

Table 1: DcA query proteins used to identify homologs across the bacterial kingdoms							DUF723 range		
Name	Species	TaxID	Lineage	DomArch:Pfam	DomArch:MobDBLite		Length (aa)	DcA group	Gram stain
BProteo_Abaumannii_WP_000642456.1	Acinetobacter baumannii	470	Bacteria-Proteobacteria	DoA	NA		154 26-95	Group 3 N-term	-
ESprocc_Lintnerigtdis_WP_000650736.1	Leptospira interrogans	171	Bacteria-Spirochaetes	DoA	NA		154 18-103	Group 3 N-term	-
BProteo_Meningitidis_WP_002257446.1	Neisseria meningitidis	487	Bacteria-Proteobacteria	DoA	NA		140 14-79	Group 3 N-term	-
BProteo_Bubortus_WP_002963653.1	Brucella abortus	234	Bacteria-Proteobacteria	DoA	NA		176 12-110	Group 3 N-term	-
BProteo_Paeruginosa_WP_003120896.1	Pseudomonas aeruginosa	286	Bacteria-Proteobacteria	DoA	NA		131 5-74	Group 3 N-term	-
BProteo_Sgroup_WP_003509076.1	RhizobiumAgrobacterium group	22720	Bacteria-Proteobacteria	DoA	NA		173 15-114	Group 3 N-term	-
BProteo_Agnerihosae_WP_003683263.1	Neisseria gonorrhoeae	485	Bacteria-Proteobacteria	DoA	NA		140 14-79	Group 3 N-term	-
BActino_Scolecoides_WP_003975057.1	Streptomyces coelicolor	1883	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction		190 73-161	Group 4 Center	+
BProteo_Proteibablis_WP_004244106.1	Proteus mirabilis	583	Bacteria-Proteobacteria	DoA	NA		172 20-98	Group 3 N-term	-
BProteo_Prowazekii_WP_004506839.1	Rickettsia prowazekii	782	Bacteria-Proteobacteria	DoA	NA		108 12-97	Group 1 Whole	-
BProteo_Vparahaemolyticus_WP_005480837.1	Vibrio parahaemolyticus	670	Bacteria-Proteobacteria	DoA	consensus disorder prediction		151 11-85	Group 3 N-term	-
BProteo_Hinfluenzae_WP_005693258.1	Haemophilus influenzae	727	Bacteria-Proteobacteria	DoA	NA		104 14-93	Group 1 Whole	-
BFusoba_Freemorphum_WP_005956359.1	Fusobacterium necrophorum	859	Bacteria-Fusobacteria	DoA	NA		99 13-85	Group 1 Whole	-
BChlamy_Putenthamorae_WP_006340294.1	Parachlamydia acanthamoebae	83552	Bacteria-Chlamydiae	DoA	NA		112 22-109	Group 2 C-term	variable (No)
BActino_Cefficiens_WP_006768689.1	Corynebacterium efficiens	152794	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction		193 81-168	Group 2 C-term	+
BActino_Blongum_WP_008783054.1	Bifidobacterium longum	216836	Bacteria-Actinobacteria	DoA	NA		156 55-141	Group 2 C-term	+
BActino_Ajesti_WP_009476748.1	Rhodococcus josti	1827	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction+consensus disorder prediction+consensus disorder prediction		188 77-163	Group 2 C-term	+
BChlamy_Chracromatis_WP_009871537.1	Chlamydia trachomatis	813	Bacteria-Chlamydiae	DoA	NA		116 41-113	Group 2 C-term	variable (No)
ESprocc_Typhidus_WP_010881454.1	Trigonema pallidum	160	Bacteria-Spirochaetes	DoA	consensus disorder prediction+consensus disorder prediction		145 29-90	Group 3 N-term	-
BProteo_Leprenophila_WP_010940302.1	Legionella pneumophila	446	Bacteria-Proteobacteria	DoA	NA		140 3-49	Group 3 N-term	-
BProteo_Turnerii_WP_010957403.1	Coxiella burnetii	777	Bacteria-Proteobacteria	DoA	NA		114 36-101	Group 2 C-term	-
