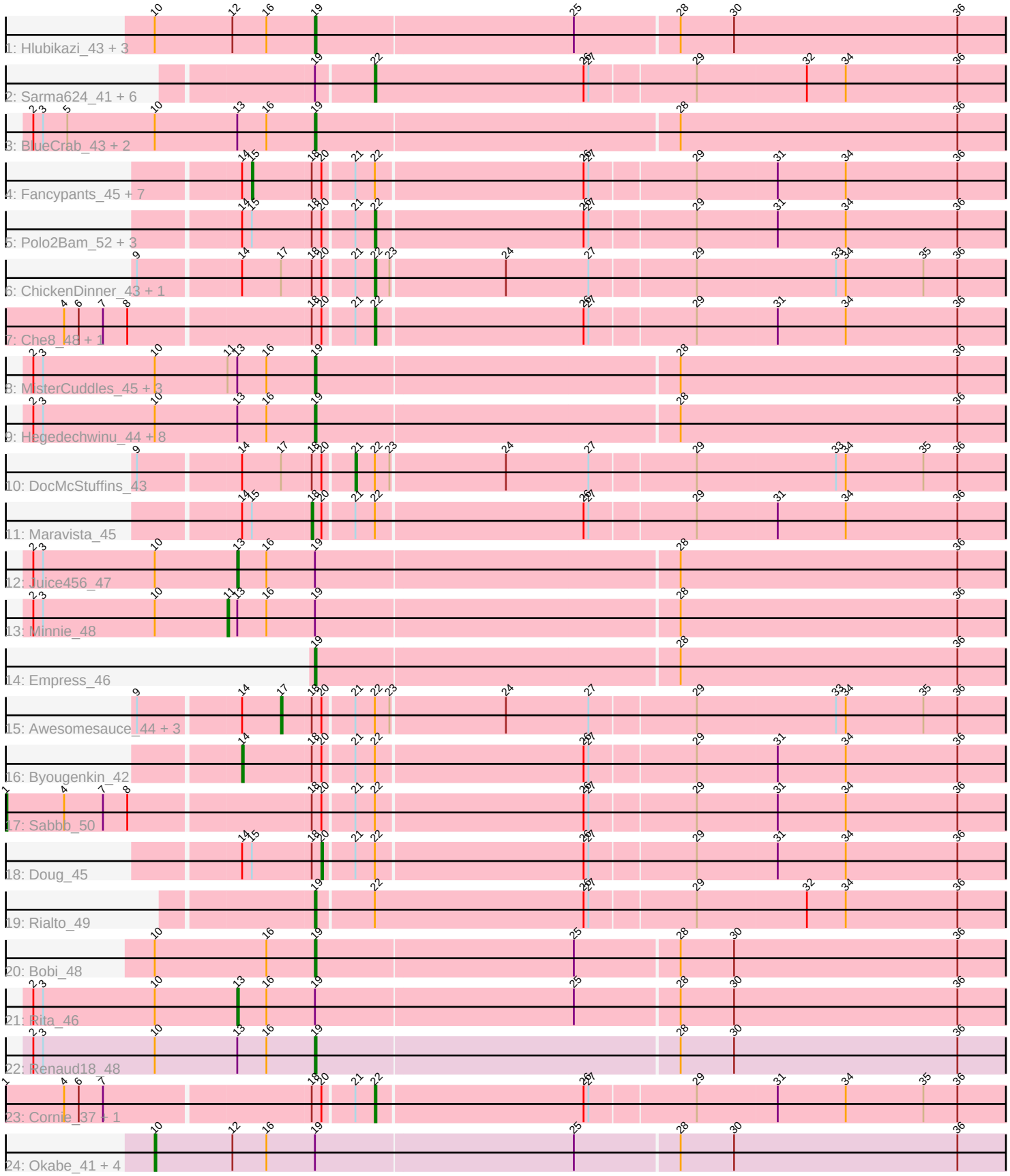
Pham 347600


1: Hlubikazi_43 + 3
2: Sarma624_41 + 6
3: BlueCrab_43 + 2
4: Fancypants_45 + 7
5: Polo2Bam_52 + 3
6: ChickenDinner_43 + 1
7: Che8_48 + 1
8: MisterCuddles_45 + 3
9: Hegedechwinu_44 + 8
10: DocMcStuffins_43
11: Maravista_45
12: Juice456_47
13: Minnie_48
14: Empress_46
15: Awesomesauce_44 + 3
16: Byougenkin_42
17: Sabbb_50
18: Doug_45
19: Rialto_49
20: Bobi_48
21: Rita_46
22: Renaud18_48
23: Cornie_37 + 1
24: Okabe_41 + 4

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 347600 Report

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

Pham number 347600 has 66 members, 4 are drafts.

