foods

MDPI

Comparative Analysis of the Immune Response and the Clinical Allergic Reaction to Papain-like Cysteine Proteases from Fig, Kiwifruit, Papaya, Pineapple and Mites in an Italian Population

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CLUSTAL O(1.2.4) multiple sequence alignment

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sp|P14518|BROM2_ANACO      ------------------------------------------------------------      0
tr|O23799|O23799_ANACO     MAWKVQVVFLFLFLCVMWASPSAASADEPSDPMMKRFEEWMVEYGRVYKDNDEKMRRFQI      60
tr|O81084|O81084_ANACO     MAWKVQLVFLFLFLCVMWASPSAASADEPSDPMMKRFEEWMVEYGRVYKDNDEKMRRFQI      60
tr|O23800|O23800_ANACO     MASKVQLVFLFLFLCVMWASPSAASRDEPSDPMMKRFEEWMAEYGRVYKDNDEKMRRFQI      60
tr|F1KD58|F1KD58_ANACO     MASKVQLVFLFLFLCVMWASPSAASRDEPSDPMMKRFEEWMAEYGRVYKDNDEKMRRFQI      60
tr|Q7DNA3|Q7DNA3_ANACO     ----------------------------------------MAEYGRVYKDNDEKMRRFQI      20
tr|O24641|O24641_ANACO     MASKVQLVFLFLFLCVMWASPSAASRDEPSDPMMKRFEEWMAEYGRVYKDNDEKMRRFQI      60
sp|O23791|BROM1_ANACO      MASKVQLVFLFLFLCAMWASPSAASRDEPNDPMMKRFEEWMAEYGRVYKDDDEKMRRFQI      60
tr|O23801|O23801_ANACO     ---------------------------EPNDPMMKRFEEWMAEYGRIYKDNDEKMRRFQI      33
tr|F8UN02|F8UN02_ANACO     MASKVQLVFLFLFLCVMWASPSAASRDEPSDPMMKRFEEWMAEYGRVYKDNDEKMRRFQI      60
tr|L7UXZ2|L7UXZ2_ANACO     ------------------------------------------------------------      0
sp|P80884|ANAN_ANACO        MTSKVQLVFLFLFLCVMWASPSAASCDEPSDPMMKQFEEWMAEYGRVYKDNDEKMLRFQI      60
tr|S5VRY7|S5VRY7_ANACO     MASKVQLVFLFLFLCVMWASPSAASRDEPSDPMMKRFEEWMAEYGRVYKDNDEKMRRFQI      60
tr|O81085|O81085_ANACO     MASKVQLVFLFLFLCVMWASPSAASRDEPSDPMMKRFEEWMAEYGRVYKDNDEKMRRFQI      60


sp|P14518|BROM2_ANACO      ------------------------------------------------------------      0
tr|O23799|O23799_ANACO     FKNNVNHIETFNSRNENSYTLGINQFTDMTNNEFIAQYTGGISRPLNIEREPVVSFDDVD      120
tr|O81084|O81084_ANACO     FKNNVNHIETFNSRNKDSYTLGINQFTDMTNNEFVAQYTGGISRPLNIEREPVVSFDDVD      120
tr|O23800|O23800_ANACO     FKNNVNHIETFNNRNGNSYTLGINKFTDMTNNEFVTQYTG-VSLPLNFKREPVVSFDDVN      119
tr|F1KD58|F1KD58_ANACO     FKNNVNHIETFNNRNGNSYTLGINKFTDMTNNEFVAQYTGGISRPLNIEKEPVVSFDDVN      120
tr|Q7DNA3|Q7DNA3_ANACO     FKNNVNHIETFNNRNGNSYTLGINKFTDMTNNEFVAQYTGGISRPLNIEKEPVVSFDDVN      80
tr|O24641|O24641_ANACO     FKNNVNHIETFNNRNGNSYTLGINKFTDMTNNEFVAQYTGGISRPLNIEKEPVVSFDDVN      120
sp|O23791|BROM1_ANACO      FKNNVKHIETFNSRNENSYTLGINQFTDMTKSEFVAQYTG-VSLPLNIEREPVVSFDDVN      119
tr|O23801|O23801_ANACO     FKNNVKHIETFNSRNGNSYTLGINQFTDMTKSEFVAQYTG-VSLPLNIEREPVVSFDDVN      92
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tr|F8UN02|F8UN02_ANACO      FKNNVNHIETFNSHNGNSYTLGINQFTDMTKSEFVAQYTGGISRPLNIEREPVVSFDDVN        120
tr|L7UXZ2|L7UXZ2_ANACO      ---------------------------------------------------PVVSFDDVN        9
sp|P80884|ANAN_ANACO        FKNNVNHIETFNNRNGNSYTLGINQFTDMTNNEFVAQYTG-LSLPLNIKREPVVSFDDVD        119
tr|S5VRY7|S5VRY7_ANACO      FKNNVNHIETFNNRSGNSYTLGINQFTDMTDNEFVAQYTG-VSLPLNIEREPVVSFDDVD        119
tr|O81085|O81085_ANACO      FKNNVNHIETFNSRNGNSYTLGINQFTDMTNNEFVAQYTG-VSLPLNIEREPVVSFDDVD        119

