget_68:

(Start: 23 @43297 has 12 MA's), (Start: 24 @43285 has 53 MA's), (26, 43258), (32, 43168), (33, 43159), (34, 43144), (37, 43111), (39, 43093), (42, 43060), (44, 43009), (51, 42943), (56, 42883), (64, 42778), (68, 42733),

Gene: Bud_73 Start: 43799, Stop: 43236, Start Num: 23

Candidate Starts for Bud_73:

(Start: 18 @43829 has 4 MA's), (Start: 23 @43799 has 12 MA's), (Start: 24 @43787 has 53 MA's), (26, 43760), (32, 43670), (34, 43646), (37, 43613), (44, 43511), (47, 43487), (48, 43472), (51, 43445), (54, 43424), (56, 43385), (64, 43286), (69, 43253),

Gene: Buggy_77 Start: 45815, Stop: 45240, Start Num: 24

Candidate Starts for Buggy_77:

(Start: 18 @45857 has 4 MA's), (20, 45845), (Start: 23 @45827 has 12 MA's), (Start: 24 @45815 has 53 MA's), (32, 45698), (33, 45689), (37, 45641), (44, 45539), (54, 45452), (56, 45413), (60, 45350),

Gene: Centaur_76 Start: 45368, Stop: 44799, Start Num: 24

Candidate Starts for Centaur_76:

(Start: 18 @45410 has 4 MA's), (20, 45398), (Start: 23 @45380 has 12 MA's), (Start: 24 @45368 has 53 MA's), (32, 45251), (33, 45242), (35, 45215), (37, 45194), (44, 45092), (51, 45026), (54, 45005), (56, 44966), (60, 44903),

Gene: Changeling_74 Start: 45726, Stop: 45136, Start Num: 23

Candidate Starts for Changeling_74:

(Start: 23 @45726 has 12 MA's), (Start: 24 @45714 has 53 MA's), (26, 45687), (32, 45597), (33, 45588), (37, 45540), (44, 45438), (46, 45429), (52, 45369), (54, 45351), (56, 45312),

Gene: ChipMunk_76 Start: 46976, Stop: 46281, Start Num: 16

Candidate Starts for ChipMunk_76:

(Start: 16 @46976 has 1 MA's), (Start: 18 @46898 has 4 MA's), (20, 46886), (Start: 23 @46868 has 12 MA's), (Start: 24 @46856 has 53 MA's), (32, 46739), (33, 46730), (37, 46682), (44, 46580), (54, 46493), (56, 46454), (60, 46391), (65, 46328),

Gene: Colin_75 Start: 46429, Stop: 45851, Start Num: 24

Candidate Starts for Colin_75:

(15, 46552), (Start: 18 @46471 has 4 MA's), (Start: 23 @46441 has 12 MA's), (Start: 24 @46429 has 53 MA's), (32, 46312), (37, 46255), (40, 46228), (43, 46186), (44, 46153), (46, 46144), (52, 46084), (54, 46066), (56, 46027), (65, 45901),

Gene: Crucio_76 Start: 45736, Stop: 45161, Start Num: 24

Candidate Starts for Crucio_76:

(Start: 18 @45778 has 4 MA's), (20, 45766), (Start: 23 @45748 has 12 MA's), (Start: 24 @45736 has 53 MA's), (32, 45619), (33, 45610), (37, 45562), (44, 45460), (54, 45373), (56, 45334), (60, 45271),

Gene: DBQu4n_78 Start: 45869, Stop: 45312, Start Num: 23

Candidate Starts for DBQu4n_78:

(Start: 23 @45869 has 12 MA's), (Start: 24 @45857 has 53 MA's), (32, 45740), (33, 45731), (34, 45716), (37, 45683), (44, 45581), (45, 45575), (47, 45557), (50, 45530), (51, 45515), (52, 45512), (53, 45497), (56, 45455), (59, 45401), (62, 45374), (64, 45356),

Gene: Dalmatian_76 Start: 45555, Stop: 44977, Start Num: 24

Candidate Starts for Dalmatian_76:

(Start: 18 @45597 has 4 MA's), (20, 45585), (Start: 23 @45567 has 12 MA's), (Start: 24 @45555 has 53 MA's), (32, 45438), (33, 45429), (37, 45381), (44, 45279), (52, 45210), (54, 45192), (55, 45162), (56, 45153), (60, 45090),

Gene: Deloris_75 Start: 45154, Stop: 44579, Start Num: 24

Candidate Starts for Deloris_75:

(21, 45184), (Start: 23 @45166 has 12 MA's), (Start: 24 @45154 has 53 MA's), (32, 45037), (33, 45028), (35, 45001), (37, 44980), (38, 44974), (44, 44878), (46, 44869), (54, 44791), (56, 44752), (66, 44623), (67, 44614),

Gene: Dignity_77 Start: 45853, Stop: 45278, Start Num: 24

Candidate Starts for Dignity_77:

(Start: 18 @45895 has 4 MA's), (20, 45883), (Start: 23 @45865 has 12 MA's), (Start: 24 @45853 has 53 MA's), (32, 45736), (33, 45727), (37, 45679), (44, 45577), (54, 45490), (56, 45451), (60, 45388),

Gene: Drake55_77 Start: 45449, Stop: 44874, Start Num: 24

Candidate Starts for Drake55_77:

(Start: 18 @45491 has 4 MA's), (20, 45479), (Start: 23 @45461 has 12 MA's), (Start: 24 @45449 has 53 MA's), (32, 45332), (33, 45323), (35, 45296), (37, 45275), (44, 45173), (51, 45107), (54, 45086), (56, 45047), (60, 44984),

Gene: DudeLittle_74 Start: 45321, Stop: 44743, Start Num: 24

Candidate Starts for DudeLittle_74:

(Start: 18 @45363 has 4 MA's), (20, 45351), (Start: 23 @45333 has 12 MA's), (Start: 24 @45321 has 53 MA's), (32, 45204), (33, 45195), (37, 45147), (44, 45045), (52, 44976), (54, 44958), (55, 44928), (56, 44919), (60, 44856),

Gene: EZMoney23_72 Start: 45225, Stop: 44641, Start Num: 24

Candidate Starts for EZMoney23_72:

(Start: 24 @45225 has 53 MA's), (26, 45198), (32, 45108), (37, 45051), (44, 44949), (46, 44940), (52, 44880), (54, 44862), (56, 44823), (59, 44766), (65, 44694),

Gene: Equemioh13_75 Start: 45271, Stop: 44696, Start Num: 24

Candidate Starts for Equemioh13_75:

(3, 45496), (8, 45475), (13, 45406), (Start: 18 @45313 has 4 MA's), (20, 45301), (Start: 23 @45283 has 12 MA's), (Start: 24 @45271 has 53 MA's), (32, 45154), (33, 45145), (35, 45118), (37, 45097), (44, 44995), (51, 44929), (54, 44908), (56, 44869), (60, 44806),

Gene: EvilGenius_75 Start: 46857, Stop: 46282, Start Num: 24

Candidate Starts for EvilGenius_75:

(Start: 16 @46977 has 1 MA's), (Start: 18 @46899 has 4 MA's), (20, 46887), (Start: 23 @46869 has 12 MA's), (Start: 24 @46857 has 53 MA's), (32, 46740), (33, 46731), (37, 46683), (44, 46581), (54, 46494), (56, 46455), (58, 46419), (60, 46392), (65, 46329),

Gene: Fameo_74 Start: 45363, Stop: 44785, Start Num: 24

Candidate Starts for Fameo_74:

(Start: 16 @45483 has 1 MA's), (Start: 18 @45405 has 4 MA's), (20, 45393), (Start: 23 @45375 has 12 MA's), (Start: 24 @45363 has 53 MA's), (32, 45246), (33, 45237), (37, 45189), (44, 45087), (54, 45000), (55, 44970), (56, 44961), (60, 44898),

Gene: Fibonacci_77 Start: 44902, Stop: 44339, Start Num: 23

Candidate Starts for Fibonacci_77:

(Start: 18 @44932 has 4 MA's), (Start: 23 @44902 has 12 MA's), (Start: 24 @44890 has 53 MA's), (26, 44863), (32, 44773), (34, 44749), (37, 44716), (44, 44614), (47, 44590), (48, 44575), (51, 44548), (54, 44527), (56, 44488), (64, 44389), (69, 44356),