Phages represented in each track:
• Track 1 : Hlubikazi_43, Strokeseat_44, Mandlovu_43, DaWorst_47
• Track 2 : Sarma624_41, Cerasum_40, Coco12_42, Brookers_41, Kingsley_40, Velveteen_39, BigPhil_40
• Track 3 : BlueCrab_43, Poenanya_45, RedBird_42
• Track 4 : Fancypants_45, MilleniumForce_44, Whatsapiecost_43, Kimberlium_46, Bubbles123_42, Wachhund_47, QuickMath_45, Soul22_49
• Track 5 : Polo2Bam_52, Mutaforma13_47, NewHope4_47, MulchExplorer_46
• Track 6 : ChickenDinner_43, Piper2020_44
• Track 7 : Che8_48, Juniper1_42
• Track 8 : MisterCuddles_45, Sassafras_45, Girr_46, Daenerys_42
• Track 9 : Hegedechwinu_44, AlpineSix_47, Pollywog_44, Madiba_41, Ochi17_45, Jinglebell_47, UncleRicky_45, Whouxphf_44, Kersh_46
• Track 10 : DocMcStuffins_43
• Track 11 : Maravista_45
• Track 12 : Juice456_47
• Track 13 : Minnie_48
• Track 14 : Empress_46
• Track 15 : Awesomesauce_44, Misha28_42, Aloeri_44, TootsiePop_42
• Track 16 : Byougenkin_42
• Track 17 : Sabbb_50
• Track 18 : Doug_45
• Track 19 : Rialto_49
• Track 20 : Bobi_48
• Track 21 : Rita_46
• Track 22 : Renaud18_48
• Track 23 : Cornie_37, Mahavrat_42
• Track 24 : Okabe_41, Corium_43, Lorde_47, Batiatus_45, PatoPoderoso_43

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

The start number called the most often in the published annotations is 19, it was called in 24 of the 62 non-draft genes in the pham.

Genes that call this "Most Annotated" start:

• AlpineSix_47, BlueCrab_43, Bobi_48, DaWorst_47, Daenerys_42, Empress_46, Girr_46, Hegedechwinu_44, Hlubikazi_43, Jinglebell_47, Kersh_46, Madiba_41, Mandlovu_43, MisterCuddles_45, Ochi17_45, Poenanya_45, Pollywog_44, RedBird_42, Renaud18_48, Rialto_49, Sassafras_45, Strokeseat_44, UncleRicky_45, Whouxphf_44,

Genes that have the "Most Annotated" start but do not call it:
• Batiatus_45, BigPhil_40, Brookers_41, Cerasum_40, Coco12_42, Corium_43, Juice456_47, Kingsley_40, Lorde_47, Minnie_48, Okabe_41, PatoPoderoso_43, Rita_46, Sarma624_41, Velveteen_39,

Genes that do not have the "Most Annotated" start:
• Aloeri_44, Awesomesauce_44, Bubbles123_42, Byougenkin_42, Che8_48, ChickenDinner_43, Cornie_37, DocMcStuffins_43, Doug_45, Fancypants_45, Juniper1_42, Kimberlium_46, Mahavrat_42, Maravista_45, MilleniumForce_44, Misha28_42, MulchExplorer_46, Mutaforma13_47, NewHope4_47, Piper2020_44, Polo2Bam_52, QuickMath_45, Sabbb_50, Soul22_49, TootsiePop_42, Wachhund_47, Whatsapiecost_43,

Summary by start number:

Start 1:
• Found in 3 of 66 (4.5%) of genes in pham
• Manual Annotations of this start: 1 of 62
• Called 33.3% of time when present
• Phage (with cluster) where this start called: Sabbb_50 (F1),

Start 10:
• Found in 30 of 66 (45.5%) of genes in pham
• Manual Annotations of this start: 2 of 62
• Called 16.7% of time when present
• Phage (with cluster) where this start called: Batiatus_45 (F1), Corium_43 (F1), Lorde_47 (F1), Okabe_41 (F8), PatoPoderoso_43 (F1),

Start 11:
• Found in 5 of 66 (7.6%) of genes in pham
• Manual Annotations of this start: 1 of 62
• Called 20.0% of time when present
• Phage (with cluster) where this start called: Minnie_48 (F1),

Start 13:
• Found in 20 of 66 (30.3%) of genes in pham
• Manual Annotations of this start: 2 of 62
• Called 10.0% of time when present
• Phage (with cluster) where this start called: Juice456_47 (F1), Rita_46 (F1),

Start 14:
• Found in 22 of 66 (33.3%) of genes in pham
• Manual Annotations of this start: 1 of 62
• Called 4.5% of time when present
• Phage (with cluster) where this start called: Byougenkin_42 (F1),

Start 15:

• Found in 14 of 66 (21.2%) of genes in pham
• Manual Annotations of this start: 8 of 62
• Called 57.1% of time when present
• Phage (with cluster) where this start called: Bubbles123_42 (F1), Fancypants_45 (F1), Kimberlium_46 (F1), MilleniumForce_44 (F1), QuickMath_45 (F1), Soul22_49 (F2), Wachhund_47 (F1), Whatsapiecost_43 (F1),

Start 17:
• Found in 7 of 66 (10.6%) of genes in pham
• Manual Annotations of this start: 4 of 62
• Called 57.1% of time when present
• Phage (with cluster) where this start called: Aloeri_44 (F1), Awesomesauce_44 (F1), Misha28_42 (F1), TootsiePop_42 (F1),

Start 18:
• Found in 27 of 66 (40.9%) of genes in pham
• Manual Annotations of this start: 1 of 62
• Called 3.7% of time when present
• Phage (with cluster) where this start called: Maravista_45 (F1),