sp|P14518|BROM2_ANACO       --AVPQSIDWRDYGAVTSVKNQNPCGACWAFAAIATVESIYKIKKGILEPLSEQQVLDCA        58
tr|O23799|O23799_ANACO      ISAVPQSIDWRDYGAVTSVKNQNPCGACWAFAAIATVESIYKIKKGILEPLSEQQVLDCA        180
tr|O81084|O81084_ANACO      ISAVPQSIDWRDYGAVTSVKNQNPCGACWAFAAIATVESIYKIKKGILEPLSEQQVLDCA        180
tr|O23800|O23800_ANACO      ISAVGQSIDWRDYGAVTEVKDQNPCGSCWAFSAIATVEGIYKIVTGYLVSLSEQEVLDCA        179
tr|F1KD58|F1KD58_ANACO      ISAVGQSIDWRDYGAVTEVKDQNPCGSCWAFSAIATVEGIYKIVTGYLVSLSEQEVLDCA        180
tr|Q7DNA3|Q7DNA3_ANACO      ISAVGQSIDWRDYGAVTEVKDQNPCGSCWAFSAIATVEGIYKIVTGYLVSLSEQEVLDCA        140
tr|O24641|O24641_ANACO      ISAVGQSIDWRDYGAVTEVKDQNPCGSCWAFSAIATVEGIYKIVTGYLVSLSEQEVLDCA        180
sp|O23791|BROM1_ANACO       ISAVPQSIDWRDYGAVNEVKNQNPCGSCWSFAAIATVEGIYKIKTGYLVSLSEQEVLDCA        179
tr|O23801|O23801_ANACO      ISAVPQSIDWRDYGAVNEVKNQNPCGSCWAFAAIATVEGIYKIKTGYLVSLSEQEVLDCA        152
tr|F8UN02|F8UN02_ANACO      ISAVPQSIDWRDYGAVNEVKNQNPCGSCWAFAAIATVEGIYKIKTGYLVSLSEQEVLDCA        180
tr|L7UXZ2|L7UXZ2_ANACO      ISAVPQSIDWRDYGAVNEVKNQNPCGSCWAFAAIATVEGIYKIKTGYLVSLSEQEVLDCA        69
sp|P80884|ANAN_ANACO        ISSVPQSIDWRDSGAVTSVKNQGRCGSCWAFASIATVESIYKIKRGNLVSLSEQQVLDCA        179
tr|S5VRY7|S5VRY7_ANACO      ISAVPQSIDWRNCGAVTSVKNQNPCGSCWAFAAIATVESIYKIKRGYLVSLSEQQVLDCA        179
tr|O81085|O81085_ANACO      ISAVPQSIDWRNYGAVTSVKNHIPCGSCWAFAAIATVESIYKIKRGYLISLSEQQVLDCA        179
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sp|P14518|BROM2_ANACO       KGYGCKGGWEFRAFEFIISNKGVASGAIYPYKAAK--GTCKTDGVPNSAYITGYARVPRN        116
tr|O23799|O23799_ANACO      KGYGCKGGWEFRAFEFIISNKGVASGAIYPYKAAK--GTCKTNGVPNSAYITGYARVPRN        238
tr|O81084|O81084_ANACO      KGYGCKGGWEFRAFEFIISNKGVASVAIYPYKAAK--GTCKTNGVPNSAYITGYARVPRN        238
tr|O23800|O23800_ANACO      VSNGCDGGFVDNAYDFIISNNGVASEADYPYQAYE--GDCTANSWPNSAYITGYSYVRSN        237
tr|F1KD58|F1KD58_ANACO      VSNGCDGGFVDNAYDFIISNNGVASEADYPYQAYQ--GDCAANSWPNSAYITGYSYVRSN        238
tr|Q7DNA3|Q7DNA3_ANACO      VSNGCDGGFVDNAYDFIISNNGVASEADYPYQAYQ--GDCAANSWPNSAYITGYSYVRSN        198
tr|O24641|O24641_ANACO      VSNGCDGGFVDNAYDFIISNNGVASEADYPYQAYQ--GDCAANSWPNSAYITGYSYVRSN        238
sp|O23791|BROM1_ANACO       VSYGCKGGWVNKAYDFIISNNGVTTEENYPYLAYQ--GTCNANSFPNSAYITGYSYVRRN        237
tr|O23801|O23801_ANACO      VSYGCKGGWVNKAYDFIISNNGVTTEENYPYQAYQ--GTCNANSFPNSAYITGYSYVRRN        210
tr|F8UN02|F8UN02_ANACO      VSYGCKGGWVNKAYDFIISNNGVTTEENYPYQAYQ--GTCNANSFPNSAYITGYSYVRRN        238
tr|L7UXZ2|L7UXZ2_ANACO      VSYGCKGGWVNKAYDFIISNNGVTTEENYPYQAYQ--GTCNANSFPNSAYITGYSYVRRN        127
sp|P80884|ANAN_ANACO        VSYGCKGGWINKAYSFIISNKGVASAAIYPYKAAK--GTCKTNGVPNSAYITRYTYVQRN        237
tr|S5VRY7|S5VRY7_ANACO      VSYGCDGGWVNKAYDFIISNKGVASAAIYPYKASQ--GTCRTNGVPNSAYITGYTRVQSN        237
tr|O81085|O81085_ANACO      VSYGCDGGWVNKAYDFIISNKGVASAAIYPYKASQGQGTCRINGVPNSAYITGYTRVQSN        239
                          . **.**:  .*:.*****:**::   *** * :  * *  :. ******* *: *  *

