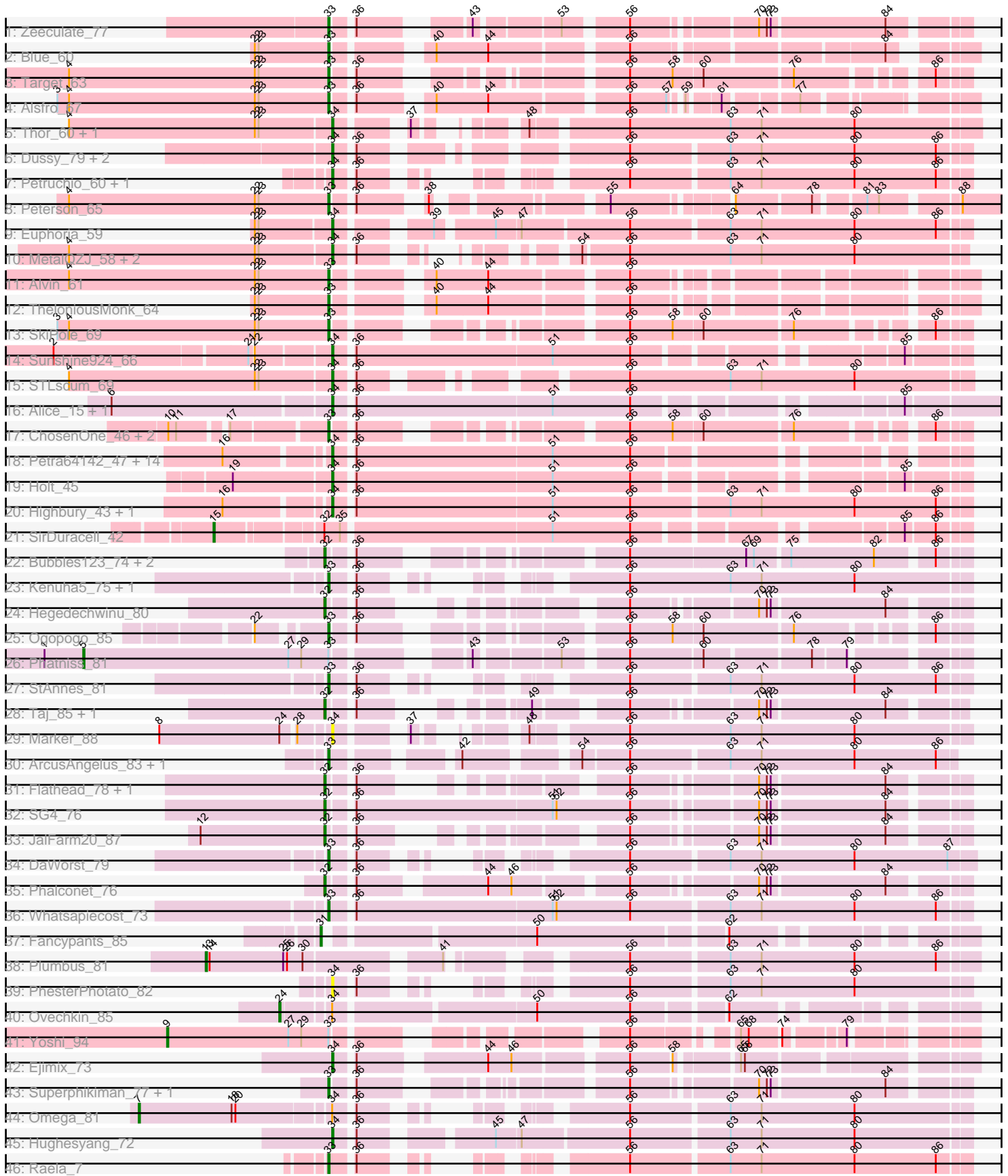


Pham 163559



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 163559 Report

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

Pham number 163559 has 77 members, 7 are drafts.