Start 19:
• Found in 39 of 66 (59.1%) of genes in pham
• Manual Annotations of this start: 24 of 62
• Called 61.5% of time when present
• Phage (with cluster) where this start called: AlpineSix_47 (F1), BlueCrab_43 (F1), Bobi_48 (F1), DaWorst_47 (F1), Daenerys_42 (F1), Empress_46 (F1), Girr_46 (F1), Hegedechwinu_44 (F1), Hlubikazi_43 (F1), Jinglebell_47 (F1), Kersh_46 (F1), Madiba_41 (F1), Mandlovu_43 (F1), MisterCuddles_45 (F1), Ochi17_45 (F1), Poenanya_45 (F1), Pollywog_44 (F1), RedBird_42 (F1), Renaud18_48 (F4), Rialto_49 (F1), Sassafras_45 (F1), Strokeseat_44 (F1), UncleRicky_45 (F1), Whouxphf_44 (F1),

Start 20:
• Found in 27 of 66 (40.9%) of genes in pham
• Manual Annotations of this start: 1 of 62
• Called 3.7% of time when present
• Phage (with cluster) where this start called: Doug_45 (F1),

Start 21:
• Found in 27 of 66 (40.9%) of genes in pham
• Manual Annotations of this start: 1 of 62
• Called 3.7% of time when present
• Phage (with cluster) where this start called: DocMcStuffins_43 (F1),

Start 22:
• Found in 35 of 66 (53.0%) of genes in pham
• Manual Annotations of this start: 16 of 62
• Called 48.6% of time when present
• Phage (with cluster) where this start called: BigPhil_40 (F1), Brookers_41 (F1), Cerasum_40 (F1), Che8_48 (F1), ChickenDinner_43 (F1), Coco12_42 (F1), Cornie_37 (F5), Juniper1_42 (F1), Kingsley_40 (F1), Mahavrat_42 (F1), MulchExplorer_46 (F1), Mutaforma13_47 (F1), NewHope4_47 (F1), Piper2020_44 (F1), Polo2Bam_52 (F1), Sarma624_41 (F1), Velveteen_39 (F1),

Summary by clusters:

There are 5 clusters represented in this pham: F8, F1, F2, F4, F5,

Info for manual annotations of cluster F1:
•Start number 1 was manually annotated 1 time for cluster F1.
•Start number 10 was manually annotated 2 times for cluster F1.
•Start number 11 was manually annotated 1 time for cluster F1.
•Start number 13 was manually annotated 2 times for cluster F1.
•Start number 14 was manually annotated 1 time for cluster F1.
•Start number 15 was manually annotated 7 times for cluster F1.
•Start number 17 was manually annotated 4 times for cluster F1.
•Start number 18 was manually annotated 1 time for cluster F1.
•Start number 19 was manually annotated 23 times for cluster F1.
•Start number 20 was manually annotated 1 time for cluster F1.
•Start number 21 was manually annotated 1 time for cluster F1.
•Start number 22 was manually annotated 15 times for cluster F1.

Info for manual annotations of cluster F2:
•Start number 15 was manually annotated 1 time for cluster F2.

Info for manual annotations of cluster F4:
•Start number 19 was manually annotated 1 time for cluster F4.

Info for manual annotations of cluster F5:
•Start number 22 was manually annotated 1 time for cluster F5.

Gene Information:

Gene: Aloeri_44 Start: 34127, Stop: 33540, Start Num: 17
Candidate Starts for Aloeri_44:
(9, 34211), (Start: 14 @34151 has 1 MA's), (Start: 17 @34127 has 4 MA's), (Start: 18 @34109 has 1 MA's), (Start: 20 @34103 has 1 MA's), (Start: 21 @34085 has 1 MA's), (Start: 22 @34073 has 16 MA's), (23, 34064), (24, 33995), (27, 33944), (29, 33881), (33, 33797), (34, 33791), (35, 33743), (36, 33722),

Gene: AlpineSix_47 Start: 35804, Stop: 35232, Start Num: 19
Candidate Starts for AlpineSix_47:
(2, 35978), (3, 35972), (Start: 10 @35903 has 2 MA's), (Start: 13 @35852 has 2 MA's), (16, 35834), (Start: 19 @35804 has 24 MA's), (28, 35585), (36, 35414),

Gene: Awesomesauce_44 Start: 33389, Stop: 32802, Start Num: 17
Candidate Starts for Awesomesauce_44:
(9, 33473), (Start: 14 @33413 has 1 MA's), (Start: 17 @33389 has 4 MA's), (Start: 18 @33371 has 1 MA's), (Start: 20 @33365 has 1 MA's), (Start: 21 @33347 has 1 MA's), (Start: 22 @33335 has 16 MA's), (23, 33326), (24, 33257), (27, 33206), (29, 33143), (33, 33059), (34, 33053), (35, 33005), (36, 32984),

Gene: Batiatus_45 Start: 35723, Stop: 35055, Start Num: 10

Candidate Starts for Batiatus_45:
(Start: 10 @35723 has 2 MA's), (12, 35675), (16, 35654), (Start: 19 @35624 has 24 MA's), (25, 35468), (28, 35405), (30, 35372), (36, 35234),