sp|P14518|BROM2_ANACO       NESSMMYAVSKQPITVAVDANA-NFQYYKSGVFNGPCGTSLNHAVTAIGYGQDSI-----        170
tr|O23799|O23799_ANACO      NESSMMYAVSKQPITVAVDANA-NFQYYKSGVFNGPCGTSLNHAVTAIGYGQDSNGKKYW        297
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tr|O81084|O81084_ANACO      NESSMMYAVSKQPITVAVDANA-NSQYYNSGVFNGPCGTSLNHAVTAIGYGQDSNGKKYW        297
tr|O23800|O23800_ANACO      DESSMKYAVWNQPIAAAIDASGDNFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTQYW        297
tr|F1KD58|F1KD58_ANACO      DESSMKYAVWNQPIAAAIDASGDNFQYYNGGVFSGPCGTSLNHAITIIGYGQD-------        291
tr|Q7DNA3|Q7DNA3_ANACO      DESSMKYAVWNQPIAAAIDASGDNFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTQYW        258
tr|O24641|O24641_ANACO      DESSMKYAVWNQPIAAAIDASGDNFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTQYW        298
sp|O23791|BROM1_ANACO       DERSMMYAVSNQPIAALIDASE-NFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTKYW        296
tr|O23801|O23801_ANACO      DERSMMYAVSNQPIAALIDASE-NFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTKYW        269
tr|F8UN02|F8UN02_ANACO      DERSMMYAVSNQPIAALIDASE-NFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTKYW        297
tr|L7UXZ2|L7UXZ2_ANACO      DERSMMYAVSNQPIAALIDASE-NFQYYNGGVFSGPCGTSLNHAITIIGYGQDSSGTKYW        186
sp|P80884|ANAN_ANACO        NERNMMYAVSNQPIAAALDASG-NFQHYKRGVFTGPCGTRLNHAIVIIGYGQDSSGKKFW        296
tr|S5VRY7|S5VRY7_ANACO      NERSMMYAVSNQPIAASIEASG-DFQHYKRGVFSGPCGTSLNHAITIIGYGQDSSGKKFW        296
tr|O81085|O81085_ANACO      NERSMMYAVSNQPIAASIEASG-DFQHYKRGVFSGPCGTSLNHAITIIGYGQDSSGKKFW        298
                          :* .* *** :***:. ::*.  : *:*: ***.***** ****:. ******