Phages represented in each track:

- Track 1 : Zeeculate_77
- Track 2 : Blue_60
- Track 3 : Target_63
- Track 4 : Alsfro_67
- Track 5 : Thor_60, SarFire_60
- Track 6 : Dussy_79, Kenmech_82, Abbyshoes_80
- Track 7 : Petruccio_60, Simpliphy_43
- Track 8 : Peterson_65
- Track 9 : Euphoria_59
- Track 10 : MetalQZJ_58, Corvo_62, MaryBeth_59
- Track 11 : Alvin_61
- Track 12 : TheloniousMonk_64
- Track 13 : SkiPole_69
- Track 14 : Sunshine924_66
- Track 15 : STLscum_69
- Track 16 : Alice_15, Flabslab_16
- Track 17 : ChosenOne_46, Lilpickle_45, Elite2014_45
- Track 18 : Petra64142_47, Kostya_43, Murica_44, Terminus_44, PhatBacter_45, Phaux_44, Policronamos_47, HufflyPuff_44, BigBubba_43, xkcd_46, Misfit_44, FireRed_45, Nimrod_45, BugsBunny_43, Palpatine_45
- Track 19 : Holt_45
- Track 20 : Highbury_43, Saints25_43
- Track 21 : SirDuracell_42
- Track 22 : Bubbles123_74, IrishSherpFalk_79, WillSterrel_78
- Track 23 : Kenuha5_75, Gandalph_77
- Track 24 : Hegedechwinu_80
- Track 25 : Ogopogo_85
- Track 26 : Phatniss_81
- Track 27 : StAnnes_81
- Track 28 : Taj_85, Wee_84
- Track 29 : Marker_88
- Track 30 : ArcusAngelus_83, Chevrolet_89
- Track 31 : Flathead_78, Donkeykong_83
- Track 32 : SG4_76
- Track 33 : JalFarm20_87
- Track 34 : DaWorst_79
- Track 35 : Phalconet_76

- Track 36 : Whatsapiecost_73
- Track 37 : Fancypants_85
- Track 38 : Plumbus_81
- Track 39 : PhesterPhotato_82
- Track 40 : Ovechkin_85
- Track 41 : Yoshi_94
- Track 42 : Ejimix_73
- Track 43 : Superphikiman_77, Lucky2013_77
- Track 44 : Omega_81
- Track 45 : Hughesyang_72
- Track 46 : Raela_7

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

The start number called the most often in the published annotations is 34, it was called in 31 of the 70 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

- Abbyshoes_80, Alice_15, BigBubba_43, BugsBunny_43, Corvo_62, Dussy_79, Ejimix_73, Euphoria_59, FireRed_45, Flabslab_16, Highbury_43, Holt_45, HufflyPuff_44, Hughesyang_72, Kenmech_82, Kostya_43, Marker_88, MaryBeth_59, MetalQZJ_58, Misfit_44, Murica_44, Nimrod_45, Palpatine_45, Petra64142_47, Petruccio_60, PhatBacter_45, Phaux_44, PhesterPhotato_82, Policronamos_47, STLscum_69, Saints25_43, SarFire_60, Simpliphy_43, Sunshine924_66, Terminus_44, Thor_60, xkcd_46,

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

- Omega_81, Ovechkin_85,

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

- Alsfro_67, Alvin_61, ArcusAngelus_83, Blue_60, Bubbles123_74, Chevrolet_89, ChosenOne_46, DaWorst_79, Donkeykong_83, Elite2014_45, Fancypants_85, Flathead_78, Gandalph_77, Hegedechwinu_80, IrishSherpFalk_79, JalFarm20_87, Kenuha5_75, Lilpickle_45, Lucky2013_77, Ogopogo_85, Peterson_65, Phalconet_76, Phatniss_81, Plumbus_81, Raela_7, SG4_76, SirDuracell_42, SkiPole_69, StAnnes_81, Superphikiman_77, Taj_85, Target_63, TheloniousMonk_64, Wee_84, Whatsapiecost_73, WillSterrel_78, Yoshi_94, Zeeculate_77,

Summary by start number:

Start 5:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Phatniss_81 (F1),

Start 7:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 70

- Called 100.0% of time when present
- Phage (with cluster) where this start called: Omega_81 (J),

Start 9:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Yoshi_94 (F2),

Start 13:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Plumbus_81 (F1),

Start 15:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: SirDuracell_42 (E),

Start 24:

- Found in 2 of 77 (2.6%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 50.0% of time when present
- Phage (with cluster) where this start called: Ovechkin_85 (F1),

Start 31:

- Found in 1 of 77 (1.3%) of genes in pham
- Manual Annotations of this start: 1 of 70
- Called 100.0% of time when present
- Phage (with cluster) where this start called: Fancypants_85 (F1),

Start 32:

- Found in 12 of 77 (15.6%) of genes in pham
- Manual Annotations of this start: 11 of 70
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Bubbles123_74 (F1), Donkeykong_83 (F1), Flathead_78 (F1), Hegedechwinu_80 (F1), IrishSherpFalk_79 (F1), JalFarm20_87 (F1), Phalconet_76 (F1), SG4_76 (F1), Taj_85 (F1), Wee_84 (F1), WillSterrel_78 (F1),

Start 33:

- Found in 24 of 77 (31.2%) of genes in pham
- Manual Annotations of this start: 21 of 70
- Called 91.7% of time when present
- Phage (with cluster) where this start called: Alsfro_67 (A1), Alvin_61 (A1), ArcusAngelus_83 (F1), Blue_60 (A1), Chevrolet_89 (F1), ChosenOne_46 (E), DaWorst_79 (F1), Elite2014_45 (E), Gandalph_77 (F1), Kenuha5_75 (F1), Lilpickle_45 (E), Lucky2013_77 (J), Ogopogo_85 (F1), Peterson_65 (A1), Raela_7 (S), SkiPole_69 (A1), StAnnes_81 (F1), Superphikiman_77 (J), Target_63 (A1), TheloniousMonk_64 (A1), Whatsapiecost_73 (F1), Zeeculate_77 (A1),

Start 34:

- Found in 39 of 77 (50.6%) of genes in pham
- Manual Annotations of this start: 31 of 70
- Called 94.9% of time when present
- Phage (with cluster) where this start called: Abbyshoes_80 (A1), Alice_15 (C1), BigBubba_43 (E), BugsBunny_43 (E), Corvo_62 (A1), Dussy_79 (A1), Ejimix_73 (J), Euphoria_59 (A1), FireRed_45 (E), Flabslab_16 (C1), Highbury_43 (E), Holt_45 (E), HufflyPuff_44 (E), Hughesyang_72 (J), Kenmech_82 (A1), Kostya_43 (E), Marker_88 (F1), MaryBeth_59 (A1), MetalQZJ_58 (A1), Misfit_44 (E), Murica_44 (E), Nimrod_45 (E), Palpatine_45 (E), Petra64142_47 (E), Petruchio_60 (A1), PhatBacter_45 (E), Phaux_44 (E), PhesterPhotato_82 (F1), Policronamos_47 (E), STLscum_69 (A1), Saints25_43 (E), SarFire_60 (A1), Simpliphy_43 (E), Sunshine924_66 (A1), Terminus_44 (E), Thor_60 (A1), xkcd_46 (E),

Summary by clusters:

There are 7 clusters represented in this pham: F1, F2, E, J, A1, S, C1,

Info for manual annotations of cluster A1:

- Start number 33 was manually annotated 8 times for cluster A1.
- Start number 34 was manually annotated 12 times for cluster A1.

Info for manual annotations of cluster C1:

- Start number 34 was manually annotated 2 times for cluster C1.

Info for manual annotations of cluster E:

- Start number 15 was manually annotated 1 time for cluster E.
- Start number 33 was manually annotated 3 times for cluster E.
- Start number 34 was manually annotated 15 times for cluster E.

Info for manual annotations of cluster F1:

- Start number 5 was manually annotated 1 time for cluster F1.
- Start number 13 was manually annotated 1 time for cluster F1.
- Start number 24 was manually annotated 1 time for cluster F1.
- Start number 31 was manually annotated 1 time for cluster F1.
- Start number 32 was manually annotated 11 times for cluster F1.
- Start number 33 was manually annotated 7 times for cluster F1.

Info for manual annotations of cluster F2:

- Start number 9 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster J:

- Start number 7 was manually annotated 1 time for cluster J.
- Start number 33 was manually annotated 2 times for cluster J.
- Start number 34 was manually annotated 2 times for cluster J.

Info for manual annotations of cluster S:

- Start number 33 was manually annotated 1 time for cluster S.

Gene Information:

Gene: Abbysshoes_80 Start: 47965, Stop: 47543, Start Num: 34
Candidate Starts for Abbysshoes_80:
(Start: 34 @47965 has 31 MA's), (36, 47953), (56, 47797), (63, 47725), (71, 47701), (80, 47629), (86, 47566),

Gene: Alice_15 Start: 5418, Stop: 5885, Start Num: 34
Candidate Starts for Alice_15:
(6, 5256), (Start: 34 @5418 has 31 MA's), (36, 5430), (51, 5580), (56, 5640), (85, 5811),

