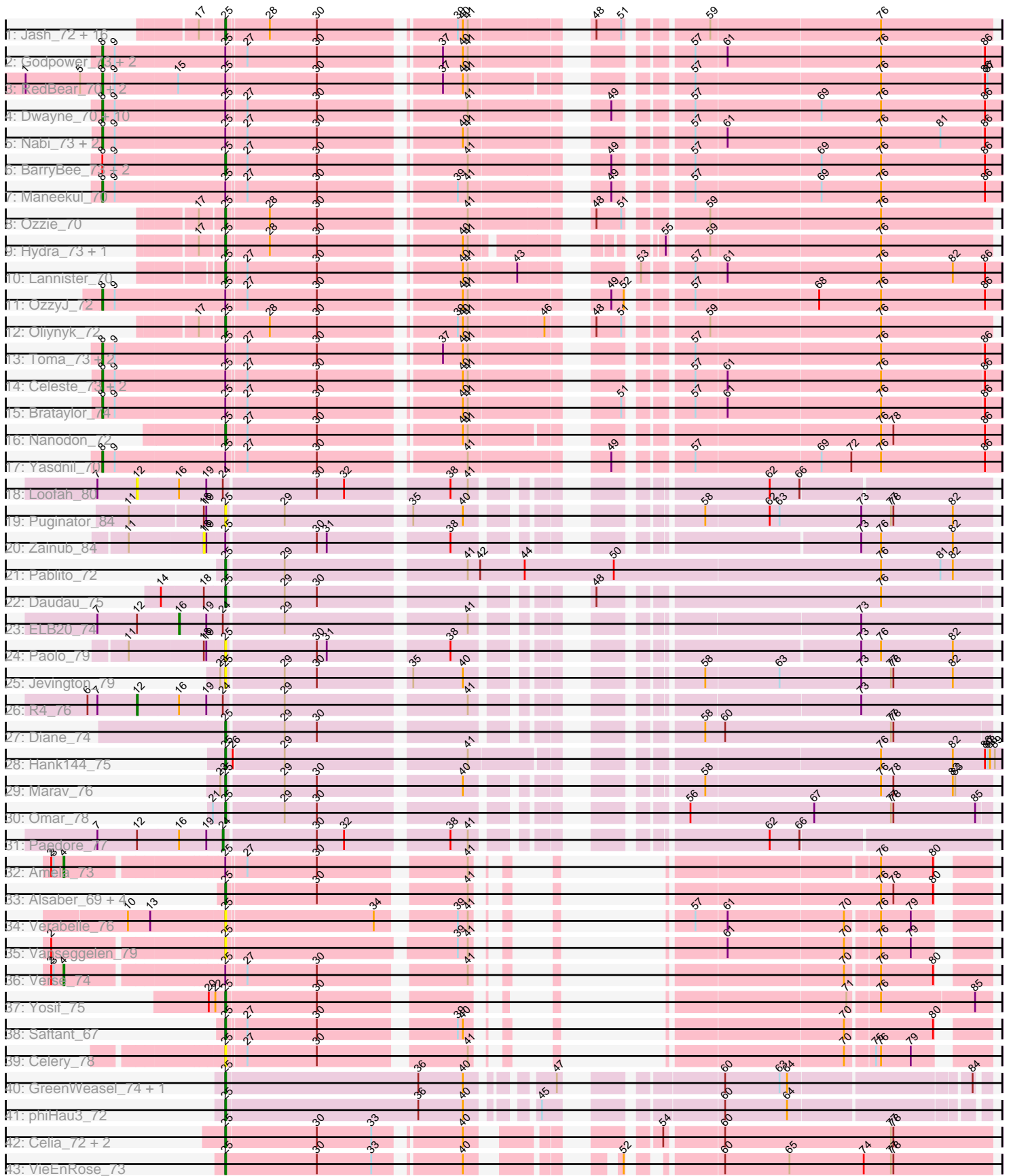


Pham 1240



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 1240 Report

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

WARNING: Pham size does not match number of genes in report. Either unphamerated genes have been added (by you) or starterator has removed genes due to invalid start codon.

Pham number 1240 has 89 members, 12 are drafts.

Phages represented in each track:

- Track 1 : Jash_72, Rusticus_72, Izzy_72, Aaronocolus_70, Bovely_70, BryanRecycles_72, Indigo_69, Eddasa_73, Legacy_70, Caliburn_69, Nerdos_69, BeardedLady_71, EnochSoames_74, Esperer_71, SunsetPointe_70, Leviticus_71, Unstoppable_70
- Track 2 : Godpower_73, Lika_72, Sujidade_73
- Track 3 : RedBear_70, South40_69, Katalie_69
- Track 4 : Dwayne_70, TagePhighter_72, SarahRose_70, Triste_71, Whatever_70, Snorlax_70, Asten_70, Emaanora_73, TuanPN_68, Chucky_70, Ejemplo_68
- Track 5 : Nabi_73, Rana_73, Lorelei_72
- Track 6 : BarryBee_73, Werner_70, Hippo_70
- Track 7 : Maneekul_70
- Track 8 : Ozzie_70
- Track 9 : Hydra_73, Phettuccine_70
- Track 10 : Lannister_70
- Track 11 : OzzyJ_72
- Track 12 : Oliynyk_72
- Track 13 : Toma_73, Goby_73, Dattran_74
- Track 14 : Celeste_73, Danzina_73, Zemlya_73
- Track 15 : Brataylor_74
- Track 16 : Nanodon_72
- Track 17 : Yasdnil_70
- Track 18 : Loofah_80
- Track 19 : Puginator_84
- Track 20 : Zainub_84
- Track 21 : Pablito_72
- Track 22 : Daudau_75
- Track 23 : ELB20_74
- Track 24 : Paolo_79
- Track 25 : Jevington_79
- Track 26 : R4_76
- Track 27 : Diane_74
- Track 28 : Hank144_75
- Track 29 : Marav_76