sp|P14518|BROM2_ANACO       IYPKKWGAKWGEAGYIRMARDVSSSSGICGIAIDPLYPTLEE-----------------212
tr|O23799|O23799_ANACO      IVKNSWGARWGEAGYIRMARDVSSSSGICGIAIDSLYPTLESRANVEAIKMVSESRSSV         356
tr|O81084|O81084_ANACO      IVKNSWGARWGEAGYIRMARDVSSSSGICGIAIDSLYPTLESRANVEAIKMVSESRSSV         356
tr|O23800|O23800_ANACO      IVKNSWGSSWGERGYVRMARGVS-SSGLCGIAMDPLYPTLQSGA---------------         340
tr|F1KD58|F1KD58_ANACO      ------------------------------------------------------------         291
tr|Q7DNA3|Q7DNA3_ANACO      IVKNSWGSSWGERGYIRMARGVS-SSGLCGIAMDPLYPTLQSGANVAVIKMVSKT----         312
tr|O24641|O24641_ANACO      IVKNSWGSSWGERGYIRMARGVS-SSGLCGIAMDPLYPTLQSGANVAVIKMVSKT----         352
sp|O23791|BROM1_ANACO       IVRNSWGSSWGEGGYVRMARGVSSSSGVCGIAMAPLFPTLQSGANAEVIKMVSET----351
tr|O23801|O23801_ANACO      IVRNSWGSSWGEGGYVRMARGVSSSSGACGIAMSPLFPTLQSGANVEVIKMVSET----         324
tr|F8UN02|F8UN02_ANACO      IVRNSWGSSWGEGGYVRMARGVSSSSGACGIAMSPLFPTLQSGANVEVIKMVSET----         352
tr|L7UXZ2|L7UXZ2_ANACO      IVGNSWGSSWGEGGYVRMARGVSSSSGACGIAMSPLFPTLQSGANVEVIKMVSET----         241
sp|P80884|ANAN_ANACO        IVRNSWGAGWGEGGYIRLARDVSSSFGLCGIAMDPLYPTLQSGPSVEVI----------345
tr|S5VRY7|S5VRY7_ANACO      IVRNSWGASWGERGYIRMARDVSSSSGLCGIAIRPLYPTLQSGANVEVIKMVSESQSSV         355
tr|O81085|O81085_ANACO      IVRNSWGASWGERGYIRMARDVSSSSGLCGIAIRPLYPTLQSGANVEVIKMVSESRSSV         357
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Figure S1. Multiple sequence alignment of the 14 sequences reported in the Allergome database as Ana c 2. The sequences used for this alignment are those provided by UniProt, which include the signal and propart regions. The sequence regions removed in the mature proteins are highlighted with a grey background. A glycosylation site (N-X-S) is observed in the first three aligned sequences and it is highlighted in dark green. The three residues involved in the catalytic activity have been highlighted in yellow. The asterisks, colons, and dots indicate the identical amino acid residues, conserved substitutions, and semiconserved substitutions, respectively.

Table S1. Amino acid sequence identity (%) between different isoforms of Ana c 2. The accession number of each isoform is reported. The identity values were calculated with the Clustal O algorithm on the UniProt website, using the amino acid sequences aligned in Figure S1.

	P14518	O23799	O81084	O23800	F1KD58	Q7DNA3	O24641	O23791	O23801	F8UN02	L7UXZ2	P80884	S5VRY7	O81085
P14518	100													
O23799	95.75	100												
O81084	94.34	98.03	100											
O23800	68.72	76.99	77.29	100										
F1KD58	69.05	78.97	79.31	97.24	100									
Q7DNA3	69.19	76.21	76.21	97.00	100	100								
O24641	69.19	78.06	78.35	97.35	100	100	100							
O23791	69.81	77.49	77.49	87.02	87.20	85.48	86.57	100						
O23801	70.28	77.16	77.16	87.18	87.40	86.77	87.00	97.53	100					
F8UN02	70.28	79.26	79.55	88.20	90.00	87.78	89.17	96.30	98.15	100				
L7UXZ2	70.28	73.44	73.44	86.90	87.15	86.67	86.67	97.51	99.59	99.59	100			
P80884	75.94	81.16	80.87	76.65	79.93	77.63	79.36	79.71	79.87	81.16	76.60	100		
S5VRY7	76.89	83.10	82.82	84.07	84.78	82.26	84.29	84.33	84.26	85.47	81.33	88.41	100	
O81085	75.94	83.66	83.38	83.78	84.43	81.94	84.00	84.33	84.26	85.47	80.50	87.83	97.46	100

Table S2. Immunological and clinical data of the 133 patients with specific IgE towards the seven papain-like cysteine proteases analyzed in this study. In addition, the Table shows some details of two patients reporting allergy symptoms after exposure to fig, but they were IgE negative to Fic c Ficin. Patients were selected from a random population of 341 individuals reporting allergy symptoms and subjected to IgE detection with the FABER test.