Gene: BigPhil_40 Start: 30335, Stop: 29802, Start Num: 22
Candidate Starts for BigPhil_40:
(Start: 19 @30368 has 24 MA's), (Start: 22 @30335 has 16 MA's), (26, 30206), (27, 30203), (29, 30140), (32, 30074), (34, 30050), (36, 29981),

Gene: BlueCrab_43 Start: 34399, Stop: 33827, Start Num: 19
Candidate Starts for BlueCrab_43:
(2, 34573), (3, 34567), (5, 34552), (Start: 10 @34498 has 2 MA's), (Start: 13 @34447 has 2 MA's), (16, 34429), (Start: 19 @34399 has 24 MA's), (28, 34180), (36, 34009),

Gene: Bobi_48 Start: 36367, Stop: 35798, Start Num: 19
Candidate Starts for Bobi_48:
(Start: 10 @36466 has 2 MA's), (16, 36397), (Start: 19 @36367 has 24 MA's), (25, 36211), (28, 36148), (30, 36115), (36, 35977),

Gene: Brookers_41 Start: 33286, Stop: 32753, Start Num: 22
Candidate Starts for Brookers_41:
(Start: 19 @33319 has 24 MA's), (Start: 22 @33286 has 16 MA's), (26, 33157), (27, 33154), (29, 33091), (32, 33025), (34, 33001), (36, 32932),

Gene: Bubbles123_42 Start: 35115, Stop: 34513, Start Num: 15
Candidate Starts for Bubbles123_42:
(Start: 14 @35121 has 1 MA's), (Start: 15 @35115 has 8 MA's), (Start: 18 @35079 has 1 MA's), (Start: 20 @35073 has 1 MA's), (Start: 21 @35055 has 1 MA's), (Start: 22 @35043 has 16 MA's), (26, 34917), (27, 34914), (29, 34851), (31, 34803), (34, 34761), (36, 34692),

Gene: Byougenkin_42 Start: 34510, Stop: 33902, Start Num: 14
Candidate Starts for Byougenkin_42:
(Start: 14 @34510 has 1 MA's), (Start: 18 @34468 has 1 MA's), (Start: 20 @34462 has 1 MA's), (Start: 21 @34444 has 1 MA's), (Start: 22 @34432 has 16 MA's), (26, 34306), (27, 34303), (29, 34240), (31, 34192), (34, 34150), (36, 34081),

Gene: Cerasum_40 Start: 30353, Stop: 29820, Start Num: 22
Candidate Starts for Cerasum_40:
(Start: 19 @30386 has 24 MA's), (Start: 22 @30353 has 16 MA's), (26, 30224), (27, 30221), (29, 30158), (32, 30092), (34, 30068), (36, 29999),

Gene: Che8_48 Start: 35596, Stop: 35063, Start Num: 22
Candidate Starts for Che8_48:
(4, 35779), (6, 35770), (7, 35755), (8, 35740), (Start: 18 @35632 has 1 MA's), (Start: 20 @35626 has 1 MA's), (Start: 21 @35608 has 1 MA's), (Start: 22 @35596 has 16 MA's), (26, 35470), (27, 35467), (29, 35404), (31, 35356), (34, 35314), (36, 35245),

Gene: ChickenDinner_43 Start: 34073, Stop: 33540, Start Num: 22
Candidate Starts for ChickenDinner_43:
(9, 34211), (Start: 14 @34151 has 1 MA's), (Start: 17 @34127 has 4 MA's), (Start: 18 @34109 has 1 MA's), (Start: 20 @34103 has 1 MA's), (Start: 21 @34085 has 1 MA's), (Start: 22 @34073 has 16 MA's), (23, 34064), (24, 33995), (27, 33944), (29, 33881), (33, 33797), (34, 33791), (35, 33743), (36, 33722),

Gene: Coco12_42 Start: 34410, Stop: 33877, Start Num: 22
Candidate Starts for Coco12_42:
(Start: 19 @34443 has 24 MA's), (Start: 22 @34410 has 16 MA's), (26, 34281), (27, 34278), (29, 34215), (32, 34149), (34, 34125), (36, 34056),

Gene: Corium_43 Start: 34988, Stop: 34320, Start Num: 10
Candidate Starts for Corium_43:
(Start: 10 @34988 has 2 MA's), (12, 34940), (16, 34919), (Start: 19 @34889 has 24 MA's), (25, 34733), (28, 34670), (30, 34637), (36, 34499),

Gene: Cornie_37 Start: 32469, Stop: 31936, Start Num: 22
Candidate Starts for Cornie_37:
(Start: 1 @32688 has 1 MA's), (4, 32652), (6, 32643), (7, 32628), (Start: 18 @32505 has 1 MA's), (Start: 20 @32499 has 1 MA's), (Start: 21 @32481 has 1 MA's), (Start: 22 @32469 has 16 MA's), (26, 32343), (27, 32340), (29, 32277), (31, 32229), (34, 32187), (35, 32139), (36, 32118),

Gene: DaWorst_47 Start: 35474, Stop: 34905, Start Num: 19
Candidate Starts for DaWorst_47:
(Start: 10 @35573 has 2 MA's), (12, 35525), (16, 35504), (Start: 19 @35474 has 24 MA's), (25, 35318), (28, 35255), (30, 35222), (36, 35084),