- Track 30 : Omar_78
- Track 31 : Paedore_77
- Track 32 : Amela_73
- Track 33 : Alsaber_69, Provolone_70, ElGato_72, Dexers_67, Conan_72
- Track 34 : Verabelle_76
- Track 35 : Vanseggelen_79
- Track 36 : Verse_74
- Track 37 : Yosif_75
- Track 38 : Saftant_67
- Track 39 : Celery_78
- Track 40 : GreenWeasel_74, BroPlease_72
- Track 41 : phiHau3_72
- Track 42 : Celia_72, Urza_74, Itza_75
- Track 43 : VieEnRose_73

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

The start number called the most often in the published annotations is 25, it was called in 43 of the 77 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Aaronocolus_70, Alsaber_69, BarryBee_73, BeardedLady_71, Bovely_70, BroPlease_72, BryanRecycles_72, Caliburn_69, Celery_78, Celia_72, Conan_72, Daudau_75, Dexers_67, Diane_74, Eddasa_73, ElGato_72, EnochSoames_74, Esperer_71, GreenWeasel_74, Hank144_75, Hippo_70, Hydra_73, Indigo_69, Itza_75, Izzy_72, Jash_72, Jevington_79, Lannister_70, Legacy_70, Leviticus_71, Marav_76, Nanodon_72, Nerdos_69, Oliynyk_72, Omar_78, Ozzie_70, Pablito_72, Paolo_79, Phettuccine_70, Provolone_70, Puginator_84, Rusticus_72, Saftant_67, SunsetPointe_70, Unstoppable_70, Urza_74, Vanseggelen_79, Verabelle_76, VieEnRose_73, Werner_70, Yosif_75, phiHau3_72,

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

- Amela_73, Asten_70, Brataylor_74, Celeste_73, Chucky_70, Danzina_73, Dattran_74, Dwayne_70, Ejemplo_68, Emaanora_73, Goby_73, Godpower_73, Katalie_69, Lika_72, Lorelei_72, Maneekul_70, Nabi_73, OzzyJ_72, Rana_73, RedBear_70, SarahRose_70, Snorlax_70, South40_69, Sujidade_73, TAgePhigher_72, Toma_73, Triste_71, TuanPN_68, Verse_74, Whatever_70, Yasdnil_70, Zainub_84, Zemlya_73,

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

- ELB20_74, Loofah_80, Paedore_77, R4_76,

Summary by start number:

Start 4:

- Found in 2 of 89 (2.2%) of genes in pham
- Manual Annotations of this start: 2 of 77
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Amela_73 (BD3), Verse_74 (BD3),

Start 8:

- Found in 33 of 89 (37.1%) of genes in pham
- Manual Annotations of this start: 29 of 77
- Called 90.9% of time when present
- Phage (with cluster) where this start called: Asten_70 (BD1), Brataylor_74 (BD1), Celeste_73 (BD1), Chucky_70 (BD1), Danzina_73 (BD1), Dattran_74 (BD1), Dwayne_70 (BD1), Ejemplo_68 (BD1), Emaanora_73 (BD1), Goby_73 (BD1), Godpower_73 (BD1), Katalie_69 (BD1), Lika_72 (BD1), Lorelei_72 (BD1), Maneekul_70 (BD1), Nabi_73 (BD1), OzzyJ_72 (BD1), Rana_73 (BD1), RedBear_70 (BD1), SarahRose_70 (BD1), Snorlax_70 (BD1), South40_69 (BD1), Sujidade_73 (BD1), TagePhighter_72 (BD1), Toma_73 (BD1), Triste_71 (BD1), TuanPN_68 (BD1), Whatever_70 (BD1), Yasdnil_70 (BD1), Zemlya_73 (BD1),

Start 12:

- Found in 4 of 89 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 77
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Loofah_80 (BD2), R4_76 (BD2),

Start 16:

- Found in 4 of 89 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 77
- Called 25.0% of time when present
- Phage (with cluster) where this start called: ELB20_74 (BD2),

Start 18:

- Found in 4 of 89 (4.5%) of genes in pham
- No Manual Annotations of this start.
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Zainub_84 (BD2),

Start 24:

- Found in 4 of 89 (4.5%) of genes in pham
- Manual Annotations of this start: 1 of 77
- Called 25.0% of time when present
- Phage (with cluster) where this start called: Paedore_77 (BD2),

Start 25:

- Found in 85 of 89 (95.5%) of genes in pham
- Manual Annotations of this start: 43 of 77
- Called 61.2% of time when present
- Phage (with cluster) where this start called: Aaronocolus_70 (BD1), Alsaber_69 (BD3), BarryBee_73 (BD1), BeardedLady_71 (BD1), Bovel_70 (BD1), BroPlease_72 (BD4), BryanRecycles_72 (BD1), Caliburn_69 (BD1), Celery_78 (BD3), Celia_72 (BD6), Conan_72 (BD3), Daudau_75 (BD2), Dexers_67 (BD3), Diane_74 (BD2), Eddasa_73 (BD1), ElGato_72 (BD3), EnochSoames_74 (BD1), Esperer_71 (BD1), GreenWeasel_74 (BD4), Hank144_75 (BD2), Hippo_70 (BD1), Hydra_73 (BD1), Indigo_69 (BD1), Itza_75 (BD6), Izzy_72 (BD1), Jash_72 (BD1), Jevington_79 (BD2), Lannister_70 (BD1), Legacy_70 (BD1), Leviticus_71 (BD1), Marav_76 (BD2), Nanodon_72 (BD1), Nerdos_69 (BD1), Oliynyk_72 (BD1), Omar_78 (BD2), Ozzie_70 (BD1), Pablito_72 (BD2), Paolo_79 (BD2), Phettuccine_70 (BD1), Provolone_70 (BD3), Puginator_84 (BD2), Rusticus_72 (BD1), Saftant_67 (BD3), SunsetPointe_70 (BD1), Unstoppable_70 (BD1), Urza_74 (BD6), Vanseggelen_79 (BD3), Verabelle_76