Patient details			**FABER 244 (FIU)***							**Allergy reaction**				
	Sex	Years	Act d 1	Ana c 2	Cari p 2	Cari p Pap [a]	Der p 1	Der f 1	Fic c Fic [b]	Kiwi	Ananas	Papaya	HDM [c]	Fig
1	M	15.8	1.10	0.67	0	0	0	0	0	0	0	0	0	0
2	M	6.3	0.66	0.44	0	0	0	0	0	0	0	0	0	0
3	F	10.2	0.92	2.88	0	0.62	0	0	0	1	0	0	0	0
4	F	28.7	0	24.05	26.32	0	0	0	0	0	0	0	0	0
5	M	22.2	0	1.47	13.94	3.18	0	0	0	0	0	0	0	0
6	M	6.6	0	0.65	0.43	19.15	9.64	11.13	0	0	0	0	0	0
7	M	48.5	0	5.24	2.48	0	1.24	0	0	0	0	0	1	0
8	M	3.6	0	1.38	0.92	0	3.21	8.50	0	0	0	0	1	0
9	M	30.0	0	0	6.25	0	0	0	0	0	0	0	0	0
10	M	49.7	0	0	7.30	0	0	0	0	0	0	0	0	0
11	M	37.8	0	0	0.75	0	0	0	0	0	0	0	0	0
12	F	33.1	0	0	2.24	0	0	0	0	0	0	0	0	0
13	F	37.7	0	1.20	0	0	0.72	0	0	0	0	0	1	0
14	F	55.1	0	0	0	3.52	1.54	0.91	0	0	0	0	1	0
15	F	67.8	0	0	0	0.72	0	0	2.14	0	0	0	0	0
16	F	41.5	0	1.52	0	0	0	0	3.82	0	0	0	0	0

17	F	20.1	0	4.60	0	0	0	0	4.84	0	0	0	0	0
18	F	10.0	0	0	0	0	0	0	2.87	0	0	0	0	0
19	F	52.1	0	0	0	0	0	0	4.24	0	0	0	0	0
20	F	51.6	0	0	0	0	0	0	2.29	0	0	0	0	0
21	F	25.4	0	0	0	0	0	0	5.16	0	0	0	0	0
22	F	34.0	0	0	0	0	0	0	4.96	0	0	0	0	0
23	F	16.7	0	0	0	0	0	0	4.03	0	0	0	0	0
24	F	26.3	0	0	0	0	0	0	3.98	0	0	0	0	0
25	F	18.8	0	0	0	0	0	0	2.15	0	0	0	0	0
26	F	55.8	0	0	0	0	0	0	3.04	0	0	0	0	0
27	F	38.6	0	0	0	0	0	0	3.52	0	0	0	0	0
28	F	34.8	0	0	0	0	0	0	2.95	0	0	0	0	0
29	F	44.7	0	0	0	0	0	0	3.01	0	0	0	0	0
30	M	76.9	0	0	0	0	0.67	0	2.34	0	0	0	0	0
31	M	10.7	0	0	0	0	17.10	14.35	3.01	0	0	0	1	0
32	F	25.9	0	0	0	0	2.10	10.35	3.13	0	0	0	1	0
33	M	12.9	0	0	0	0	3.46	12.23	2.84	0	0	0	1	0
34	F	10.7	0	0	0	0	37.75	67.87	3.37	0	0	0	1	0
35	F	2.1	0	0	0	0	7.43	7.44	3.74	0	0	0	1	0
36	F	30.3	0	0	0	0	1.69	0.91	0	0	0	0	1	0
37	M	30.6	0	0	0	0	2.32	5.87	0	0	0	0	1	0
38	M	24.9	0	0	0	0	0	3.33	4.42	0	0	0	1	0
39	M	38.0	0	0.91	0	0	0	0	3.98	0	0	0	0	0
40	F	36.5	0	2.43	0	0	0	0	4.85	0	0	0	0	0
41	M	45.9	0	0	0	0	0	0	25.58	0	0	0	0	0
42	F	50.1	0	0	0	0	0	0	4.13	0	0	0	0	0
43	M	70.2	0	0	0	0	0	0	3.73	0	0	0	0	0
44	M	59.1	0	0	0	0	0	0	3.19	0	0	0	0	0
45	M	11.3	0	0	0	0	0	0	3.60	0	0	0	0	0
46	F	44.6	0	0	0	0	3.21	0	0	0	0	0	1	0
47	F	53.9	0	0	0	0	1.69	0	0	0	0	0	1	0
48	F	36.5	0	0	0	0	1.39	0	0	0	0	0	1	0
49	M	60.5	0	0	0	0	0.90	0	0	0	0	0	1	0
50	M	9.1	0	0	0	0	0.94	0	0	0	0	0	1	0
51	M	64.5	0	0	0	0	5.29	0	0	0	0	0	1	0
52	M	23.5	0	0	0	0	2.08	2.69	0	0	0	0	1	0
53	M	30.6	0	0	0	0	2.32	5.19	0	0	0	0	1	0
54	M	27.7	0	0	0	0	3.20	19.57	0	0	0	0	1	0
55	M	25.8	0	0	0	0	5.25	5.25	0	0	0	0	1	0
56	M	32.5	0	0	0	0	1.67	1.02	0	0	0	0	1	0
57	M	11.8	0	0	0	0	1.02	1.02	0	0	0	0	1	0
58	M	21.0	0	0	0	0	1.81	1.15	0	0	0	0	1	0