Gene: Alsfro_67 Start: 41490, Stop: 41089, Start Num: 33
Candidate Starts for Alsfro_67:
(3, 41700), (4, 41691), (22, 41547), (23, 41544), (Start: 33 @41490 has 21 MA's), (36, 41478), (40, 41433), (44, 41394), (56, 41298), (57, 41271), (59, 41265), (61, 41244), (77, 41196),

Gene: Alvin_61 Start: 40955, Stop: 40545, Start Num: 33
Candidate Starts for Alvin_61:
(4, 41156), (22, 41012), (23, 41009), (Start: 33 @40955 has 21 MA's), (40, 40898), (44, 40859), (56, 40763),

Gene: ArcusAngelus_83 Start: 49676, Stop: 50101, Start Num: 33
Candidate Starts for ArcusAngelus_83:
(Start: 33 @49676 has 21 MA's), (42, 49751), (54, 49823), (56, 49856), (63, 49928), (71, 49952), (80, 50024), (86, 50087),

Gene: BigBubba_43 Start: 35101, Stop: 34667, Start Num: 34
Candidate Starts for BigBubba_43:
(16, 35173), (Start: 34 @35101 has 31 MA's), (36, 35089), (51, 34939), (56, 34879),

Gene: Blue_60 Start: 41591, Stop: 41178, Start Num: 33
Candidate Starts for Blue_60:
(22, 41648), (23, 41645), (Start: 33 @41591 has 21 MA's), (40, 41534), (44, 41495), (56, 41399), (84, 41228),

Gene: Bubbles123_74 Start: 48058, Stop: 48471, Start Num: 32
Candidate Starts for Bubbles123_74:
(Start: 32 @48058 has 11 MA's), (36, 48073), (56, 48229), (67, 48316), (69, 48322), (75, 48346), (82, 48409), (86, 48448),

Gene: BugsBunny_43 Start: 35586, Stop: 35152, Start Num: 34
Candidate Starts for BugsBunny_43:
(16, 35658), (Start: 34 @35586 has 31 MA's), (36, 35574), (51, 35424), (56, 35364),

Gene: Chevrolet_89 Start: 49677, Stop: 50102, Start Num: 33
Candidate Starts for Chevrolet_89:
(Start: 33 @49677 has 21 MA's), (42, 49752), (54, 49824), (56, 49857), (63, 49929), (71, 49953), (80, 50025), (86, 50088),

Gene: ChosenOne_46 Start: 35277, Stop: 34882, Start Num: 33
Candidate Starts for ChosenOne_46:
(10, 35379), (11, 35373), (17, 35343), (Start: 33 @35277 has 21 MA's), (36, 35265), (56, 35109), (58, 35076), (60, 35055), (76, 34989), (86, 34905),

Gene: Corvo_62 Start: 41848, Stop: 41459, Start Num: 34

Candidate Starts for Corvo_62:

(4, 42049), (22, 41905), (23, 41902), (Start: 34 @41848 has 31 MA's), (36, 41836), (54, 41749), (56, 41716), (63, 41638), (71, 41614), (80, 41542),

Gene: DaWorst_79 Start: 47793, Stop: 48188, Start Num: 33

Candidate Starts for DaWorst_79:

(Start: 33 @47793 has 21 MA's), (36, 47808), (56, 47928), (63, 48000), (71, 48024), (80, 48096), (87, 48168),

Gene: Donkeykong_83 Start: 49734, Stop: 50111, Start Num: 32

Candidate Starts for Donkeykong_83:

(Start: 32 @49734 has 11 MA's), (36, 49749), (56, 49884), (70, 49968), (72, 49974), (73, 49977), (84, 50061),

Gene: Dussy_79 Start: 47985, Stop: 47563, Start Num: 34

Candidate Starts for Dussy_79:

(Start: 34 @47985 has 31 MA's), (36, 47973), (56, 47817), (63, 47745), (71, 47721), (80, 47649), (86, 47586),

Gene: Ejimix_73 Start: 51773, Stop: 51354, Start Num: 34

Candidate Starts for Ejimix_73:

(Start: 34 @51773 has 31 MA's), (36, 51761), (44, 51677), (46, 51659), (56, 51581), (58, 51551), (65, 51512), (66, 51509),

Gene: Elite2014_45 Start: 35276, Stop: 34881, Start Num: 33

Candidate Starts for Elite2014_45:

(10, 35378), (11, 35372), (17, 35342), (Start: 33 @35276 has 21 MA's), (36, 35264), (56, 35108), (58, 35075), (60, 35054), (76, 34988), (86, 34904),