(BD3), VieEnRose_73 (BD6), Werner_70 (BD1), Yosif_75 (BD3), phiHau3_72 (BD4),

Summary by clusters:

There are 5 clusters represented in this pham: BD4, BD6, BD1, BD3, BD2,

Info for manual annotations of cluster BD1:

- Start number 8 was manually annotated 29 times for cluster BD1.
- Start number 25 was manually annotated 25 times for cluster BD1.

Info for manual annotations of cluster BD2:

- Start number 12 was manually annotated 1 time for cluster BD2.
- Start number 16 was manually annotated 1 time for cluster BD2.
- Start number 24 was manually annotated 1 time for cluster BD2.
- Start number 25 was manually annotated 6 times for cluster BD2.

Info for manual annotations of cluster BD3:

- Start number 4 was manually annotated 2 times for cluster BD3.
- Start number 25 was manually annotated 5 times for cluster BD3.

Info for manual annotations of cluster BD4:

- Start number 25 was manually annotated 3 times for cluster BD4.

Info for manual annotations of cluster BD6:

- Start number 25 was manually annotated 4 times for cluster BD6.

Gene Information:

Gene: Aaronocolus_70 Start: 47353, Stop: 46535, Start Num: 25

Candidate Starts for Aaronocolus_70:

(17, 47380), (Start: 25 @47353 has 43 MA's), (28, 47305), (30, 47248), (39, 47101), (40, 47095), (41, 47089), (48, 46978), (51, 46948), (59, 46870), (76, 46669),

Gene: Alsaber_69 Start: 45045, Stop: 44401, Start Num: 25

Candidate Starts for Alsaber_69:

(Start: 25 @45045 has 43 MA's), (30, 44940), (41, 44781), (76, 44511), (78, 44496), (80, 44448),

Gene: Amela_73 Start: 47992, Stop: 47180, Start Num: 4

Candidate Starts for Amela_73:

(2, 48007), (3, 48004), (Start: 4 @47992 has 2 MA's), (Start: 25 @47815 has 43 MA's), (27, 47794), (30, 47710), (41, 47551), (76, 47290), (80, 47227),

Gene: Asten_70 Start: 49486, Stop: 48509, Start Num: 8

Candidate Starts for Asten_70:

(Start: 8 @49486 has 29 MA's), (9, 49471), (Start: 25 @49339 has 43 MA's), (27, 49318), (30, 49234), (41, 49075), (49, 48946), (57, 48874), (69, 48727), (76, 48655), (86, 48529),

Gene: BarryBee_73 Start: 49312, Stop: 48482, Start Num: 25

Candidate Starts for BarryBee_73:

(Start: 8 @49459 has 29 MA's), (9, 49444), (Start: 25 @49312 has 43 MA's), (27, 49291), (30, 49207), (41, 49048), (49, 48919), (57, 48847), (69, 48700), (76, 48628), (86, 48502),

Gene: BeardedLady_71 Start: 47733, Stop: 46915, Start Num: 25

Candidate Starts for BeardedLady_71:

(17, 47760), (Start: 25 @47733 has 43 MA's), (28, 47685), (30, 47628), (39, 47481), (40, 47475), (41, 47469), (48, 47358), (51, 47328), (59, 47250), (76, 47049),

Gene: Bovely_70 Start: 47356, Stop: 46538, Start Num: 25

Candidate Starts for Bovely_70:

(17, 47383), (Start: 25 @47356 has 43 MA's), (28, 47308), (30, 47251), (39, 47104), (40, 47098), (41, 47092), (48, 46981), (51, 46951), (59, 46873), (76, 46672),

Gene: Brataylor_74 Start: 49005, Stop: 48028, Start Num: 8

Candidate Starts for Brataylor_74:

(Start: 8 @49005 has 29 MA's), (9, 48990), (Start: 25 @48858 has 43 MA's), (27, 48837), (30, 48753), (40, 48600), (41, 48594), (51, 48450), (57, 48390), (61, 48354), (76, 48171), (86, 48048),

Gene: BroPlease_72 Start: 47020, Stop: 46226, Start Num: 25

Candidate Starts for BroPlease_72:

(Start: 25 @47020 has 43 MA's), (36, 46789), (40, 46735), (47, 46660), (60, 46519), (63, 46453), (64, 46444), (84, 46240),

Gene: BryanRecycles_72 Start: 47859, Stop: 47041, Start Num: 25

Candidate Starts for BryanRecycles_72:

(17, 47886), (Start: 25 @47859 has 43 MA's), (28, 47811), (30, 47754), (39, 47607), (40, 47601), (41, 47595), (48, 47484), (51, 47454), (59, 47376), (76, 47175),

Gene: Caliburn_69 Start: 47741, Stop: 46923, Start Num: 25

Candidate Starts for Caliburn_69:

(17, 47768), (Start: 25 @47741 has 43 MA's), (28, 47693), (30, 47636), (39, 47489), (40, 47483), (41, 47477), (48, 47366), (51, 47336), (59, 47258), (76, 47057),

Gene: Celery_78 Start: 46869, Stop: 46234, Start Num: 25

Candidate Starts for Celery_78:

(Start: 25 @46869 has 43 MA's), (27, 46848), (30, 46764), (41, 46605), (70, 46380), (75, 46350), (76, 46344), (79, 46308),

Gene: Celeste_73 Start: 48473, Stop: 47496, Start Num: 8

Candidate Starts for Celeste_73:

(Start: 8 @48473 has 29 MA's), (9, 48458), (Start: 25 @48326 has 43 MA's), (27, 48305), (30, 48221), (40, 48068), (41, 48062), (57, 47858), (61, 47822), (76, 47639), (86, 47516),

Gene: Celia_72 Start: 47258, Stop: 46464, Start Num: 25

Candidate Starts for Celia_72:

(Start: 25 @47258 has 43 MA's), (30, 47150), (33, 47084), (40, 46997), (54, 46850), (60, 46787), (77, 46586), (78, 46583),

Gene: Chucky_70 Start: 49521, Stop: 48544, Start Num: 8

Candidate Starts for Chucky_70:

(Start: 8 @49521 has 29 MA's), (9, 49506), (Start: 25 @49374 has 43 MA's), (27, 49353), (30, 49269), (41, 49110), (49, 48981), (57, 48909), (69, 48762), (76, 48690), (86, 48564),

Gene: Conan_72 Start: 45297, Stop: 44653, Start Num: 25

Candidate Starts for Conan_72:

(Start: 25 @45297 has 43 MA's), (30, 45192), (41, 45033), (76, 44763), (78, 44748), (80, 44700),

Gene: Danzina_73 Start: 48711, Stop: 47734, Start Num: 8

Candidate Starts for Danzina_73:

(Start: 8 @48711 has 29 MA's), (9, 48696), (Start: 25 @48564 has 43 MA's), (27, 48543), (30, 48459), (40, 48306), (41, 48300), (57, 48096), (61, 48060), (76, 47877), (86, 47754),

Gene: Dattran_74 Start: 48926, Stop: 47949, Start Num: 8

Candidate Starts for Dattran_74:

(Start: 8 @48926 has 29 MA's), (9, 48911), (Start: 25 @48779 has 43 MA's), (27, 48758), (30, 48674), (37, 48545), (40, 48521), (41, 48515), (57, 48311), (76, 48092), (86, 47969),

Gene: Daudau_75 Start: 47338, Stop: 46538, Start Num: 25

Candidate Starts for Daudau_75:

(14, 47410), (18, 47362), (Start: 25 @47338 has 43 MA's), (29, 47272), (30, 47233), (48, 46984), (76, 46669),

Gene: Dexers_67 Start: 45271, Stop: 44627, Start Num: 25

Candidate Starts for Dexers_67:

(Start: 25 @45271 has 43 MA's), (30, 45166), (41, 45007), (76, 44737), (78, 44722), (80, 44674),

Gene: Diane_74 Start: 47686, Stop: 46886, Start Num: 25

Candidate Starts for Diane_74:

(Start: 25 @47686 has 43 MA's), (29, 47620), (30, 47581), (58, 47230), (60, 47206), (77, 47005), (78, 47002),

Gene: Dwayne_70 Start: 49509, Stop: 48532, Start Num: 8

Candidate Starts for Dwayne_70:

(Start: 8 @49509 has 29 MA's), (9, 49494), (Start: 25 @49362 has 43 MA's), (27, 49341), (30, 49257), (41, 49098), (49, 48969), (57, 48897), (69, 48750), (76, 48678), (86, 48552),

Gene: ELB20_74 Start: 47862, Stop: 47014, Start Num: 16

Candidate Starts for ELB20_74:

(7, 47958), (Start: 12 @47910 has 1 MA's), (Start: 16 @47862 has 1 MA's), (19, 47829), (Start: 24 @47811 has 1 MA's), (29, 47742), (41, 47538), (73, 47172),

Gene: Eddasa_73 Start: 48398, Stop: 47580, Start Num: 25

Candidate Starts for Eddasa_73:

(17, 48425), (Start: 25 @48398 has 43 MA's), (28, 48350), (30, 48293), (39, 48146), (40, 48140), (41, 48134), (48, 48023), (51, 47993), (59, 47915), (76, 47714),

Gene: Ejemplo_68 Start: 49447, Stop: 48470, Start Num: 8

Candidate Starts for Ejemplo_68:

(Start: 8 @49447 has 29 MA's), (9, 49432), (Start: 25 @49300 has 43 MA's), (27, 49279), (30, 49195), (41, 49036), (49, 48907), (57, 48835), (69, 48688), (76, 48616), (86, 48490),

Gene: ElGato_72 Start: 45174, Stop: 44530, Start Num: 25

Candidate Starts for ElGato_72:

(Start: 25 @45174 has 43 MA's), (30, 45069), (41, 44910), (76, 44640), (78, 44625), (80, 44577),

Gene: Emaanora_73 Start: 49433, Stop: 48456, Start Num: 8

Candidate Starts for Emaanora_73:

(Start: 8 @49433 has 29 MA's), (9, 49418), (Start: 25 @49286 has 43 MA's), (27, 49265), (30, 49181), (41, 49022), (49, 48893), (57, 48821), (69, 48674), (76, 48602), (86, 48476),