59	M	10.0	0	0	0	0	2.18	1.86	0	0	0	0	1	0
60	M	20.5	0	0	0	0	0.91	1.18	0	0	0	0	1	0
61	M	25.8	0	0	0	0	5.25	5.25	0	0	0	0	1	0
62	M	10.0	0	0	0	0	0.62	1.55	0	0	0	0	1	0
63	M	12.8	0	0	0	0	7.58	13.65	0	0	0	0	1	0
64	M	15.8	0	0	0	0	9.02	19.70	0	0	0	0	1	0
65	M	30.8	0	0	0	0	1.80	2.25	0	0	0	0	1	0
66	M	3.3	0	0	0	0	2.33	6.53	0	0	0	0	1	0
67	M	45.3	0	0	0	0	4.95	1.32	0	1	0	0	1	0
68	F	13.7	0	0	0	0	3.01	4.04	0	0	0	0	1	0
69	F	11.7	0	0	0	0	26.08	22.70	0	0	0	0	0	0
70	F	43.6	0	0	0	0	2.35	4.38	0	0	0	0	1	0
71	F	15.6	0	0	0	0	4.91	9.48	0	0	0	0	1	0
72	M	39.1	0	3.83	0	0	2.26	0.68	0	0	0	0	1	0
73	F	5.2	0	1.17	0	0	0.71	15.82	0	0	0	0	1	0
74	F	15.7	0	7.62	0	0	0.32	0.44	0	0	0	0	1	0
75	F	38.4	0	2.70	0	0	0.73	0.91	0	0	0	0	1	0
76	M	13.5	0	0.67	0	0	5.81	8.21	0	0	0	0	1	0
77	M	29.6	0	5.32	0	0	0.55	1.04	0	0	0	0	1	1
78	F	11.6	0	0	0	0	4.88	7.56	0	0	0	0	1	0
79	F	18.1	0	0	0	0	1.27	0.64	0	0	0	0	1	0
80	M	11.0	0	0	0	0	0.91	1.32	0	0	0	0	1	0
81	M	12.4	0	0	0	0	0.46	0.52	0	0	0	0	1	0
82	M	16.1	0	0	0	0	2.93	2.92	0	0	0	0	1	0
83	F	32.6	0	0	0	0	1.32	3.49	0	0	0	0	1	0
84	F	13.1	0	0	0	0	0.22	0	0	0	0	0	1	0
85	F	39.1	0	0	0	0	0.57	1.97	0	0	0	0	1	0
86	F	39.2	0	0	0	0	0.20	1.05	0	0	0	0	1	0
87	F	47.1	0	0	0	0	0.91	1.17	0	0	0	0	1	0
88	F	14.5	0	0	0	0	0.55	0.98	0	0	0	0	1	0
89	F	45.1	0	0	0	0	2.48	1.16	0	0	0	0	1	0
90	F	48.7	0	0	0	0	0.49	0.55	0	0	0	0	1	0
91	F	33.9	0	0	0	0	0.91	1.21	0	0	0	0	1	0
92	F	34.6	0	0	0	0	2.64	2.55	0	0	0	0	1	0
93	F	8.1	0	0	0	0	0.72	5.39	0	0	0	0	1	0
94	F	16.5	0	0	0	0	2.05	0.57	0	0	0	0	1	0
95	F	47.4	0	0	0	0	0.65	1.84	0	0	0	0	1	0
96	F	9.3	0	0	0	0	0.70	2.01	0	0	0	0	1	0
97	F	36.7	0	0	0	0	0.37	0.48	0	0	0	0	1	0
98	F	45.6	0	0	0	0	0.46	0.60	0	0	0	0	1	0
99	F	20.4	0	0	0	0	0.46	0.37	0	0	0	0	1	0
100	F	42.1	0	0	0	0	0	0.49	0	0	0	0	1	0

