

Table S3. Allergen homologs in *A. fumigatus* and other *Aspergillus* species.

A. Afu allergen	Function	<i>A. fumigatus</i>	<i>A. nidulans</i>	<i>A. oryzae</i>	Human homolog
Asp f1	Ribotoxin	Afu5g02330	no	no	no
Asp f2	B-glucanase (Also homology to fibrinogen binding protein from <i>Candida</i>)	Afu4g09580	AN1832.1 (60) AN5965.1 (49) AN4812.1 (46) AN0933.1 (42) glucanase AN1041.1 (52) endoglucanase AN2833.1 (39) cutinase	AO070318000085 (65) AO070319000031 (44) AO070297000104 (39) AO070322000042 (35) AO070280000026 (35) AO070320000125 (43) AO070209000003 (42)	no
Asp f3	PMP	Afu6g02280 Afu5g01440 (62) ^a	AN8692.1 (90) AN8080.1 (73)	AO070315000113 (86) AO070312000078 (68) AO070342000308 (37)	SwissProt P30044 (33)
Asp f4	Glucosidase	Afu2g03830 Afu3g00710 (61) Afu3g02940 (61)	AN3804.1 (60) AN8461.1 (58) AN9377.1 (48) AN7735.1 (30) cellulase	AO070342000311 (60) AO070337000223 (55) AO070315000006 (48)	no
Asp f5	Metalloprotease	Afu8g07080	no	AO070335000037 (78) protease AO070257000046 (64) protease	no
Asp f6	Mn SOD	Afu1g14550 Afu4g11580 (52)	AN0785.1 (67) AN5577.1 (51)	AO070328000027 (51)	SwissProt PO4179 (49.2)
Asp f7	Glucosidase	Afu4g06670 Afu1g00810 (82) Afu5g08030 (30) cellulase	AN4379.1 (73) AN7735.1 (30) cellulase AN6888.1 (69) aspergillopepsin	AO070261000023 (61) AO070323000029 (36) AO070325000149 (46) cellulase	no

Asp f8	Ribosomal P2	Afu2g10100	AN5996.1 (78) AN5719.1 (64)	AO070340000281 (81) P2	SwissProt PO5387 (38.3)
Asp f9	Aspartic protease	Afu5g13300 Afu2g15950 (40) Afu6g03260 (36)	AN6888.1 aspergillopepsin AN2157.1 (42) AN6686.1 (28) AN2903.1 (30) AN4422.1 (29) AN6487.1 (26) AN1573.1 (29)	AO070314000034 (71) pepsin AO070312000069 (44) AO070343000208 (42) AO070342000229 (30) AO070273000045 (29) AO070338000102 (30) AO070331000094 (27)	SwissProt P00790 (28.9) SwissProt P20142 (28.2)
Asp f10	cyclophilin	Afu2g03720 Afu3g07430 (66) Afu4g07650 (57) Afu8g03890 (51) Afu6g02140 (56) Afu2g02050 (62) Afu1g01750 (52) Afu5g13350 (47) Afu6g10480 (47)	AN3814.1 (81) cyclophilin AN8605.1 (61) AN4467.1 (55) AN4583.1 (54) AN8680.1 (58) AN0380.1 (54) AN6894.1 (47)	AO070311000012 (75) AO070328000042 (69) AO070314000022 (59) AO070305000123 (56) AO070316000171 (54) AO070315000100 (49) AO070318000064 (54) AO070314000028 (46)	SwissProt P30405 (54) SwissProt P05092 (53) Ensembl ENSP00000316205 (49.4) SwissProt Q9UNP9 (52) SwissProt P45877 (47)
Asp f11	HSP 70	Afu5g04170	AN8269.1 (95)	AO070310000033 (95) HSP	SwissProt P08238 (58.5) SwissProt P07900 (59) Ensemble ENSP00000328774 (71) SwissProt P14625 (42.2)
Asp f13	Alkaline protease/toxin	Afu2g12630	AN6273.1 (52)	AO070304000011 (58)	no
Asp f16	B-glucanase	Afu1g16190 Afu6g03230 (40) Afu6g08510 (47) Afu3g09250 (44) Afu2g03120 (34)	AN0933.1 (68) glucanase AN3914.1 (60) AN3053.1 (43) glucanase AN6948.1 (39) AN4515.1 (35) glucanase	AO070320000125 (53) AO070339000279 (52) glucanase AO070324000101 (48) glucanase AO070337000058 (39) AO070337000025 (43) glucanase	no