Gene: FiringLine_76 Start: 45718, Stop: 45143, Start Num: 24

Candidate Starts for FiringLine_76:

(Start: 18 @45760 has 4 MA's), (20, 45748), (Start: 23 @45730 has 12 MA's), (Start: 24 @45718 has 53 MA's), (32, 45601), (33, 45592), (37, 45544), (44, 45442), (54, 45355), (56, 45316), (60, 45253),

Gene: First_0076 Start: 45400, Stop: 44828, Start Num: 24

Candidate Starts for First_0076:

(Start: 24 @45400 has 53 MA's), (32, 45283), (33, 45274), (35, 45247), (37, 45226), (44, 45124), (46, 45115), (54, 45037), (56, 44998), (59, 44944),

Gene: Flare16_76 Start: 45412, Stop: 44843, Start Num: 24

Candidate Starts for Flare16_76:

(Start: 18 @45454 has 4 MA's), (20, 45442), (Start: 23 @45424 has 12 MA's), (Start: 24 @45412 has 53 MA's), (32, 45295), (33, 45286), (35, 45259), (37, 45238), (44, 45136), (51, 45070), (54, 45049), (56, 45010), (60, 44947),

Gene: GaugeLDP_71 Start: 44968, Stop: 44396, Start Num: 24

Candidate Starts for GaugeLDP_71:

(Start: 23 @44980 has 12 MA's), (Start: 24 @44968 has 53 MA's), (26, 44941), (30, 44902), (32, 44851), (37, 44794), (44, 44692), (51, 44626), (54, 44605), (56, 44566), (57, 44542), (63, 44470), (68, 44416),

Gene: Georgie2_77 Start: 45763, Stop: 45188, Start Num: 24

Candidate Starts for Georgie2_77:

(Start: 18 @45805 has 4 MA's), (20, 45793), (Start: 23 @45775 has 12 MA's), (Start: 24 @45763 has 53 MA's), (32, 45646), (33, 45637), (37, 45589), (44, 45487), (54, 45400), (56, 45361), (60, 45298),

Gene: HarryHoudini_76 Start: 45446, Stop: 44871, Start Num: 24

Candidate Starts for HarryHoudini_76:

(Start: 18 @45488 has 4 MA's), (20, 45476), (Start: 23 @45458 has 12 MA's), (Start: 24 @45446 has 53 MA's), (32, 45329), (33, 45320), (35, 45293), (37, 45272), (44, 45170), (51, 45104), (54, 45083), (56, 45044), (60, 44981),

Gene: Heffalump_73 Start: 45831, Stop: 45253, Start Num: 24

Candidate Starts for Heffalump_73:

(Start: 16 @45951 has 1 MA's), (Start: 18 @45873 has 4 MA's), (20, 45861), (Start: 23 @45843 has 12 MA's), (Start: 24 @45831 has 53 MA's), (32, 45714), (33, 45705), (37, 45657), (44, 45555), (54, 45468), (55, 45438), (56, 45429), (60, 45366),

Gene: Iwokeuplikedis_77 Start: 45892, Stop: 45314, Start Num: 24

Candidate Starts for Iwokeuplikedis_77:

(Start: 24 @45892 has 53 MA's), (32, 45775), (33, 45766), (36, 45724), (37, 45718), (40, 45691), (44, 45616), (49, 45568), (51, 45550), (54, 45529), (56, 45490), (57, 45466), (60, 45427), (68, 45331),

Gene: Jerm_77 Start: 45848, Stop: 45261, Start Num: 23

Candidate Starts for Jerm_77:

(Start: 18 @45878 has 4 MA's), (20, 45866), (Start: 23 @45848 has 12 MA's), (Start: 24 @45836 has 53 MA's), (32, 45719), (33, 45710), (37, 45662), (44, 45560), (54, 45473), (56, 45434), (60, 45371),

Gene: JoshKayV_76 Start: 45870, Stop: 45292, Start Num: 24

Candidate Starts for JoshKayV_76:

(Start: 24 @45870 has 53 MA's), (32, 45753), (33, 45744), (37, 45696), (44, 45594), (56, 45468), (60, 45405),

Gene: Kalpine_75 Start: 45776, Stop: 45198, Start Num: 24

Candidate Starts for Kalpine_75:

(Start: 18 @45818 has 4 MA's), (Start: 23 @45788 has 12 MA's), (Start: 24 @45776 has 53 MA's), (32, 45659), (33, 45650), (35, 45623), (37, 45602), (43, 45533), (44, 45500), (46, 45491), (52, 45431), (54, 45413), (56, 45374),

Gene: KingCyrus_75 Start: 46852, Stop: 46277, Start Num: 24

Candidate Starts for KingCyrus_75:

(Start: 16 @46972 has 1 MA's), (Start: 18 @46894 has 4 MA's), (20, 46882), (Start: 23 @46864 has 12 MA's), (Start: 24 @46852 has 53 MA's), (32, 46735), (33, 46726), (37, 46678), (44, 46576), (54, 46489), (56, 46450), (58, 46414), (60, 46387), (65, 46324),

Gene: Larenn_72 Start: 45147, Stop: 44536, Start Num: 18

Candidate Starts for Larenn_72:

(6, 45318), (11, 45267), (Start: 18 @45147 has 4 MA's), (Start: 23 @45117 has 12 MA's), (Start: 24 @45105 has 53 MA's), (32, 44988), (33, 44979), (35, 44952), (37, 44931), (41, 44883), (44, 44829), (54, 44742), (56, 44703), (60, 44640), (64, 44598),

Gene: Leogania_74 Start: 45788, Stop: 45216, Start Num: 24

Candidate Starts for Leogania_74:

(Start: 23 @45800 has 12 MA's), (Start: 24 @45788 has 53 MA's), (26, 45761), (32, 45671), (37, 45614), (40, 45587), (44, 45512), (51, 45446), (54, 45425), (56, 45386), (59, 45332), (65, 45260),

Gene: Leviathan_77 Start: 45902, Stop: 45327, Start Num: 24

Candidate Starts for Leviathan_77:

(Start: 18 @45944 has 4 MA's), (20, 45932), (Start: 23 @45914 has 12 MA's), (Start: 24 @45902 has 53 MA's), (32, 45785), (33, 45776), (37, 45728), (44, 45626), (54, 45539), (56, 45500), (60, 45437),

Gene: LilTurb_76 Start: 45716, Stop: 45141, Start Num: 24

Candidate Starts for LilTurb_76:

(Start: 18 @45758 has 4 MA's), (20, 45746), (Start: 23 @45728 has 12 MA's), (Start: 24 @45716 has 53 MA's), (32, 45599), (33, 45590), (37, 45542), (44, 45440), (54, 45353), (56, 45314), (60, 45251),

Gene: Lokk_69 Start: 43909, Stop: 43337, Start Num: 24

Candidate Starts for Lokk_69:

(Start: 23 @43921 has 12 MA's), (Start: 24 @43909 has 53 MA's), (25, 43894), (26, 43882), (32, 43792), (33, 43783), (34, 43768), (37, 43735), (39, 43717), (42, 43684), (44, 43633), (51, 43567), (56, 43507), (64, 43402), (68, 43357),

Gene: Loser_77 Start: 45980, Stop: 45399, Start Num: 24

Candidate Starts for Loser_77:

(Start: 18 @46022 has 4 MA's), (Start: 19 @46019 has 1 MA's), (22, 46004), (Start: 23 @45992 has 12 MA's), (Start: 24 @45980 has 53 MA's), (28, 45941), (32, 45863), (33, 45854), (37, 45806), (40, 45779), (44, 45704), (46, 45695), (52, 45635), (54, 45617), (61, 45503),

Gene: Malec_73 Start: 45714, Stop: 45103, Start Num: 18

Candidate Starts for Malec_73:

(6, 45885), (11, 45834), (Start: 18 @45714 has 4 MA's), (Start: 23 @45684 has 12 MA's), (Start: 24 @45672 has 53 MA's), (32, 45555), (33, 45546), (35, 45519), (37, 45498), (41, 45450), (44, 45396), (54, 45309), (56, 45270), (60, 45207), (64, 45165),