101	F	38.0	0	0	0	0	0	1.48	0	0	0	0	1	0
102	F	39.5	0	0	0	0	0	2.25	0	0	0	0	1	0
103	F	51.0	0	0	0	0	0	0.61	0	0	0	0	1	0
104	F	25.5	0	0	0	0	0	0.38	0	0	0	0	1	0
105	F	23.5	0	0	0	0	0	0.82	0	0	0	0	1	0
106	F	74.6	0	0	0	0	0	0.79	0	0	0	0	1	0
107	F	49.6	0	0	0	0	0	0.72	0	0	0	0	1	0
108	M	20.5	0	0	0	0	0	0.48	0	0	0	0	1	0
109	M	12.1	0	0	0	0	0	0.48	0	0	0	0	1	0
110	M	24.2	0	0	0	0	0	0.41	0	0	0	0	1	0
111	M	37.6	0	0	0	0	0	2.04	0	0	0	0	1	0
112	M	70.9	0	0	0	0	0	0.92	0	0	0	0	1	0
113	M	12.6	0	1.52	0	0	0	0.51	0	0	0	0	1	0
114	M	48.0	0	1.25	0	0	0	0.83	0	0	0	0	1	0
115	M	29.5	0	10.31	0	0	0	0	0	0	0	0	0	0
116	M	15.9	0	9.32	0	0	0	0	0	0	0	0	0	0
117	M	25.2	0	1.06	0	0	0	0	0	0	0	0	0	0
118	M	40.2	0	2.32	0	0	0	0	0	0	0	0	0	0
119	M	83.3	0	45.10	0	0	0	0	0	0	0	0	0	0
120	M	22.7	0	1.07	0	0	0	0	0	0	0	0	0	0
121	M	21.6	0	1.07	0	0	0	0	0	0	0	0	0	0
122	F	27.7	0	4.35	0	0	0	0	0	0	0	0	0	0
123	F	35.8	0	0.66	0	0	0	0	0	0	0	0	0	0
124	F	35.0	0	2.91	0	0	0	0	0	0	0	0	0	0
125	F	16.9	0	0.97	0	0	0	0	0	0	0	0	0	0
126	F	52.0	0	0.79	0	0	0	0	0	0	0	0	0	0
127	F	25.0	0	0.34	0	0	0	0	0	0	0	0	0	0
128	F	17.0	0	30.57	0	0	0	0	0	0	0	0	0	0
129	F	26.0	0	5.08	0	0	0	0	0	0	0	0	0	0
130	F	36.5	0	18.91	0	0	0	0	0	0	0	0	0	0
131	F	29.2	0	0.84	0	0	0	0	0	0	0	0	0	0
132	M	24.4	0	2.19	0	0	0	0	0	0	0	0	0	0
133	M	8.1	0	0.77	0	0	0	0	0	0	0	0	0	0
153	M	59.8	0	0	0	0	0	0	0	0	0	0	0	1
252	F	64.9	0	0	0	0	0	0	0	0	0	0	0	1

[a] Cari p Papain; [b] Fic c Ficin [c]allergy symptoms towards House Dust Mite (HDM) on the basis of the clinical history. * FIU, FABER International Units, positive value FIU≥0.01.