Gene: Euphoria_59 Start: 40555, Stop: 40109, Start Num: 34

Candidate Starts for Euphoria_59:

(22, 40612), (23, 40609), (Start: 34 @40555 has 31 MA's), (39, 40498), (45, 40459), (47, 40441), (56, 40363), (63, 40291), (71, 40267), (80, 40195), (86, 40132),

Gene: Fancypants_85 Start: 50404, Stop: 50835, Start Num: 31

Candidate Starts for Fancypants_85:

(Start: 31 @50404 has 1 MA's), (50, 50548), (62, 50683),

Gene: FireRed_45 Start: 36025, Stop: 35591, Start Num: 34

Candidate Starts for FireRed_45:

(16, 36097), (Start: 34 @36025 has 31 MA's), (36, 36013), (51, 35863), (56, 35803),

Gene: Flabslab_16 Start: 5015, Stop: 5452, Start Num: 34

Candidate Starts for Flabslab_16:

(6, 4853), (Start: 34 @5015 has 31 MA's), (36, 5027), (51, 5177), (56, 5237), (85, 5408),

Gene: Flathead_78 Start: 47777, Stop: 48157, Start Num: 32

Candidate Starts for Flathead_78:

(Start: 32 @47777 has 11 MA's), (36, 47792), (56, 47927), (70, 48011), (72, 48017), (73, 48020), (84, 48104),

Gene: Gandolph_77 Start: 45404, Stop: 45799, Start Num: 33

Candidate Starts for Gandolph_77:

(Start: 33 @45404 has 21 MA's), (36, 45419), (56, 45539), (63, 45617), (71, 45641), (80, 45713),

Gene: Hegedechwinu_80 Start: 46978, Stop: 47358, Start Num: 32

Candidate Starts for Hegedechwinu_80:

(Start: 32 @46978 has 11 MA's), (36, 46993), (56, 47128), (70, 47212), (72, 47218), (73, 47221), (84, 47305),

Gene: Highbury_43 Start: 34897, Stop: 34421, Start Num: 34

Candidate Starts for Highbury_43:

(16, 34969), (Start: 34 @34897 has 31 MA's), (36, 34885), (51, 34735), (56, 34675), (63, 34603), (71, 34579), (80, 34507), (86, 34444),

Gene: Holt_45 Start: 35325, Stop: 34888, Start Num: 34

Candidate Starts for Holt_45:

(19, 35397), (Start: 34 @35325 has 31 MA's), (36, 35313), (51, 35163), (56, 35103), (85, 34932),

Gene: HuffyPuff_44 Start: 35981, Stop: 35547, Start Num: 34

Candidate Starts for HuffyPuff_44:

(16, 36053), (Start: 34 @35981 has 31 MA's), (36, 35969), (51, 35819), (56, 35759),

Gene: Hughesyang_72 Start: 50943, Stop: 50497, Start Num: 34

Candidate Starts for Hughesyang_72:

(Start: 34 @50943 has 31 MA's), (36, 50931), (45, 50847), (47, 50829), (56, 50751), (63, 50679), (71, 50655), (80, 50583),

Gene: IrishSherpFalk_79 Start: 48781, Stop: 49194, Start Num: 32

Candidate Starts for IrishSherpFalk_79:

(Start: 32 @48781 has 11 MA's), (36, 48796), (56, 48952), (67, 49039), (69, 49045), (75, 49069), (82, 49132), (86, 49171),

Gene: JalFarm20_87 Start: 48995, Stop: 49375, Start Num: 32

Candidate Starts for JalFarm20_87:

(12, 48899), (Start: 32 @48995 has 11 MA's), (36, 49010), (56, 49145), (70, 49229), (72, 49235), (73, 49238), (84, 49322),

Gene: Kenmech_82 Start: 49111, Stop: 48689, Start Num: 34

Candidate Starts for Kenmech_82:

(Start: 34 @49111 has 31 MA's), (36, 49099), (56, 48943), (63, 48871), (71, 48847), (80, 48775), (86, 48712),

Gene: Kenuha5_75 Start: 48762, Stop: 49157, Start Num: 33

Candidate Starts for Kenuha5_75:

(Start: 33 @48762 has 21 MA's), (36, 48777), (56, 48897), (63, 48975), (71, 48999), (80, 49071),

Gene: Kostya_43 Start: 35472, Stop: 35038, Start Num: 34

Candidate Starts for Kostya_43:

(16, 35544), (Start: 34 @35472 has 31 MA's), (36, 35460), (51, 35310), (56, 35250),