Gene: MiculUcigas_76 Start: 45315, Stop: 44746, Start Num: 24

Candidate Starts for MiculUcigas_76:

(Start: 18 @45357 has 4 MA's), (20, 45345), (Start: 23 @45327 has 12 MA's), (Start: 24 @45315 has 53 MA's), (32, 45198), (33, 45189), (35, 45162), (37, 45141), (44, 45039), (51, 44973), (54, 44952), (56, 44913), (60, 44850),

Gene: Miko_69 Start: 44687, Stop: 44115, Start Num: 24

Candidate Starts for Miko_69:

(Start: 23 @44699 has 12 MA's), (Start: 24 @44687 has 53 MA's), (26, 44660), (32, 44570), (33, 44561), (34, 44546), (37, 44513), (39, 44495), (42, 44462), (44, 44411), (51, 44345), (56, 44285), (64, 44180), (68, 44135),

Gene: Mulciber_76 Start: 44899, Stop: 44336, Start Num: 23

Candidate Starts for Mulciber_76:

(Start: 18 @44929 has 4 MA's), (Start: 23 @44899 has 12 MA's), (Start: 24 @44887 has 53 MA's), (26, 44860), (32, 44770), (34, 44746), (37, 44713), (44, 44611), (47, 44587), (48, 44572), (51, 44545), (54, 44524), (56, 44485), (64, 44386), (69, 44353),

Gene: Munch_78 Start: 45362, Stop: 44799, Start Num: 23

Candidate Starts for Munch_78:

(Start: 18 @45392 has 4 MA's), (Start: 23 @45362 has 12 MA's), (Start: 24 @45350 has 53 MA's), (26, 45323), (32, 45233), (34, 45209), (37, 45176), (44, 45074), (47, 45050), (48, 45035), (51, 45008), (54, 44987), (56, 44948), (64, 44849), (69, 44816),

Gene: NaSiaTalie_76 Start: 45409, Stop: 44840, Start Num: 24

Candidate Starts for NaSiaTalie_76:

(Start: 18 @45451 has 4 MA's), (20, 45439), (Start: 23 @45421 has 12 MA's), (Start: 24 @45409 has 53 MA's), (32, 45292), (33, 45283), (35, 45256), (37, 45235), (44, 45133), (51, 45067), (54, 45046), (56, 45007), (60, 44944),

Gene: NicoleTera_73 Start: 45439, Stop: 44858, Start Num: 24

Candidate Starts for NicoleTera_73:

(Start: 23 @45451 has 12 MA's), (Start: 24 @45439 has 53 MA's), (31, 45355), (32, 45319), (35, 45283), (37, 45262), (44, 45160), (46, 45151), (52, 45091), (54, 45073), (56, 45034), (65, 44908),

Gene: NothingSpecial_71 Start: 45368, Stop: 44808, Start Num: 23

Candidate Starts for NothingSpecial_71:

(Start: 23 @45368 has 12 MA's), (Start: 24 @45356 has 53 MA's), (28, 45317), (32, 45239), (34, 45215), (37, 45182), (44, 45080), (47, 45056), (51, 45014), (54, 44993), (56, 44954), (60, 44888), (64, 44852),

Gene: Piro94_75 Start: 45423, Stop: 44806, Start Num: 18

Candidate Starts for Piro94_75:

(Start: 18 @45423 has 4 MA's), (20, 45411), (Start: 23 @45393 has 12 MA's), (Start: 24 @45381 has 53 MA's), (32, 45264), (33, 45255), (35, 45228), (37, 45207), (44, 45105), (51, 45039), (54, 45018), (56, 44979), (60, 44916),

Gene: Power_75 Start: 45761, Stop: 45186, Start Num: 24

Candidate Starts for Power_75:

(Start: 18 @45803 has 4 MA's), (20, 45791), (Start: 23 @45773 has 12 MA's), (Start: 24 @45761 has 53 MA's), (32, 45644), (33, 45635), (37, 45587), (44, 45485), (54, 45398), (56, 45359), (60, 45296),