Gene: Daenerys_42 Start: 34265, Stop: 33693, Start Num: 19
Candidate Starts for Daenerys_42:
(2, 34439), (3, 34433), (Start: 10 @34364 has 2 MA's), (Start: 11 @34319 has 1 MA's), (Start: 13 @34313 has 2 MA's), (16, 34295), (Start: 19 @34265 has 24 MA's), (28, 34046), (36, 33875),

Gene: DocMcStuffins_43 Start: 34085, Stop: 33540, Start Num: 21
Candidate Starts for DocMcStuffins_43:
(9, 34211), (Start: 14 @34151 has 1 MA's), (Start: 17 @34127 has 4 MA's), (Start: 18 @34109 has 1 MA's), (Start: 20 @34103 has 1 MA's), (Start: 21 @34085 has 1 MA's), (Start: 22 @34073 has 16 MA's), (23, 34064), (24, 33995), (27, 33944), (29, 33881), (33, 33797), (34, 33791), (35, 33743), (36, 33722),

Gene: Doug_45 Start: 34931, Stop: 34371, Start Num: 20
Candidate Starts for Doug_45:
(Start: 14 @34979 has 1 MA's), (Start: 15 @34973 has 8 MA's), (Start: 18 @34937 has 1 MA's), (Start: 20 @34931 has 1 MA's), (Start: 21 @34913 has 1 MA's), (Start: 22 @34901 has 16 MA's), (26, 34775), (27, 34772), (29, 34709), (31, 34661), (34, 34619), (36, 34550),

Gene: Empress_46 Start: 35678, Stop: 35106, Start Num: 19
Candidate Starts for Empress_46:
(Start: 19 @35678 has 24 MA's), (28, 35459), (36, 35288),

Gene: Fancypants_45 Start: 35388, Stop: 34783, Start Num: 15
Candidate Starts for Fancypants_45:
(Start: 14 @35394 has 1 MA's), (Start: 15 @35388 has 8 MA's), (Start: 18 @35352 has 1 MA's), (Start: 20 @35346 has 1 MA's), (Start: 21 @35328 has 1 MA's), (Start: 22 @35316 has 16 MA's), (26, 35190), (27, 35187), (29, 35124), (31, 35076), (34, 35034), (36, 34965),

Gene: Girr_46 Start: 35274, Stop: 34702, Start Num: 19
Candidate Starts for Girr_46:

(2, 35448), (3, 35442), (Start: 10 @35373 has 2 MA's), (Start: 11 @35328 has 1 MA's), (Start: 13 @35322 has 2 MA's), (16, 35304), (Start: 19 @35274 has 24 MA's), (28, 35055), (36, 34884),

Gene: Hegedechwinu_44 Start: 33406, Stop: 32837, Start Num: 19
Candidate Starts for Hegedechwinu_44:
(2, 33580), (3, 33574), (Start: 10 @33505 has 2 MA's), (Start: 13 @33454 has 2 MA's), (16, 33436), (Start: 19 @33406 has 24 MA's), (28, 33187), (36, 33016),

Gene: Hlubikazi_43 Start: 34252, Stop: 33683, Start Num: 19
Candidate Starts for Hlubikazi_43:
(Start: 10 @34351 has 2 MA's), (12, 34303), (16, 34282), (Start: 19 @34252 has 24 MA's), (25, 34096), (28, 34033), (30, 34000), (36, 33862),

Gene: Jinglebell_47 Start: 35803, Stop: 35231, Start Num: 19
Candidate Starts for Jinglebell_47:
(2, 35977), (3, 35971), (Start: 10 @35902 has 2 MA's), (Start: 13 @35851 has 2 MA's), (16, 35833), (Start: 19 @35803 has 24 MA's), (28, 35584), (36, 35413),

Gene: Juice456_47 Start: 36056, Stop: 35439, Start Num: 13
Candidate Starts for Juice456_47:
(2, 36182), (3, 36176), (Start: 10 @36107 has 2 MA's), (Start: 13 @36056 has 2 MA's), (16, 36038), (Start: 19 @36008 has 24 MA's), (28, 35789), (36, 35618),

Gene: Juniper1_42 Start: 34132, Stop: 33599, Start Num: 22
Candidate Starts for Juniper1_42:
(4, 34315), (6, 34306), (7, 34291), (8, 34276), (Start: 18 @34168 has 1 MA's), (Start: 20 @34162 has 1 MA's), (Start: 21 @34144 has 1 MA's), (Start: 22 @34132 has 16 MA's), (26, 34006), (27, 34003), (29, 33940), (31, 33892), (34, 33850), (36, 33781),

Gene: Kersh_46 Start: 36309, Stop: 35737, Start Num: 19
Candidate Starts for Kersh_46:
(2, 36483), (3, 36477), (Start: 10 @36408 has 2 MA's), (Start: 13 @36357 has 2 MA's), (16, 36339), (Start: 19 @36309 has 24 MA's), (28, 36090), (36, 35919),

Gene: Kimberlium_46 Start: 35638, Stop: 35036, Start Num: 15
Candidate Starts for Kimberlium_46:
(Start: 14 @35644 has 1 MA's), (Start: 15 @35638 has 8 MA's), (Start: 18 @35602 has 1 MA's), (Start: 20 @35596 has 1 MA's), (Start: 21 @35578 has 1 MA's), (Start: 22 @35566 has 16 MA's), (26, 35440), (27, 35437), (29, 35374), (31, 35326), (34, 35284), (36, 35215),