Gene: Lilpickle_45 Start: 35276, Stop: 34881, Start Num: 33

Candidate Starts for Lilpickle_45:

(10, 35378), (11, 35372), (17, 35342), (Start: 33 @35276 has 21 MA's), (36, 35264), (56, 35108), (58, 35075), (60, 35054), (76, 34988), (86, 34904),

Gene: Lucky2013_77 Start: 48582, Stop: 48184, Start Num: 33

Candidate Starts for Lucky2013_77:

(Start: 33 @48582 has 21 MA's), (36, 48570), (56, 48414), (70, 48330), (72, 48324), (73, 48321), (84, 48237),

Gene: Marker_88 Start: 48016, Stop: 48423, Start Num: 34

Candidate Starts for Marker_88:

(8, 47893), (Start: 24 @47986 has 1 MA's), (28, 47995), (Start: 34 @48016 has 31 MA's), (37, 48055), (48, 48100), (56, 48163), (63, 48241), (71, 48265), (80, 48337),

Gene: MaryBeth_59 Start: 41225, Stop: 40836, Start Num: 34

Candidate Starts for MaryBeth_59:

(4, 41426), (22, 41282), (23, 41279), (Start: 34 @41225 has 31 MA's), (36, 41213), (54, 41126), (56, 41093), (63, 41015), (71, 40991), (80, 40919),

Gene: MetalQZJ_58 Start: 41225, Stop: 40836, Start Num: 34

Candidate Starts for MetalQZJ_58:

(4, 41426), (22, 41282), (23, 41279), (Start: 34 @41225 has 31 MA's), (36, 41213), (54, 41126), (56, 41093), (63, 41015), (71, 40991), (80, 40919),

Gene: Misfit_44 Start: 36046, Stop: 35612, Start Num: 34

Candidate Starts for Misfit_44:

(16, 36118), (Start: 34 @36046 has 31 MA's), (36, 36034), (51, 35884), (56, 35824),

Gene: Murica_44 Start: 35981, Stop: 35547, Start Num: 34

Candidate Starts for Murica_44:

(16, 36053), (Start: 34 @35981 has 31 MA's), (36, 35969), (51, 35819), (56, 35759),

Gene: Nimrod_45 Start: 36239, Stop: 35805, Start Num: 34

Candidate Starts for Nimrod_45:

(16, 36311), (Start: 34 @36239 has 31 MA's), (36, 36227), (51, 36077), (56, 36017),

Gene: Ogotogo_85 Start: 48076, Stop: 48471, Start Num: 33

Candidate Starts for Ogotogo_85:

(22, 48034), (Start: 33 @48076 has 21 MA's), (36, 48088), (56, 48244), (58, 48277), (60, 48298), (76, 48364), (86, 48448),

Gene: Omega_81 Start: 52384, Stop: 51857, Start Num: 7

Candidate Starts for Omega_81:

(Start: 7 @52384 has 1 MA's), (18, 52312), (20, 52309), (Start: 34 @52243 has 31 MA's), (36, 52231), (56, 52111), (63, 52039), (71, 52015), (80, 51943),

Gene: Ovechkin_85 Start: 49845, Stop: 50309, Start Num: 24

Candidate Starts for Ovechkin_85:

(Start: 24 @49845 has 1 MA's), (Start: 34 @49878 has 31 MA's), (50, 50022), (56, 50094), (62, 50157),

Gene: Palpatine_45 Start: 36011, Stop: 35577, Start Num: 34

Candidate Starts for Palpatine_45:

(16, 36083), (Start: 34 @36011 has 31 MA's), (36, 35999), (51, 35849), (56, 35789),

Gene: Peterson_65 Start: 43369, Stop: 42962, Start Num: 33

Candidate Starts for Peterson_65:

(4, 43570), (22, 43426), (23, 43423), (Start: 33 @43369 has 21 MA's), (36, 43357), (38, 43318), (55, 43216), (64, 43138), (78, 43084), (81, 43051), (83, 43042), (88, 42994),

Gene: Petra64142_47 Start: 36475, Stop: 36041, Start Num: 34

Candidate Starts for Petra64142_47:

(16, 36547), (Start: 34 @36475 has 31 MA's), (36, 36463), (51, 36313), (56, 36253),

Gene: Petruccio_60 Start: 40166, Stop: 39780, Start Num: 34

Candidate Starts for Petruccio_60:

(Start: 34 @40166 has 31 MA's), (36, 40154), (56, 40034), (63, 39962), (71, 39938), (80, 39866), (86, 39803),