Gene: QueenB2_73 Start: 45044, Stop: 44466, Start Num: 24

Candidate Starts for QueenB2_73:

(Start: 16 @45164 has 1 MA's), (Start: 18 @45086 has 4 MA's), (20, 45074), (Start: 23 @45056 has 12 MA's), (Start: 24 @45044 has 53 MA's), (32, 44927), (33, 44918), (37, 44870), (44, 44768), (54, 44681), (55, 44651), (56, 44642), (60, 44579),

Gene: QueenBeesly_76 Start: 45718, Stop: 45143, Start Num: 24

Candidate Starts for QueenBeesly_76:

(Start: 18 @45760 has 4 MA's), (20, 45748), (Start: 23 @45730 has 12 MA's), (Start: 24 @45718 has 53 MA's), (32, 45601), (33, 45592), (37, 45544), (44, 45442), (54, 45355), (56, 45316), (60, 45253),

Gene: Rachaly_71 Start: 44832, Stop: 44260, Start Num: 24

Candidate Starts for Rachaly_71:

(Start: 23 @44844 has 12 MA's), (Start: 24 @44832 has 53 MA's), (25, 44817), (26, 44805), (32, 44715), (33, 44706), (34, 44691), (37, 44658), (39, 44640), (42, 44607), (44, 44556), (51, 44490), (56, 44430), (64, 44325), (68, 44280),

Gene: RedRock_74 Start: 45760, Stop: 45170, Start Num: 23

Candidate Starts for RedRock_74:

(22, 45772), (Start: 23 @45760 has 12 MA's), (Start: 24 @45748 has 53 MA's), (28, 45709), (32, 45631), (33, 45622), (37, 45574), (40, 45547), (44, 45472), (46, 45463), (52, 45403), (54, 45385), (56, 45346), (61, 45271),

Gene: Retro23_76 Start: 45449, Stop: 44871, Start Num: 24

Candidate Starts for Retro23_76:

(Start: 18 @45491 has 4 MA's), (20, 45479), (Start: 23 @45461 has 12 MA's), (Start: 24 @45449 has 53 MA's), (32, 45332), (33, 45323), (37, 45275), (44, 45173), (52, 45104), (54, 45086), (55, 45056), (56, 45047), (60, 44984),

Gene: SemperFi_76 Start: 45606, Stop: 45031, Start Num: 24

Candidate Starts for SemperFi_76:

(Start: 18 @45648 has 4 MA's), (20, 45636), (Start: 23 @45618 has 12 MA's), (Start: 24 @45606 has 53 MA's), (32, 45489), (33, 45480), (37, 45432), (44, 45330), (54, 45243), (56, 45204), (60, 45141),

Gene: Smeagan_78 Start: 45993, Stop: 45418, Start Num: 24

Candidate Starts for Smeagan_78:

(Start: 18 @46035 has 4 MA's), (20, 46023), (Start: 23 @46005 has 12 MA's), (Start: 24 @45993 has 53 MA's), (32, 45876), (33, 45867), (37, 45819), (44, 45717), (54, 45630), (56, 45591), (60, 45528),

Gene: SnapTap_75 Start: 45417, Stop: 44842, Start Num: 24

Candidate Starts for SnapTap_75:

(Start: 18 @45459 has 4 MA's), (20, 45447), (Start: 23 @45429 has 12 MA's), (Start: 24 @45417 has 53 MA's), (32, 45300), (33, 45291), (37, 45243), (44, 45141), (54, 45054), (56, 45015), (59, 44961), (60, 44952),

Gene: SweetiePie_75 Start: 45549, Stop: 44974, Start Num: 24

Candidate Starts for SweetiePie_75:

(Start: 18 @45591 has 4 MA's), (20, 45579), (Start: 23 @45561 has 12 MA's), (Start: 24 @45549 has 53 MA's), (32, 45432), (33, 45423), (37, 45375), (44, 45273), (54, 45186), (56, 45147), (60, 45084),

Gene: TarsusIV_73 Start: 45469, Stop: 44888, Start Num: 23

Candidate Starts for TarsusIV_73:

(Start: 23 @45469 has 12 MA's), (Start: 24 @45457 has 53 MA's), (26, 45430), (27, 45427), (32, 45340), (33, 45331), (37, 45283), (44, 45181), (56, 45055), (70, 44893),

Gene: Trixie_75 Start: 46174, Stop: 45596, Start Num: 24

Candidate Starts for Trixie_75:

(2, 46402), (4, 46396), (14, 46303), (Start: 18 @46216 has 4 MA's), (Start: 23 @46186 has 12 MA's), (Start: 24 @46174 has 53 MA's), (32, 46057), (35, 46021), (37, 46000), (44, 45898), (46, 45889), (52, 45829), (53, 45814), (54, 45811), (56, 45772),

Gene: Trooper_75 Start: 45436, Stop: 44858, Start Num: 24

Candidate Starts for Trooper_75:

(Start: 23 @45448 has 12 MA's), (Start: 24 @45436 has 53 MA's), (26, 45409), (32, 45319), (33, 45310), (37, 45262), (39, 45244), (44, 45160), (52, 45091), (54, 45073), (56, 45034), (60, 44971), (65, 44908),

Gene: Turbido_76 Start: 45726, Stop: 45139, Start Num: 23

Candidate Starts for Turbido_76:

(1, 45978), (5, 45930), (7, 45918), (Start: 18 @45756 has 4 MA's), (20, 45744), (Start: 23 @45726 has 12 MA's), (Start: 24 @45714 has 53 MA's), (32, 45597), (33, 45588), (37, 45540), (44, 45438), (54, 45351), (56, 45312), (60, 45249),

Gene: Updawg_76 Start: 45271, Stop: 44696, Start Num: 24

Candidate Starts for Updawg_76:

(3, 45496), (8, 45475), (13, 45406), (Start: 18 @45313 has 4 MA's), (20, 45301), (Start: 23 @45283 has 12 MA's), (Start: 24 @45271 has 53 MA's), (32, 45154), (33, 45145), (35, 45118), (37, 45097), (44, 44995), (51, 44929), (54, 44908), (56, 44869), (60, 44806),

Gene: VA6_75 Start: 45463, Stop: 44891, Start Num: 24

Candidate Starts for VA6_75:

(Start: 24 @45463 has 53 MA's), (29, 45409), (32, 45346), (33, 45337), (37, 45289), (39, 45271), (40, 45262), (44, 45187), (46, 45178), (54, 45100), (56, 45061), (66, 44932), (67, 44923),

Gene: WeiHuaDA_76 Start: 46220, Stop: 45651, Start Num: 24

Candidate Starts for WeiHuaDA_76:

(Start: 23 @46232 has 12 MA's), (Start: 24 @46220 has 53 MA's), (29, 46166), (32, 46103), (34, 46079), (37, 46046), (39, 46028), (44, 45944), (46, 45935), (54, 45857), (56, 45818), (64, 45713),

Gene: Whabigail7_76 Start: 45712, Stop: 45137, Start Num: 24

Candidate Starts for Whabigail7_76:

(Start: 18 @45754 has 4 MA's), (20, 45742), (Start: 23 @45724 has 12 MA's), (Start: 24 @45712 has 53 MA's), (32, 45595), (33, 45586), (37, 45538), (44, 45436), (54, 45349), (56, 45310), (60, 45247),

Gene: WideWale_76 Start: 45271, Stop: 44696, Start Num: 24

Candidate Starts for WideWale_76:

(3, 45496), (8, 45475), (13, 45406), (Start: 18 @45313 has 4 MA's), (20, 45301), (Start: 23 @45283 has 12 MA's), (Start: 24 @45271 has 53 MA's), (32, 45154), (33, 45145), (35, 45118), (37, 45097), (44, 44995), (51, 44929), (54, 44908), (56, 44869), (60, 44806),

Gene: XianYue_71 Start: 45222, Stop: 44638, Start Num: 23

Candidate Starts for XianYue_71:

(Start: 23 @45222 has 12 MA's), (Start: 24 @45210 has 53 MA's), (32, 45093), (33, 45084), (37, 45036), (40, 45009), (44, 44934), (51, 44868), (54, 44847), (56, 44808), (60, 44745), (64, 44703),