BActino_Suermittilis_WP_010985745.1	Streptomyces avermitilis	1883	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction+consensus disorder prediction		187 67-135	Group 2 C-term	+
BCyanob_Goldacus_WP_011143578.1	Gloeobacter violaceus	33072	Bacteria-Cyanobacteria	DoA	NA		180 5-93	Group 3 N-term	-
BProteo_Bacteriovorus_WP_011165754.1	Bdellovibrio bacteriovorus	959	Bacteria-Proteobacteria	DoA	NA		131 15-102	Group 3 N-term	-
BProteo_Rickettsiae_WP_011180381.1	Rickettsia rickettsii	38323	Bacteria-Proteobacteria	DoA	NA		166 12-110	Group 3 N-term	-
BActino_Megarrhinis_WP_011726064.1	Mycobacterium mageritii	1772	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction		194 83-169	Group 2 C-term	Positive (acid fast)
BActino_Mulicerosi_WP_011738409.1	Mycobacterium ulcerans	1809	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction		187 75-162	Group 2 C-term	Positive (acid fast)
BThermo_Tetraphila_WP_011942798.1	Thermotoga tetraphila	93929	Bacteria-Thermotogae	DoA	NA		101 6-90	Group 1 Whole	-
BProteo_Ascuichogones_WP_012073745.1	Actinobaculum succinogenes	67894	Bacteria-Proteobacteria	DoA	NA		110 13-97	Group 1 Whole	-
BProteo_Rickettsii_WP_012151389.1	Rickettsia rickettsii	783	Bacteria-Proteobacteria	DoA	NA		107 12-98	Group 1 Whole	-
BElasm_Elimidum_WP_012414387.1	Elusimicrobium minutum	423605	Bacteria-Elusimicrobia	DoA	NA		98 34-97	Group 3 C-term	-
BChloro_Chilassium_WP_012499396.1	Chloroherpeton thalassium	100716	Bacteria-Chlorobi	DoA	NA		97 10-96	Group 1 Whole	-
ESprocc_Crococuriae_WP_012938193.1	Borelia crocicuriae	29520	Bacteria-Spirochaetes	DoA	NA		99 9-96	Group 1 Whole	-
BDCyba_Dibromophillum_WP_012547832.1	Dicytygenus dibromophillum	34	Bacteria-Dicytygonini	DoA	NA		160 23-91	Group 3 N-term	-
BGermat_Gaurantica_WP_012642303.1	Gemmatimonas aurantiaca	173480	Bacteria-Gemmatimonadetes	DoA	NA		183 12-98	Group 1 Whole	-
BDeferri_Dactylophilus_WP_013009384.1	Dentrobrevia acrophilus	118090	Bacteria-Deltaproteobacteres	DoA	NA		147 21-94	Group 3 N-term	-
BProteo_Neodugesiis_WP_013053388.1	Nitrospirochaeta saluaginis	269261	Bacteria-Proteobacteria	DoA	NA		151 6-75	Group 3 N-term	-
BProteo_Methenococcus_WP_013816973.1	Methylobacillus methanococcus	421	Bacteria-Proteobacteria	DoA	NA		154 23-90	Group 3 N-term	-
BProteo_Tydicus_WP_013834763.1	Thiomicrospira cyclica	147588	Bacteria-Proteobacteria	DoA	NA		143 15-79	Group 3 N-term	-
BThermo_Tindicus_WP_013908751.1	Thermodesulfator indicus	171695	Bacteria-Thermodesulfobacteria	DoA	NA		159 4-90	Group 3 N-term	-
BProteo_Mastococcus_WP_015118768.1	Mesochoridium australicum	66287	Bacteria-Proteobacteria	DoA	NA		166 12-110	Group 3 N-term	-
BESynerg_Fastidiosum_WP_015556932.1	Fastidiosum synergisticum	611822	Bacteria-Synergistetes	DoA	consensus disorder prediction+consensus disorder prediction		176 30-113	Group 4 Center	-
BProteo_Vibriocholeerae_WP_012481231.1	Vibrio cholerae	666	Bacteria-Proteobacteria	DoA	NA		157 12-90	Group 3 N-term	-
BActino_Catypicum_WP_018603888.1	Corynebacterium atypicum	131610	Bacteria-Actinobacteria	DoA	consensus disorder prediction		206 94-181	Group 2 C-term	+
