

Supplementary Figure 1: Homology between amino acid sequences of FusA like proteins in *S. aureus*, *Enterobacteriaceae*, *A. baumannii*, *Pseudomonas aeruginosa* and *Stenotrophomonas maltophilia*.

FusA alignment full proteins

CLUSTAL O(1.2.1) multiple sequence alignment

S.aureusNCTC8325	MAREFSLKTRNIGIMAHIDAGKTTTTTERILYYTGRIHKIGETHEGASQMDWMEQEQDRG	60
P.aeruginosaPA01	MARTTPIELYRNIGIVAHVDAGKTTTTTERILFYTGVNHHKMGVHDGAATMDWVQEQERG	60
A.baumannii	MARQTPITRYRNIGISAHIDAGKTTTTTERILFYTGVSCHKIGEVHDGAATMDWMEQEQERG	60
S.maltophiliaK279a	MARSTPIERYRNIFGIMAHIDAGKTTTTSERILFYTGKSHKIGEVHDGAATMDWMEQEQERG	60
Enterobacteriaceae	MARTTPIARYRNIGISAHIDAGKTTTTTERILFYTGVNHHKIGEVHDGAATMDWMEQEQERG	60
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S.aureusNCTC8325	ITITSAATTAAWEG-----HRVNIIDTPGHVDFTEVERSLRVLGDGAVTVLDAQSGV	112
P.aeruginosaPA01	ITITSAATTAAPWQGSTKQFPHRFYRNIIDTPGHVDFTEVERSLRVLGDGAVTVLDAQSGV	120
A.baumannii	ITITSAATTCFWSGGMNQFPQ-HRINVIDTPGHVDFTEVERSMRVLGDGAVTVLDAQSGV	119
S.maltophiliaK279a	ITIQSAATTAAPWQGMKSLPE-HRINVIDTPGHVDFTEVERSLRVLGDGAVTVLDAQSGV	119
Enterobacteriaceae	ITITSAATTAAPWQGMKSLPE-HRINVIDTPGHVDFTEVERSMRVLGDGAVTVLDAQSGV	119
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S.aureusNCTC8325	EPQSETVWRQANKYHVPRLAYVNMKDRQADFLRVVAQIKQRLGHVPVPIQLATIGAEDEF	172
P.aeruginosaPA01	EPQSETVWRQANKYHVPRLAYVNMKDRQADFLRVVAQIKQRLGHVPVPIQLATIGAEDEF	180
A.baumannii	QPQSETVWRQANKYHVPRLAFVNMKDRGTGANFFRVVEQMKTRLGANPVPIVVPVIGAEDEF	179
S.maltophiliaK279a	QPQSETVWRQANKYHVPRIAFAVNMKDRGTGANFQKVVQQLKAKLGAVAVPMQLPVGAEDEF	179
Enterobacteriaceae	QPQSETVWRQANKYHVPRIAFAVNMKDRGTGANFLKVVNQIKTRLGANPVPIQLATIGAEDEF	179
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S.aureusNCTC8325	EAITDLVEMKCFKYTN-DLGTETEETEIPEDHLDRAEFARASLIEAVAETSDELMEKYLK	231
P.aeruginosaPA01	SGQIDLVMKKAIIYNDADQGTSYREEEIPAEELRALAEWRAMVEAAEAANDLNMKYLE	240
A.baumannii	TGVVDLIMKKAIIYNDADQGTSYREEEIPAEELRALAEWRAMVEAAEAANDLNMKYLE	239
S.maltophiliaK279a	KGVVDLIMKKAIIYNDADQGTSYREEEIPAEELRALAEWRAMVEAAEAANDLNMKYLE	239
Enterobacteriaceae	TGVVDLVMKKAIIYNDADQGTVEYEDIPADMVELLANEWHQNLIESAAEAASEELMEKYLK	239
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S.aureusNCTC8325	DEETSVSELKEAIRQATTNVEFYVPLCGTAFKNGVQLMLDAVIDYLPSPLDVVKPIIGHR	291
P.aeruginosaPA01	GEELSTEEIKAGLRQRTLANQIVPAVLGSSFKNGVPLVLDVIDYLPAPSEIPAIRGTD	300
A.baumannii	EGDLKSEDIITAGLRARLASEIQVMLCGSAFKNKGVQRLDAVIEFLPSPTEVKATIGIL	299
S.maltophiliaK279a	GEELAEAEIINALRTRTLATEIVPMYCGSAFKNKGVQAMLQVQQLPSPVDVPMKGVQD	299
Enterobacteriaceae	GEELTEAETKGLRQRLNNEIILVTGSAFKNKGVQAMLDAVIDYLPSPVDVPAINGIL	299
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S.aureusNCTC8325	ASNPEEEVIAKADDSAEFAALAFKVMTPYVVKLTFFRVYSGVTMTSGSYVKNSTKGRER	351
P.aeruginosaPA01	PDDEEKHDERHADDEPFSSALAFKIATDPFVGTLTFRVYSGVLTSGDAVLNSVKGKKER	360
A.baumannii	DDKDETASREASDEAPFSSALAFKIMNDKFGVNLTFVRVYSGVLTSGDAVYVYKSKRER	359
S.maltophiliaK279a	VDDQTVEMTRKSDKAPFSSALAFKIITDPFVGTLTFRVYSGVLTSGDAVYVYKSKRER	359
Enterobacteriaceae	DDGKDTPAERHASDDEPFSSALAFKIATDPFVGTLTFRVYSGVLTSGDAVYVYKSKRER	359