Gene: EnochSoames_74 Start: 47565, Stop: 46747, Start Num: 25

Candidate Starts for EnochSoames_74:

(17, 47592), (Start: 25 @47565 has 43 MA's), (28, 47517), (30, 47460), (39, 47313), (40, 47307), (41, 47301), (48, 47190), (51, 47160), (59, 47082), (76, 46881),

Gene: Esperer_71 Start: 47699, Stop: 46881, Start Num: 25

Candidate Starts for Esperer_71:

(17, 47726), (Start: 25 @47699 has 43 MA's), (28, 47651), (30, 47594), (39, 47447), (40, 47441), (41, 47435), (48, 47324), (51, 47294), (59, 47216), (76, 47015),

Gene: Goby_73 Start: 49343, Stop: 48366, Start Num: 8

Candidate Starts for Goby_73:

(Start: 8 @49343 has 29 MA's), (9, 49328), (Start: 25 @49196 has 43 MA's), (27, 49175), (30, 49091), (37, 48962), (40, 48938), (41, 48932), (57, 48728), (76, 48509), (86, 48386),

Gene: Godpower_73 Start: 48637, Stop: 47660, Start Num: 8

Candidate Starts for Godpower_73:

(Start: 8 @48637 has 29 MA's), (9, 48622), (Start: 25 @48490 has 43 MA's), (27, 48469), (30, 48385), (37, 48256), (40, 48232), (41, 48226), (57, 48022), (61, 47986), (76, 47803), (86, 47680),

Gene: GreenWeasel_74 Start: 47020, Stop: 46226, Start Num: 25

Candidate Starts for GreenWeasel_74:

(Start: 25 @47020 has 43 MA's), (36, 46789), (40, 46735), (47, 46660), (60, 46519), (63, 46453), (64, 46444), (84, 46240),

Gene: Hank144_75 Start: 48083, Stop: 47250, Start Num: 25

Candidate Starts for Hank144_75:

(Start: 25 @48083 has 43 MA's), (26, 48077), (29, 48017), (41, 47813), (76, 47396), (82, 47309), (86, 47270), (87, 47267), (88, 47264), (89, 47258),

Gene: Hippo_70 Start: 49348, Stop: 48518, Start Num: 25

Candidate Starts for Hippo_70:

(Start: 8 @49495 has 29 MA's), (9, 49480), (Start: 25 @49348 has 43 MA's), (27, 49327), (30, 49243), (41, 49084), (49, 48955), (57, 48883), (69, 48736), (76, 48664), (86, 48538),

Gene: Hydra_73 Start: 48513, Stop: 47725, Start Num: 25

Candidate Starts for Hydra_73:

(17, 48540), (Start: 25 @48513 has 43 MA's), (28, 48465), (30, 48408), (40, 48255), (41, 48249), (55, 48105), (59, 48060), (76, 47859),

Gene: Indigo_69 Start: 47349, Stop: 46531, Start Num: 25

Candidate Starts for Indigo_69:

(17, 47376), (Start: 25 @47349 has 43 MA's), (28, 47301), (30, 47244), (39, 47097), (40, 47091), (41, 47085), (48, 46974), (51, 46944), (59, 46866), (76, 46665),

Gene: Itza_75 Start: 47191, Stop: 46397, Start Num: 25

Candidate Starts for Itza_75:

(Start: 25 @47191 has 43 MA's), (30, 47083), (33, 47017), (40, 46930), (54, 46783), (60, 46720), (77, 46519), (78, 46516),

Gene: Izzy_72 Start: 47906, Stop: 47088, Start Num: 25

Candidate Starts for Izzy_72:

(17, 47933), (Start: 25 @47906 has 43 MA's), (28, 47858), (30, 47801), (39, 47654), (40, 47648), (41, 47642), (48, 47531), (51, 47501), (59, 47423), (76, 47222),

Gene: Jash_72 Start: 47859, Stop: 47041, Start Num: 25

Candidate Starts for Jash_72:

(17, 47886), (Start: 25 @47859 has 43 MA's), (28, 47811), (30, 47754), (39, 47607), (40, 47601), (41, 47595), (48, 47484), (51, 47454), (59, 47376), (76, 47175),

Gene: Jevington_79 Start: 47328, Stop: 46531, Start Num: 25

Candidate Starts for Jevington_79:

(23, 47334), (Start: 25 @47328 has 43 MA's), (29, 47262), (30, 47223), (35, 47124), (40, 47064), (58, 46875), (63, 46788), (73, 46689), (77, 46653), (78, 46650), (82, 46578),

Gene: Katalie_69 Start: 49219, Stop: 48251, Start Num: 8

Candidate Starts for Katalie_69:

(1, 49312), (5, 49246), (Start: 8 @49219 has 29 MA's), (9, 49207), (15, 49132), (Start: 25 @49075 has 43 MA's), (30, 48970), (37, 48841), (40, 48817), (41, 48811), (57, 48613), (76, 48394), (86, 48271), (87, 48268),

Gene: Lannister_70 Start: 48086, Stop: 47256, Start Num: 25

Candidate Starts for Lannister_70:

(Start: 25 @48086 has 43 MA's), (27, 48065), (30, 47981), (40, 47828), (41, 47822), (43, 47765), (53, 47672), (57, 47621), (61, 47585), (76, 47402), (82, 47315), (86, 47276),

Gene: Legacy_70 Start: 47732, Stop: 46914, Start Num: 25

Candidate Starts for Legacy_70:

(17, 47759), (Start: 25 @47732 has 43 MA's), (28, 47684), (30, 47627), (39, 47480), (40, 47474), (41, 47468), (48, 47357), (51, 47327), (59, 47249), (76, 47048),

Gene: Leviticus_71 Start: 47886, Stop: 47068, Start Num: 25

Candidate Starts for Leviticus_71:

(17, 47913), (Start: 25 @47886 has 43 MA's), (28, 47838), (30, 47781), (39, 47634), (40, 47628), (41, 47622), (48, 47511), (51, 47481), (59, 47403), (76, 47202),

Gene: Lika_72 Start: 49190, Stop: 48213, Start Num: 8

Candidate Starts for Lika_72:

(Start: 8 @49190 has 29 MA's), (9, 49175), (Start: 25 @49043 has 43 MA's), (27, 49022), (30, 48938), (37, 48809), (40, 48785), (41, 48779), (57, 48575), (61, 48539), (76, 48356), (86, 48233),

Gene: Loofah_80 Start: 49059, Stop: 48166, Start Num: 12

Candidate Starts for Loofah_80:

(7, 49107), (Start: 12 @49059 has 1 MA's), (Start: 16 @49011 has 1 MA's), (19, 48978), (Start: 24 @48960 has 1 MA's), (30, 48852), (32, 48819), (38, 48708), (41, 48687), (62, 48426), (66, 48390),

Gene: Lorelei_72 Start: 48478, Stop: 47501, Start Num: 8

Candidate Starts for Lorelei_72:

(Start: 8 @48478 has 29 MA's), (9, 48463), (Start: 25 @48331 has 43 MA's), (27, 48310), (30, 48226), (40, 48073), (41, 48067), (57, 47863), (61, 47827), (76, 47644), (81, 47572), (86, 47521),

Gene: Maneekul_70 Start: 49526, Stop: 48549, Start Num: 8

Candidate Starts for Maneekul_70:

(Start: 8 @49526 has 29 MA's), (9, 49511), (Start: 25 @49379 has 43 MA's), (27, 49358), (30, 49274), (39, 49127), (41, 49115), (49, 48986), (57, 48914), (69, 48767), (76, 48695), (86, 48569),

Gene: Marav_76 Start: 47320, Stop: 46523, Start Num: 25

Candidate Starts for Marav_76:

(23, 47326), (Start: 25 @47320 has 43 MA's), (29, 47254), (30, 47215), (40, 47056), (58, 46867), (76, 46657), (78, 46642), (82, 46570), (83, 46567),

Gene: Nabi_73 Start: 49047, Stop: 48070, Start Num: 8

Candidate Starts for Nabi_73:

(Start: 8 @49047 has 29 MA's), (9, 49032), (Start: 25 @48900 has 43 MA's), (27, 48879), (30, 48795), (40, 48642), (41, 48636), (57, 48432), (61, 48396), (76, 48213), (81, 48141), (86, 48090),

Gene: Nanodon_72 Start: 48012, Stop: 47185, Start Num: 25

Candidate Starts for Nanodon_72:

(Start: 25 @48012 has 43 MA's), (27, 47991), (30, 47907), (40, 47754), (41, 47748), (76, 47331), (78, 47316), (86, 47205),

Gene: Nerdos_69 Start: 47348, Stop: 46530, Start Num: 25

Candidate Starts for Nerdos_69:

(17, 47375), (Start: 25 @47348 has 43 MA's), (28, 47300), (30, 47243), (39, 47096), (40, 47090), (41, 47084), (48, 46973), (51, 46943), (59, 46865), (76, 46664),

Gene: Oliynyk_72 Start: 47768, Stop: 46950, Start Num: 25

Candidate Starts for Oliynyk_72:

(17, 47795), (Start: 25 @47768 has 43 MA's), (28, 47720), (30, 47663), (39, 47516), (40, 47510), (41, 47504), (46, 47417), (48, 47393), (51, 47363), (59, 47285), (76, 47084),

Gene: Omar_78 Start: 46331, Stop: 45534, Start Num: 25

Candidate Starts for Omar_78:

(21, 46346), (Start: 25 @46331 has 43 MA's), (29, 46265), (30, 46226), (56, 45893), (67, 45746), (77, 45653), (78, 45650), (85, 45551),

Gene: Ozzie_70 Start: 47741, Stop: 46923, Start Num: 25

Candidate Starts for Ozzie_70:

(17, 47768), (Start: 25 @47741 has 43 MA's), (28, 47693), (30, 47636), (41, 47477), (48, 47366), (51, 47336), (59, 47258), (76, 47057),

Gene: OzzyJ_72 Start: 49422, Stop: 48445, Start Num: 8

Candidate Starts for OzzyJ_72:

(Start: 8 @49422 has 29 MA's), (9, 49407), (Start: 25 @49275 has 43 MA's), (27, 49254), (30, 49170), (40, 49017), (41, 49011), (49, 48882), (52, 48867), (57, 48810), (68, 48666), (76, 48591), (86, 48465),

Gene: Pablito_72 Start: 46743, Stop: 45841, Start Num: 25

Candidate Starts for Pablito_72:

(Start: 25 @46743 has 43 MA's), (29, 46677), (41, 46473), (42, 46458), (44, 46404), (50, 46296), (76, 45975), (81, 45903), (82, 45888),

Gene: Paedore_77 Start: 49129, Stop: 48335, Start Num: 24

Candidate Starts for Paedore_77:

(7, 49276), (Start: 12 @49228 has 1 MA's), (Start: 16 @49180 has 1 MA's), (19, 49147), (Start: 24 @49129 has 1 MA's), (30, 49021), (32, 48988), (38, 48877), (41, 48856), (62, 48595), (66, 48559),