Gene: Kingsley_40 Start: 33143, Stop: 32610, Start Num: 22
Candidate Starts for Kingsley_40:
(Start: 19 @33176 has 24 MA's), (Start: 22 @33143 has 16 MA's), (26, 33014), (27, 33011), (29, 32948), (32, 32882), (34, 32858), (36, 32789),

Gene: Lorde_47 Start: 34386, Stop: 33718, Start Num: 10
Candidate Starts for Lorde_47:
(Start: 10 @34386 has 2 MA's), (12, 34338), (16, 34317), (Start: 19 @34287 has 24 MA's), (25, 34131), (28, 34068), (30, 34035), (36, 33897),

Gene: Madiba_41 Start: 33006, Stop: 32434, Start Num: 19
Candidate Starts for Madiba_41:

(2, 33180), (3, 33174), (Start: 10 @33105 has 2 MA's), (Start: 13 @33054 has 2 MA's), (16, 33036), (Start: 19 @33006 has 24 MA's), (28, 32787), (36, 32616),

Gene: Mahavrat_42 Start: 33928, Stop: 33395, Start Num: 22
Candidate Starts for Mahavrat_42:
(Start: 1 @34147 has 1 MA's), (4, 34111), (6, 34102), (7, 34087), (Start: 18 @33964 has 1 MA's), (Start: 20 @33958 has 1 MA's), (Start: 21 @33940 has 1 MA's), (Start: 22 @33928 has 16 MA's), (26, 33802), (27, 33799), (29, 33736), (31, 33688), (34, 33646), (35, 33598), (36, 33577),

Gene: Mandlovu_43 Start: 34194, Stop: 33625, Start Num: 19
Candidate Starts for Mandlovu_43:
(Start: 10 @34293 has 2 MA's), (12, 34245), (16, 34224), (Start: 19 @34194 has 24 MA's), (25, 34038), (28, 33975), (30, 33942), (36, 33804),

Gene: Maravista_45 Start: 35361, Stop: 34792, Start Num: 18
Candidate Starts for Maravista_45:
(Start: 14 @35403 has 1 MA's), (Start: 15 @35397 has 8 MA's), (Start: 18 @35361 has 1 MA's), (Start: 20 @35355 has 1 MA's), (Start: 21 @35337 has 1 MA's), (Start: 22 @35325 has 16 MA's), (26, 35199), (27, 35196), (29, 35133), (31, 35085), (34, 35043), (36, 34974),

Gene: MilleniumForce_44 Start: 35371, Stop: 34769, Start Num: 15
Candidate Starts for MilleniumForce_44:
(Start: 14 @35377 has 1 MA's), (Start: 15 @35371 has 8 MA's), (Start: 18 @35335 has 1 MA's), (Start: 20 @35329 has 1 MA's), (Start: 21 @35311 has 1 MA's), (Start: 22 @35299 has 16 MA's), (26, 35173), (27, 35170), (29, 35107), (31, 35059), (34, 35017), (36, 34948),

Gene: Minnie_48 Start: 35798, Stop: 35175, Start Num: 11
Candidate Starts for Minnie_48:
(2, 35918), (3, 35912), (Start: 10 @35843 has 2 MA's), (Start: 11 @35798 has 1 MA's), (Start: 13 @35792 has 2 MA's), (16, 35774), (Start: 19 @35744 has 24 MA's), (28, 35525), (36, 35354),

Gene: Misha28_42 Start: 33394, Stop: 32807, Start Num: 17
Candidate Starts for Misha28_42:
(9, 33478), (Start: 14 @33418 has 1 MA's), (Start: 17 @33394 has 4 MA's), (Start: 18 @33376 has 1 MA's), (Start: 20 @33370 has 1 MA's), (Start: 21 @33352 has 1 MA's), (Start: 22 @33340 has 16 MA's), (23, 33331), (24, 33262), (27, 33211), (29, 33148), (33, 33064), (34, 33058), (35, 33010), (36, 32989),

Gene: MisterCuddles_45 Start: 35274, Stop: 34702, Start Num: 19
Candidate Starts for MisterCuddles_45:
(2, 35448), (3, 35442), (Start: 10 @35373 has 2 MA's), (Start: 11 @35328 has 1 MA's), (Start: 13 @35322 has 2 MA's), (16, 35304), (Start: 19 @35274 has 24 MA's), (28, 35055), (36, 34884),

Gene: MulchExplorer_46 Start: 35565, Stop: 35035, Start Num: 22
Candidate Starts for MulchExplorer_46:
(Start: 14 @35643 has 1 MA's), (Start: 15 @35637 has 8 MA's), (Start: 18 @35601 has 1 MA's), (Start: 20 @35595 has 1 MA's), (Start: 21 @35577 has 1 MA's), (Start: 22 @35565 has 16 MA's), (26, 35439), (27, 35436), (29, 35373), (31, 35325), (34, 35283), (36, 35214),

Gene: Mutaforma13_47 Start: 35601, Stop: 35071, Start Num: 22
Candidate Starts for Mutaforma13_47:
(Start: 14 @35679 has 1 MA's), (Start: 15 @35673 has 8 MA's), (Start: 18 @35637 has 1 MA's), (Start: 20 @35631 has 1 MA's), (Start: 21 @35613 has 1 MA's), (Start: 22 @35601 has 16 MA's), (26, 35475),