Gene: Phalconet_76 Start: 47337, Stop: 47762, Start Num: 32

Candidate Starts for Phalconet_76:

(Start: 32 @47337 has 11 MA's), (36, 47352), (44, 47436), (46, 47454), (56, 47532), (70, 47616), (72, 47622), (73, 47625), (84, 47709),

Gene: PhatBacter_45 Start: 36025, Stop: 35591, Start Num: 34

Candidate Starts for PhatBacter_45:

(16, 36097), (Start: 34 @36025 has 31 MA's), (36, 36013), (51, 35863), (56, 35803),

Gene: Phatniss_81 Start: 48507, Stop: 49100, Start Num: 5

Candidate Starts for Phatniss_81:

(1, 48477), (Start: 5 @48507 has 1 MA's), (27, 48666), (29, 48675), (Start: 33 @48696 has 21 MA's), (43, 48771), (53, 48828), (56, 48870), (60, 48924), (78, 48999), (79, 49023),

Gene: Phaux_44 Start: 36023, Stop: 35589, Start Num: 34

Candidate Starts for Phaux_44:

(16, 36095), (Start: 34 @36023 has 31 MA's), (36, 36011), (51, 35861), (56, 35801),

Gene: PhesterPhotato_82 Start: 48607, Stop: 48993, Start Num: 34

Candidate Starts for PhesterPhotato_82:

(Start: 34 @48607 has 31 MA's), (36, 48619), (56, 48739), (63, 48811), (71, 48835), (80, 48907),

Gene: Plumbus_81 Start: 45998, Stop: 46525, Start Num: 13

Candidate Starts for Plumbus_81:

(Start: 13 @45998 has 1 MA's), (14, 46001), (25, 46058), (26, 46061), (30, 46073), (41, 46163), (56, 46265), (63, 46337), (71, 46361), (80, 46433), (86, 46496),

Gene: Policronamos_47 Start: 36023, Stop: 35589, Start Num: 34

Candidate Starts for Policronamos_47:

(16, 36095), (Start: 34 @36023 has 31 MA's), (36, 36011), (51, 35861), (56, 35801),

Gene: Raela_7 Start: 2533, Stop: 2922, Start Num: 33

Candidate Starts for Raela_7:

(Start: 33 @2533 has 21 MA's), (36, 2548), (56, 2668), (63, 2740), (71, 2764), (80, 2836), (86, 2899),

Gene: SG4_76 Start: 47114, Stop: 47569, Start Num: 32

Candidate Starts for SG4_76:

(Start: 32 @47114 has 11 MA's), (36, 47129), (51, 47279), (52, 47282), (56, 47339), (70, 47423), (72, 47429), (73, 47432), (84, 47516),

Gene: STLscum_69 Start: 42972, Stop: 42544, Start Num: 34

Candidate Starts for STLscum_69:

(4, 43173), (22, 43029), (23, 43026), (Start: 34 @42972 has 31 MA's), (36, 42960), (56, 42804), (63, 42726), (71, 42702), (80, 42630),

Gene: Saints25_43 Start: 34897, Stop: 34421, Start Num: 34

Candidate Starts for Saints25_43:

(16, 34969), (Start: 34 @34897 has 31 MA's), (36, 34885), (51, 34735), (56, 34675), (63, 34603), (71, 34579), (80, 34507), (86, 34444),

Gene: SarFire_60 Start: 40901, Stop: 40488, Start Num: 34

Candidate Starts for SarFire_60:

(4, 41102), (22, 40958), (23, 40955), (Start: 34 @40901 has 31 MA's), (37, 40862), (48, 40817), (56, 40754), (63, 40676), (71, 40652), (80, 40580),

Gene: Simpliphy_43 Start: 34882, Stop: 34496, Start Num: 34

Candidate Starts for Simpliphy_43:

(Start: 34 @34882 has 31 MA's), (36, 34870), (56, 34750), (63, 34678), (71, 34654), (80, 34582), (86, 34519),

Gene: SirDuracell_42 Start: 34192, Stop: 33677, Start Num: 15

Candidate Starts for SirDuracell_42:

(Start: 15 @34192 has 1 MA's), (Start: 32 @34120 has 11 MA's), (35, 34108), (51, 33952), (56, 33892), (85, 33721), (86, 33700),

Gene: SkiPole_69 Start: 42424, Stop: 42029, Start Num: 33

Candidate Starts for SkiPole_69:

(3, 42634), (4, 42625), (22, 42481), (23, 42478), (Start: 33 @42424 has 21 MA's), (56, 42256), (58, 42223), (60, 42202), (76, 42136), (86, 42052),

Gene: StAnnes_81 Start: 49578, Stop: 49967, Start Num: 33

Candidate Starts for StAnnes_81:

(Start: 33 @49578 has 21 MA's), (36, 49593), (56, 49713), (63, 49785), (71, 49809), (80, 49881), (86, 49944),

Gene: Sunshine924_66 Start: 41648, Stop: 41211, Start Num: 34

Candidate Starts for Sunshine924_66:

(2, 41849), (21, 41705), (22, 41702), (Start: 34 @41648 has 31 MA's), (36, 41636), (51, 41486), (56, 41426), (85, 41255),

Gene: Superphikiman_77 Start: 48448, Stop: 48050, Start Num: 33

Candidate Starts for Superphikiman_77:

(Start: 33 @48448 has 21 MA's), (36, 48436), (56, 48280), (70, 48196), (72, 48190), (73, 48187), (84, 48103),

Gene: Taj_85 Start: 49957, Stop: 50334, Start Num: 32

Candidate Starts for Taj_85:

(Start: 32 @49957 has 11 MA's), (36, 49972), (49, 50050), (56, 50107), (70, 50191), (72, 50197), (73, 50200), (84, 50284),

Gene: Target_63 Start: 40851, Stop: 40456, Start Num: 33

Candidate Starts for Target_63:

(4, 41052), (22, 40908), (23, 40905), (Start: 33 @40851 has 21 MA's), (36, 40839), (56, 40683), (58, 40650), (60, 40629), (76, 40563), (86, 40479),

Gene: Terminus_44 Start: 36046, Stop: 35612, Start Num: 34

Candidate Starts for Terminus_44:

(16, 36118), (Start: 34 @36046 has 31 MA's), (36, 36034), (51, 35884), (56, 35824),

Gene: TheloniousMonk_64 Start: 43165, Stop: 42755, Start Num: 33

Candidate Starts for TheloniousMonk_64:

(22, 43222), (23, 43219), (Start: 33 @43165 has 21 MA's), (40, 43108), (44, 43069), (56, 42973),

Gene: Thor_60 Start: 40259, Stop: 39846, Start Num: 34

Candidate Starts for Thor_60:

(4, 40460), (22, 40316), (23, 40313), (Start: 34 @40259 has 31 MA's), (37, 40220), (48, 40175), (56, 40112), (63, 40034), (71, 40010), (80, 39938),

Gene: Wee_84 Start: 50033, Stop: 50410, Start Num: 32

Candidate Starts for Wee_84:

(Start: 32 @50033 has 11 MA's), (36, 50048), (49, 50126), (56, 50183), (70, 50267), (72, 50273), (73, 50276), (84, 50360),

Gene: Whatsapiecost_73 Start: 43853, Stop: 44332, Start Num: 33

Candidate Starts for Whatsapiecost_73:

(Start: 33 @43853 has 21 MA's), (36, 43868), (51, 44018), (52, 44021), (56, 44078), (63, 44150), (71, 44174), (80, 44246), (86, 44309),

Gene: WillSterrel_78 Start: 48814, Stop: 49227, Start Num: 32

Candidate Starts for WillSterrel_78:

(Start: 32 @48814 has 11 MA's), (36, 48829), (56, 48985), (67, 49072), (69, 49078), (75, 49102), (82, 49165), (86, 49204),

Gene: Yoshi_94 Start: 49980, Stop: 50474, Start Num: 9

Candidate Starts for Yoshi_94:

(Start: 9 @49980 has 1 MA's), (27, 50073), (29, 50082), (Start: 33 @50103 has 21 MA's), (56, 50268), (65, 50331), (68, 50337), (74, 50358), (79, 50397),

Gene: Zeeculate_77 Start: 48542, Stop: 48138, Start Num: 33

Candidate Starts for Zeeculate_77:

(Start: 33 @48542 has 21 MA's), (36, 48530), (43, 48467), (53, 48410), (56, 48368), (70, 48284), (72, 48278), (73, 48275), (84, 48191),

Gene: xkcd_46 Start: 36166, Stop: 35732, Start Num: 34

Candidate Starts for xkcd_46:

(16, 36238), (Start: 34 @36166 has 31 MA's), (36, 36154), (51, 36004), (56, 35944),