Gene: Paolo_79 Start: 48116, Stop: 47322, Start Num: 25

Candidate Starts for Paolo_79:

(11, 48227), (18, 48140), (19, 48137), (Start: 25 @48116 has 43 MA's), (30, 48011), (31, 47999), (38, 47867), (73, 47480), (76, 47456), (82, 47369),

Gene: Phettuccine_70 Start: 47319, Stop: 46531, Start Num: 25

Candidate Starts for Phettuccine_70:

(17, 47346), (Start: 25 @47319 has 43 MA's), (28, 47271), (30, 47214), (40, 47061), (41, 47055), (55, 46911), (59, 46866), (76, 46665),

Gene: Provolone_70 Start: 45386, Stop: 44742, Start Num: 25

Candidate Starts for Provolone_70:

(Start: 25 @45386 has 43 MA's), (30, 45281), (41, 45122), (76, 44852), (78, 44837), (80, 44789),

Gene: Puginator_84 Start: 48189, Stop: 47392, Start Num: 25

Candidate Starts for Puginator_84:

(11, 48300), (18, 48213), (19, 48210), (Start: 25 @48189 has 43 MA's), (29, 48123), (35, 47985), (40, 47925), (58, 47736), (62, 47661), (63, 47649), (73, 47550), (77, 47514), (78, 47511), (82, 47439),

Gene: R4_76 Start: 48073, Stop: 47177, Start Num: 12

Candidate Starts for R4_76:

(6, 48133), (7, 48121), (Start: 12 @48073 has 1 MA's), (Start: 16 @48025 has 1 MA's), (19, 47992), (Start: 24 @47974 has 1 MA's), (29, 47905), (41, 47701), (73, 47335),

Gene: Rana_73 Start: 48900, Stop: 47923, Start Num: 8

Candidate Starts for Rana_73:

(Start: 8 @48900 has 29 MA's), (9, 48885), (Start: 25 @48753 has 43 MA's), (27, 48732), (30, 48648), (40, 48495), (41, 48489), (57, 48285), (61, 48249), (76, 48066), (81, 47994), (86, 47943),

Gene: RedBear_70 Start: 49219, Stop: 48251, Start Num: 8

Candidate Starts for RedBear_70:

(1, 49312), (5, 49246), (Start: 8 @49219 has 29 MA's), (9, 49207), (15, 49132), (Start: 25 @49075 has 43 MA's), (30, 48970), (37, 48841), (40, 48817), (41, 48811), (57, 48613), (76, 48394), (86, 48271), (87, 48268),

Gene: Rusticus_72 Start: 47859, Stop: 47041, Start Num: 25

Candidate Starts for Rusticus_72:

(17, 47886), (Start: 25 @47859 has 43 MA's), (28, 47811), (30, 47754), (39, 47607), (40, 47601), (41, 47595), (48, 47484), (51, 47454), (59, 47376), (76, 47175),

Gene: Saftant_67 Start: 45118, Stop: 44483, Start Num: 25

Candidate Starts for Saftant_67:

(Start: 25 @45118 has 43 MA's), (27, 45097), (30, 45013), (39, 44866), (40, 44860), (70, 44629), (80, 44530),

Gene: SarahRose_70 Start: 49496, Stop: 48519, Start Num: 8

Candidate Starts for SarahRose_70:

(Start: 8 @49496 has 29 MA's), (9, 49481), (Start: 25 @49349 has 43 MA's), (27, 49328), (30, 49244), (41, 49085), (49, 48956), (57, 48884), (69, 48737), (76, 48665), (86, 48539),

Gene: Snorlax_70 Start: 49521, Stop: 48544, Start Num: 8

Candidate Starts for Snorlax_70:

(Start: 8 @49521 has 29 MA's), (9, 49506), (Start: 25 @49374 has 43 MA's), (27, 49353), (30, 49269), (41, 49110), (49, 48981), (57, 48909), (69, 48762), (76, 48690), (86, 48564),

Gene: South40_69 Start: 49219, Stop: 48251, Start Num: 8

Candidate Starts for South40_69:

(1, 49312), (5, 49246), (Start: 8 @49219 has 29 MA's), (9, 49207), (15, 49132), (Start: 25 @49075 has 43 MA's), (30, 48970), (37, 48841), (40, 48817), (41, 48811), (57, 48613), (76, 48394), (86, 48271), (87, 48268),

Gene: Sujidade_73 Start: 49487, Stop: 48510, Start Num: 8

Candidate Starts for Sujidade_73:

(Start: 8 @49487 has 29 MA's), (9, 49472), (Start: 25 @49340 has 43 MA's), (27, 49319), (30, 49235), (37, 49106), (40, 49082), (41, 49076), (57, 48872), (61, 48836), (76, 48653), (86, 48530),

Gene: SunsetPointe_70 Start: 47748, Stop: 46930, Start Num: 25

Candidate Starts for SunsetPointe_70:

(17, 47775), (Start: 25 @47748 has 43 MA's), (28, 47700), (30, 47643), (39, 47496), (40, 47490), (41, 47484), (48, 47373), (51, 47343), (59, 47265), (76, 47064),

Gene: TagePhighter_72 Start: 49496, Stop: 48519, Start Num: 8

Candidate Starts for TagePhighter_72:

(Start: 8 @49496 has 29 MA's), (9, 49481), (Start: 25 @49349 has 43 MA's), (27, 49328), (30, 49244), (41, 49085), (49, 48956), (57, 48884), (69, 48737), (76, 48665), (86, 48539),