(27, 35472), (29, 35409), (31, 35361), (34, 35319), (36, 35250),

Gene: NewHope4_47 Start: 35189, Stop: 34659, Start Num: 22
Candidate Starts for NewHope4_47:
(Start: 14 @35267 has 1 MA's), (Start: 15 @35261 has 8 MA's), (Start: 18 @35225 has 1 MA's), (Start: 20 @35219 has 1 MA's), (Start: 21 @35201 has 1 MA's), (Start: 22 @35189 has 16 MA's), (26, 35063), (27, 35060), (29, 34997), (31, 34949), (34, 34907), (36, 34838),

Gene: Ochi17_45 Start: 35254, Stop: 34682, Start Num: 19
Candidate Starts for Ochi17_45:
(2, 35428), (3, 35422), (Start: 10 @35353 has 2 MA's), (Start: 13 @35302 has 2 MA's), (16, 35284), (Start: 19 @35254 has 24 MA's), (28, 35035), (36, 34864),

Gene: Okabe_41 Start: 30630, Stop: 29962, Start Num: 10
Candidate Starts for Okabe_41:
(Start: 10 @30630 has 2 MA's), (12, 30582), (16, 30561), (Start: 19 @30531 has 24 MA's), (25, 30375), (28, 30312), (30, 30279), (36, 30141),

Gene: PatoPoderoso_43 Start: 34988, Stop: 34320, Start Num: 10
Candidate Starts for PatoPoderoso_43:
(Start: 10 @34988 has 2 MA's), (12, 34940), (16, 34919), (Start: 19 @34889 has 24 MA's), (25, 34733), (28, 34670), (30, 34637), (36, 34499),

Gene: Piper2020_44 Start: 34056, Stop: 33523, Start Num: 22
Candidate Starts for Piper2020_44:
(9, 34194), (Start: 14 @34134 has 1 MA's), (Start: 17 @34110 has 4 MA's), (Start: 18 @34092 has 1 MA's), (Start: 20 @34086 has 1 MA's), (Start: 21 @34068 has 1 MA's), (Start: 22 @34056 has 16 MA's), (23, 34047), (24, 33978), (27, 33927), (29, 33864), (33, 33780), (34, 33774), (35, 33726), (36, 33705),

Gene: Poenanya_45 Start: 35613, Stop: 35041, Start Num: 19
Candidate Starts for Poenanya_45:
(2, 35787), (3, 35781), (5, 35766), (Start: 10 @35712 has 2 MA's), (Start: 13 @35661 has 2 MA's), (16, 35643), (Start: 19 @35613 has 24 MA's), (28, 35394), (36, 35223),

Gene: Pollywog_44 Start: 34791, Stop: 34219, Start Num: 19
Candidate Starts for Pollywog_44:
(2, 34965), (3, 34959), (Start: 10 @34890 has 2 MA's), (Start: 13 @34839 has 2 MA's), (16, 34821), (Start: 19 @34791 has 24 MA's), (28, 34572), (36, 34401),

Gene: Polo2Bam_52 Start: 35043, Stop: 34513, Start Num: 22
Candidate Starts for Polo2Bam_52:
(Start: 14 @35121 has 1 MA's), (Start: 15 @35115 has 8 MA's), (Start: 18 @35079 has 1 MA's), (Start: 20 @35073 has 1 MA's), (Start: 21 @35055 has 1 MA's), (Start: 22 @35043 has 16 MA's), (26, 34917), (27, 34914), (29, 34851), (31, 34803), (34, 34761), (36, 34692),

Gene: QuickMath_45 Start: 35861, Stop: 35259, Start Num: 15
Candidate Starts for QuickMath_45:
(Start: 14 @35867 has 1 MA's), (Start: 15 @35861 has 8 MA's), (Start: 18 @35825 has 1 MA's), (Start: 20 @35819 has 1 MA's), (Start: 21 @35801 has 1 MA's), (Start: 22 @35789 has 16 MA's), (26, 35663), (27, 35660), (29, 35597), (31, 35549), (34, 35507), (36, 35438),

Gene: RedBird_42 Start: 34424, Stop: 33852, Start Num: 19

Candidate Starts for RedBird_42:
(2, 34598), (3, 34592), (5, 34577), (Start: 10 @34523 has 2 MA's), (Start: 13 @34472 has 2 MA's), (16, 34454), (Start: 19 @34424 has 24 MA's), (28, 34205), (36, 34034),

Gene: Renaud18_48 Start: 35135, Stop: 34566, Start Num: 19
Candidate Starts for Renaud18_48:
(2, 35309), (3, 35303), (Start: 10 @35234 has 2 MA's), (Start: 13 @35183 has 2 MA's), (16, 35165), (Start: 19 @35135 has 24 MA's), (28, 34916), (30, 34883), (36, 34745),

Gene: Rialto_49 Start: 36855, Stop: 36289, Start Num: 19
Candidate Starts for Rialto_49:
(Start: 19 @36855 has 24 MA's), (Start: 22 @36822 has 16 MA's), (26, 36693), (27, 36690), (29, 36627), (32, 36561), (34, 36537), (36, 36468),