			AN8241.1 (35) chitinase	AO070212000016 (39) glucanase AO070311000076 (36) glucanase AO070319000115 (40)	
Asp f17	Galactomannoprotein MP1 (putative B-glucanase)	Afu4g03240 Afu2g05150 (50) Afu4g00870 (27)	AN8484.1 (45) AN2552.1 (43) AN0933.1 (29) glucanase AN8241.1 (25) chitinase	AO070335000122 (57) AO070331000096 (40) AO070305000116 (29)	
Asp f18	Vac serine protease	Afu5g09210 Afu4g11800 (44) Afu7g04930 (43)	AN0238.1 (78) AN5558.1 (45) AN3583.1 (24)	AO070284000067 (86) AO070328000053 (45)	RefSeq NM_174936 (33.6)
Asp f22	Enolase	Afu6g06770	AN5746.1 (93)	AO070341000003 (93)	SwissProt PO6733 (60.7)
Asp f23	L3 ribosomal	Afu2g11850	AN6202.1 (95)	AO070308000092 (95)	Swissprot Q92901 (87) SwissProt P39023 (64) Ensembl ENSP00000328810 (50.7)

**B. Fungal allergen
(Organism):**

	Function	<i>A. fumigatus</i>	<i>A. nidulans</i>	<i>A. oryzae</i>	Human homolog
CanA1 (<i>Candida albicans</i>)	Alcohol dehydrogenase	Afu2g13270 Afu2g04590 Afu7g01010 Afu5g06240 Afu2g10960 Afu7g04380	10168.m00087 (62) 10038.m00083 (60) 10061.m00492 (41) 10101.m00090 (34) 10032.m00188 (38) 10051.m00372 (34) 10093.m00141 (30) 10093.m00210 (29) 10051.m00577 (27) 10158.m00143 (30)	20132.m00147 (62) 20144.m00163 (37) 20146.m00235 (41) 20178.m00623 (39) 20180.m00972 (38) 20167.m00333 (38) 20085.m00076 (36) 20172.m00430 (33) 20123.m00136 (29) 20156.m00208 (30)	none

				20088.m00058 (28)	
				20158.m00285 (29)	
				20174.m00342 (29)	
				20109.m00079 (29)	
Alt a10 (<i>Alternaria alternata</i>)	Aldehyde dehydrogenase	Afu2g17460	10007.m00432 (69)	20109.m00086 (67)	Swissprot P05091 (39)
		Afu7g01000	10026.m00208 (50)	20142.m00145 (50)	Swissprot P47895 (33)
		Afu4g08600	10067.m00130 (51)	20158.m00239 (48)	
Cla h3 (<i>Cladosporium herbarum</i>)		Afu2g00720	10168.m00142 (48)	20131.m00148 (46)	
		Afu6g11430	10065.m00190 (42)	20179.m00500 (44)	
			10094.m00218 (43)	20079.m00049 (34)	
			10022.m00119 (33)	20164.m00379 (34)	
			10081.m00103 (35)	20174.m00367 (34)	
			10127.m00085 (34)	20142.m00202 (33)	
			10062.m00084 (34)	20173.m00421 (35)	
			10003.m00078 (34)	20171.m00441 (31)	
			10083.m00027 (31)	20179.m00782 (32)	
			10012.m00071 (35)	20127.m00130 (32)	
			10170.m00100 (34)	20180.m00727 (31)	
			10025.m00131 (31)	20165.m00291 (33)	
			10053.m00021 (34)	20180.m00861 (30)	
			10065.m00186 (33)	20176.m00624 (32)	
			10061.m00324 (34)	20179.m00603 (31)	
			10025.m00087 (31)	20153.m00176 (30)	
			10061.m00342 (32)	20156.m00356 (32)	
			10122.m00086 (29)	20163.m00273 (28)	
			10110.m00161 (27)	20176.m00319 (29)	
			10027.m00063 (27)	20161.m00238 (27)	
			10098.m00231 (29)	20149.m00173 (26)	
			10172.m00219 (29)	20166.m00302 (27)	
				20096.m00093 (26)	
				20179.m00695 (30)	

Alt a4 (<i>A. alternata</i>)	Di sulphide isomerase	Afu5g12260 Afu2g06150	10129.m00208 (62)	20066.m00032 (59)	Swissprot Q15084 (30)
Fus c2 (<i>Fusarium culmorum</i>)	Thioredoxin	Afu3g14970 Afu5g11320 Afu8g01090 Afu6g10300 Afu4g09090	10005.m00177	20158.m00272 20173.m00473 20121.m00134	Swissprot P10599 (41)
Alt aNTF2 (<i>A.alternata</i>)	Nuclear transport factor 2	Afu3g10460	10084.m00290 (58)	no close homologue	Swissprot P61970 (44)
Alt a12 (<i>A.alternata</i>)	P1 ribosomal protein	Afu1g06830	10098.m00306 (70)	20161.m00306 (74)	Swissprot P05386 (40)

^aThe percent identities to the *A. fumigatus* allergen are indicated in parenthesis after the accession numbers. The cut off value for exclusion of homology was $1E^{-020}$, which was the lowest score that gave consistent epitope length identical sequences.