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S.aureusNCTC8325	VGRLLQMHANSRQEIOTVYSGDIAAAVGLKDTGDTLCEKNDIILESMEFPFVPIHLS	411
P.aeruginosaPA01	VGRMVMQHANQRDEIKEVRAGDTAALIGMKNVDTGDTLCAIDKPIILERMDFPDPVIVSA	420
A.baumannii	IGRIVQMHANERQDIDEIRAGDIAACVGLKDVTTGDTLCEKNIITLERMEFPFVPIQLA	419
S.maltophiliaK279a	IGRILQMHNSNREEIKEVLAGDTIAAAVGLKDTTGTGDTLCAVDAPIIILERMDFPDPVIVSA	419
Enterobacteriaceae	FGRIVQMHANKREEIKEVRAGDTAAATGLKDVTTGDTLCPDAPIIILERMDFPDPVIVSA	419
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S.aureusNCTC8325	VEPKSKADQDKMTQALVKLQEEEDPTFHAHTDEETGQVIIGMGELHLDIIVDRMKREFNV	471
P.aeruginosaPA01	VEPKTKADQEKMGIALSKLAQEDPSFRVKTDEEATQTIISGMGELHLDIIVDRMRREFGV	480
A.baumannii	VEPKTKADQEKMSIALGRLAQEDPSFRVKTDEEATQTIISGMGELHLDIIVDRMRREFGV	479
S.maltophiliaK279a	VEPKTKADQEKMGIALGRLAQEDPSFRVKTDEEATQTIISGMGELHLDIIVDRMRREFNV	479
Enterobacteriaceae	VEPKTKADQEKMGIALGRLAQEDPSFRVKTDEEATQTIISGMGELHLDIIVDRMRREFNV	479
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S.aureusNCTC8325	ECNVGAPMVSRETFFKSS-AQVQGKFSRQSGGRGQYGDVHIEFTPNETG-----	519
P.aeruginosaPA01	EANIGKPVAVYRETIKKT-CEIEGKFSRQSGGRGQYGDVHIEFTPNETG-----	528
A.baumannii	EANIGKPMVAVYRETIKKT-VEQEGKFSRQSGGRGQYGDVHIEFTPNETG-----	529
S.maltophiliaK279a	EANVGAQVAVYRETIKKT-CEIEGKFSRQSGGRGQYGDVHIEFTPNETG-----	539
Enterobacteriaceae	EANVGAQVAVYRETIKKT-VEQEGKFSRQSGGRGQYGDVHIEFTPNETG-----	530
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S.aureusNCTC8325	-AGFEFENAVGGVVPREYIPVVEAGLKDAMENQVLAGYPLIDVKAKLYDGSYHDVDSSE	578
P.aeruginosaPA01	QEGLEPHNEVVGVIIPREFIPATQKGIEDQMGVLAGYPLIGLKATVYDGSYHDVDSSE	588
A.baumannii	GKEYEFAEEVVGVIIPREFIPATQKGIEDQMGVLAGYPLIGLKATVYDGSYHDVDSSE	589
S.maltophiliaK279a	KDDFLFINDITGGVIPKIEFIPVVEAGLKDAMENQVLAGYPLIDVKAKLYDGSYHDVDSSE	599
Enterobacteriaceae	PKGYEFINDITGGVIPKIEFIPVVEAGLKDAMENQVLAGYPLIDVKAKLYDGSYHDVDSSE	590
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S.aureusNCTC8325	MAFKIAASLALKEAACKDVPVILEPMMKVTIEMPEEYMGDIMGDVTSSRRGRVDGMEPR--	636
P.aeruginosaPA01	MAFKIAASMATKQLSQKGGAVLLEPVMKVEVVTPEYMGDIMGDVTSSRRGRVDGMEPR--	648
A.baumannii	LSFKMAGSYAFRDGFMKADPVLLEPIMKVEVETPEYMGDIMGDVTSSRRGRVDGMEPR--	649
S.maltophiliaK279a	MAFKIASMAFKQGFKAQKPVLLLEPIMKVEVETPEYMGDIMGDVTSSRRGRVDGMEPR--	659
Enterobacteriaceae	LAFKLAASIAFKEGFKKAKPVLLLEPIMKVEVETPEENTGDTGDLSSRRGRVDGMEPR--	650
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S.aureusNCTC8325	GNAQVNNAYVPLSEMPGYATLSRNTQGRGTMYFDHYAEVPKSIAEDIKKNKGE*--	693
P.aeruginosaPA01	G--KVIRAEVPLGEMPGYATDVRSMQGRASYSMEFVRYAEVPAVSAEIVARQGR*--	702
A.baumannii	-GTAKIAEVPVLAEMPGYATQMRSMQGRATYSMEFAKYAETPRNVAEIGIAKFAQAGKK	708
S.maltophiliaK279a	GSASIIINAMIPVLAEMPGYATLSRNTQGRGTMYFDHYAEVPAVSAEIVARQGR*--	713
Enterobacteriaceae	G--VKIHAIEVPLSEMPGYATLSRNTQGRGTMYFDHYAEVPAVSAEIVARQGR*--K-	704
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S.aureusNCTC8325	----- 693	
P.aeruginosaPA01	----- 702	
A.baumannii	GDOE* 712	
S.maltophiliaK279a	----- 713	
Enterobacteriaceae	----- 704	