Gene: Rita_46 Start: 34488, Stop: 33871, Start Num: 13
Candidate Starts for Rita_46:
(2, 34614), (3, 34608), (Start: 10 @34539 has 2 MA's), (Start: 13 @34488 has 2 MA's), (16, 34470), (Start: 19 @34440 has 24 MA's), (25, 34284), (28, 34221), (30, 34188), (36, 34050),

Gene: Sabbb_50 Start: 36282, Stop: 35530, Start Num: 1
Candidate Starts for Sabbb_50:
(Start: 1 @36282 has 1 MA's), (4, 36246), (7, 36222), (8, 36207), (Start: 18 @36099 has 1 MA's), (Start: 20 @36093 has 1 MA's), (Start: 21 @36075 has 1 MA's), (Start: 22 @36063 has 16 MA's), (26, 35937), (27, 35934), (29, 35871), (31, 35823), (34, 35781), (36, 35712),

Gene: Sarma624_41 Start: 30335, Stop: 29802, Start Num: 22
Candidate Starts for Sarma624_41:
(Start: 19 @30368 has 24 MA's), (Start: 22 @30335 has 16 MA's), (26, 30206), (27, 30203), (29, 30140), (32, 30074), (34, 30050), (36, 29981),

Gene: Sassafras_45 Start: 34945, Stop: 34373, Start Num: 19
Candidate Starts for Sassafras_45:
(2, 35119), (3, 35113), (Start: 10 @35044 has 2 MA's), (Start: 11 @34999 has 1 MA's), (Start: 13 @34993 has 2 MA's), (16, 34975), (Start: 19 @34945 has 24 MA's), (28, 34726), (36, 34555),

Gene: Soul22_49 Start: 34817, Stop: 34215, Start Num: 15
Candidate Starts for Soul22_49:
(Start: 14 @34823 has 1 MA's), (Start: 15 @34817 has 8 MA's), (Start: 18 @34781 has 1 MA's), (Start: 20 @34775 has 1 MA's), (Start: 21 @34757 has 1 MA's), (Start: 22 @34745 has 16 MA's), (26, 34619), (27, 34616), (29, 34553), (31, 34505), (34, 34463), (36, 34394),

Gene: Strokeseat_44 Start: 34251, Stop: 33682, Start Num: 19
Candidate Starts for Strokeseat_44:
(Start: 10 @34350 has 2 MA's), (12, 34302), (16, 34281), (Start: 19 @34251 has 24 MA's), (25, 34095), (28, 34032), (30, 33999), (36, 33861),

Gene: TootsiePop_42 Start: 33394, Stop: 32807, Start Num: 17
Candidate Starts for TootsiePop_42:
(9, 33478), (Start: 14 @33418 has 1 MA's), (Start: 17 @33394 has 4 MA's), (Start: 18 @33376 has 1 MA's), (Start: 20 @33370 has 1 MA's), (Start: 21 @33352 has 1 MA's), (Start: 22 @33340 has 16 MA's), (23, 33331), (24, 33262), (27, 33211), (29, 33148), (33, 33064), (34, 33058), (35, 33010), (36, 32989),

Gene: UncleRicky_45 Start: 35416, Stop: 34844, Start Num: 19
Candidate Starts for UncleRicky_45:
(2, 35590), (3, 35584), (Start: 10 @35515 has 2 MA's), (Start: 13 @35464 has 2 MA's), (16, 35446), (Start: 19 @35416 has 24 MA's), (28, 35197), (36, 35026),

Gene: Velveteen_39 Start: 30335, Stop: 29802, Start Num: 22
Candidate Starts for Velveteen_39:
(Start: 19 @30368 has 24 MA's), (Start: 22 @30335 has 16 MA's), (26, 30206), (27, 30203), (29, 30140), (32, 30074), (34, 30050), (36, 29981),

Gene: Wachhund_47 Start: 34586, Stop: 33981, Start Num: 15
Candidate Starts for Wachhund_47:
(Start: 14 @34592 has 1 MA's), (Start: 15 @34586 has 8 MA's), (Start: 18 @34550 has 1 MA's), (Start: 20 @34544 has 1 MA's), (Start: 21 @34526 has 1 MA's), (Start: 22 @34514 has 16 MA's), (26, 34388), (27, 34385), (29, 34322), (31, 34274), (34, 34232), (36, 34163),

Gene: Whatsapiecost_43 Start: 33848, Stop: 33246, Start Num: 15
Candidate Starts for Whatsapiecost_43:
(Start: 14 @33854 has 1 MA's), (Start: 15 @33848 has 8 MA's), (Start: 18 @33812 has 1 MA's), (Start: 20 @33806 has 1 MA's), (Start: 21 @33788 has 1 MA's), (Start: 22 @33776 has 16 MA's), (26, 33650), (27, 33647), (29, 33584), (31, 33536), (34, 33494), (36, 33425),

Gene: Whouxphf_44 Start: 34589, Stop: 34017, Start Num: 19
Candidate Starts for Whouxphf_44:
(2, 34763), (3, 34757), (Start: 10 @34688 has 2 MA's), (Start: 13 @34637 has 2 MA's), (16, 34619), (Start: 19 @34589 has 24 MA's), (28, 34370), (36, 34199),