Gene: Toma_73 Start: 49346, Stop: 48369, Start Num: 8

Candidate Starts for Toma_73:

(Start: 8 @49346 has 29 MA's), (9, 49331), (Start: 25 @49199 has 43 MA's), (27, 49178), (30, 49094), (37, 48965), (40, 48941), (41, 48935), (57, 48731), (76, 48512), (86, 48389),

Gene: Triste_71 Start: 49495, Stop: 48518, Start Num: 8

Candidate Starts for Triste_71:

(Start: 8 @49495 has 29 MA's), (9, 49480), (Start: 25 @49348 has 43 MA's), (27, 49327), (30, 49243), (41, 49084), (49, 48955), (57, 48883), (69, 48736), (76, 48664), (86, 48538),

Gene: TuanPN_68 Start: 49447, Stop: 48470, Start Num: 8

Candidate Starts for TuanPN_68:

(Start: 8 @49447 has 29 MA's), (9, 49432), (Start: 25 @49300 has 43 MA's), (27, 49279), (30, 49195), (41, 49036), (49, 48907), (57, 48835), (69, 48688), (76, 48616), (86, 48490),

Gene: Unstoppable_70 Start: 47347, Stop: 46529, Start Num: 25

Candidate Starts for Unstoppable_70:

(17, 47374), (Start: 25 @47347 has 43 MA's), (28, 47299), (30, 47242), (39, 47095), (40, 47089), (41, 47083), (48, 46972), (51, 46942), (59, 46864), (76, 46663),

Gene: Urza_74 Start: 47212, Stop: 46418, Start Num: 25

Candidate Starts for Urza_74:

(Start: 25 @47212 has 43 MA's), (30, 47104), (33, 47038), (40, 46951), (54, 46804), (60, 46741), (77, 46540), (78, 46537),

Gene: Vanseggelen_79 Start: 47077, Stop: 46436, Start Num: 25

Candidate Starts for Vanseggelen_79:

(2, 47269), (Start: 25 @47077 has 43 MA's), (39, 46819), (41, 46807), (61, 46720), (70, 46582), (76, 46546), (79, 46510),

Gene: Verabelle_76 Start: 46513, Stop: 45878, Start Num: 25

Candidate Starts for Verabelle_76:

(10, 46627), (13, 46600), (Start: 25 @46513 has 43 MA's), (34, 46339), (39, 46261), (41, 46249), (57, 46198), (61, 46162), (70, 46024), (76, 45988), (79, 45952),

Gene: Verse_74 Start: 48030, Stop: 47218, Start Num: 4

Candidate Starts for Verse_74:

(2, 48045), (3, 48042), (Start: 4 @48030 has 2 MA's), (Start: 25 @47853 has 43 MA's), (27, 47832), (30, 47748), (41, 47589), (70, 47364), (76, 47328), (80, 47265),

Gene: VieEnRose_73 Start: 46956, Stop: 46186, Start Num: 25

Candidate Starts for VieEnRose_73:

(Start: 25 @46956 has 43 MA's), (30, 46845), (33, 46779), (40, 46692), (52, 46587), (60, 46509), (65, 46431), (74, 46341), (77, 46308), (78, 46305),

Gene: Werner_70 Start: 49346, Stop: 48516, Start Num: 25

Candidate Starts for Werner_70:

(Start: 8 @49493 has 29 MA's), (9, 49478), (Start: 25 @49346 has 43 MA's), (27, 49325), (30, 49241), (41, 49082), (49, 48953), (57, 48881), (69, 48734), (76, 48662), (86, 48536),

Gene: Whatever_70 Start: 49518, Stop: 48541, Start Num: 8

Candidate Starts for Whatever_70:

(Start: 8 @49518 has 29 MA's), (9, 49503), (Start: 25 @49371 has 43 MA's), (27, 49350), (30, 49266), (41, 49107), (49, 48978), (57, 48906), (69, 48759), (76, 48687), (86, 48561),

Gene: Yasdnil_70 Start: 49545, Stop: 48568, Start Num: 8

Candidate Starts for Yasdnil_70:

(Start: 8 @49545 has 29 MA's), (9, 49530), (Start: 25 @49398 has 43 MA's), (27, 49377), (30, 49293), (41, 49134), (49, 49005), (57, 48933), (69, 48786), (72, 48750), (76, 48714), (86, 48588),

Gene: Yosif_75 Start: 47825, Stop: 47169, Start Num: 25

Candidate Starts for Yosif_75:

(20, 47843), (22, 47837), (Start: 25 @47825 has 43 MA's), (30, 47717), (71, 47333), (76, 47300), (85, 47189),

Gene: Zainub_84 Start: 48320, Stop: 47502, Start Num: 18

Candidate Starts for Zainub_84:

(11, 48407), (18, 48320), (19, 48317), (Start: 25 @48296 has 43 MA's), (30, 48191), (31, 48179), (38, 48047), (73, 47660), (76, 47636), (82, 47549),

Gene: Zemlya_73 Start: 49014, Stop: 48037, Start Num: 8

Candidate Starts for Zemlya_73:

(Start: 8 @49014 has 29 MA's), (9, 48999), (Start: 25 @48867 has 43 MA's), (27, 48846), (30, 48762), (40, 48609), (41, 48603), (57, 48399), (61, 48363), (76, 48180), (86, 48057),

Gene: phiHau3_72 Start: 46561, Stop: 45767, Start Num: 25

Candidate Starts for phiHau3_72:

(Start: 25 @46561 has 43 MA's), (36, 46330), (40, 46276), (45, 46219), (60, 46060), (64, 45985),