BProteo_Bpseudomallei_WP_018794713.1	Burkholderia pseudomallei	28450	Bacteria-Proteobacteria	DoA	NA		159 22-105	Group 3 N-term	-
BActidob_Methylophilatogenes_WP_019781551.1	Pythionomus methylophilatogenes	454194	Bacteria-Actinobacteria	DoA	NA		158 8-90	Group 3 N-term	-
BProteo_Amichigensis_WP_045781360.1	Klebsiella michigensis	1114687	Bacteria-Proteobacteria	DoA	NA		171 19-97	Group 3 N-term	-
BProteo_Marcescens_WP_049388024.1	Serratia marcescens	615	Bacteria-Proteobacteria	DoA	NA		171 26-98	Group 4 Center	-
BProteo_Luminescens_WP_049582384.1	Photobacterium luminescens	29488	Bacteria-Proteobacteria	DoA	NA		172 27-98	Group 4 Center	-
BProteo_Moraxi_WP_063513593.1	Moraxella ovis	29433	Bacteria-Proteobacteria	DoA	NA		172 53-108	Group 4 Center	-
BActino_Cylutamicum_WP_074493017.1	Corynebacterium glutamicum	1718	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction		178 66-153	Group 2 C-term	+
BActino_Muberculosis_WP_07788554.1	Mycobacterium tuberculosis	1773	Bacteria-Actinobacteria	DoA	consensus disorder prediction+consensus disorder prediction+consensus disorder prediction		187 59-146	Group 2 C-term	Positive (acid fast)
BVenusc_Venusticoccus_WP_078816375.1	Prostheobacter venusticoccus	48467	Bacteria-Venuscumicrobia	DoA	NA		141 51-138	Group 2 C-term	-
BProteo_Pseudococcus_WP_083003370.1	Pasturella multocida	747	Bacteria-Proteobacteria	DoA	NA		101 12-93	Group 1 Whole	-
BFinrob_Fineithialis_WP_083545550.1	Fibrobacter fineithialis	28122	Bacteria-Fibrobacteres	DoA	NA		113 29-112	Group 2 C-term	-
BPlanct_Pyiformis_WP_092049429.1	Planctomicrobium pyiforme	1576369	Bacteria-Planctomycetes	DoA	NA		116 19-107	Group 1 Whole	Negative (but unique)
BProteo_Cmizabalis_WP_099620986.1	Caalobacter mizabalis	69666	Bacteria-Proteobacteria	DoA	NA		182 37-122	Group 4 Center	-
BActidob_Balergata_WP_103932439.1	Bryocella elongata	863522	Bacteria-Actinobacteria	DoA	NA		104 20-88	Group 3 N-term	-
BActino_Bifidum_WP_110444323.1	Bifidobacterium indum	1691	Bacteria-Actinobacteria	DoA	NA		165 55-140	Group 4 Center	+
BBacter_Pileticola_WP_118966996.1	Pileotula denticola	28129	Bacteria-Bacteroidetes	DoA	NA		96 8-85	Group 1 Whole	-
BBacter_Dubosi_WP_121613775.1	Duncaniella dubosi	2518971	Bacteria-Bacteroidetes	DoA	NA		96 12-95	Group 1 Whole	-
BDeferri_Ostrophilus_WP_128465527.1	Grovibria throphilus	139438	Bacteria-Deltaproteobacteres	DoA	NA		146 5-84	Group 3 N-term	-
BProteo_Maurehus_WP_140861302.1	Mycococcus xanthus	34	Bacteria-Proteobacteria	DoA	NA		101 8-94	Group 1 Whole	-
BProteo_Magnum_WP_183109841.1	Sphingomonas alpha	653931	Bacteria-Proteobacteria	DoA	consensus disorder prediction+consensus disorder prediction		184 26-11	Group 4 Center	-
BNitrospira_Moscowensis_WP_187299312.1	Nitrospira moscowensis	42593	Bacteria-Nitrospirae	DoA	consensus disorder prediction		155 14-99	Group 3 N-term	-
BActino_Scaevolaia_WP_211711121.1	Streptomyces scaberrimus	73044	Bacteria-Actinobacteria	DoA+YACAr	NA		206 12-75Ar	Group 3 N-term	+