Table. S1. Demographic and the level of serologic sIgE of 45 cow-milk allergic patients included in our study.

Patients	Gender[a]	Age	SIgE to milk (kU_A/L)	Symptoms[b]
1	F	2	1.65	V,D
2	F	3	1.20	F,N
3	M	5	0.93	V,C
4	F	10	10.12	U,F
5	F	8	0.88	F,NC
6	M	40	12.72	U,C,W
7	M	9	2.82	D,C
8	M	55	15.00	U,D
9	M	5	0.54	F,C
10	F	2	0.73	V,C
11	F	4	1.56	U,NC
12	M	12	3.47	P,LE
13	F	39	14.98	AP,W
14	F	15	2.42	U,LE
15	F	3	1.47	D
16	M	8	2.87	U,P
17	M	46	1.70	LE,W
18	M	3	5.45	F,V,D
19	F	9	1.56	AP,N,C
20	M	5	4.13	P,C,W
21	M	7	0.80	D
22	F	6	3.92	OI,NC
23	F	12	1.03	R,N
24	M	9	1.18	P,OI,C

25	M	7	0.65	F,N
26	M	45	5.72	V,D,N
27	M	60	8.03	R,LE,OS
28	F	3	1.78	D,AP
29	F	7	0.79	R,W,C
30	M	1	0.42	V,OS
31	M	6	2.58	LE
32	F	9	4.76	U,NC
33	F	11	20.58	V,D,C
34	F	3	0.38	R,P
35	F	5	0.59	F,C
36	M	2	0.62	F,NC
37	M	10	3.83	OI,LE
38	M	5	1.64	P,D
39	F	9	4.87	AP,C
40	M	8	0.87	P,LE
41	M	35	2.40	V,D,C
42	F	4	1.27	U
43	F	1	0.56	F,C
44	F	6	4.56	AP,N
45	F	7	0.93	R,D

[a] M: male; F: female; [b] U: urticaria;F: flushing; P: puritus; R:rashes; V: vomiting; OI: oral itching;D:diarrhea;N:Nausea;AP:abdominal pain;NC:nasalcongestion;LE:laryngeal edema;C:coughing;W: wheezing; OS: other symptoms.

Table. S2. Inhibition of CMA-allergic patients' IgE binding to nBos d 5 with rabbit anti-sera. IgE binding was expressed as OD values. Inhibition to nBos d 5 was shown. Pre: the preimmune sera; r&nB5: rabbit anti- nBos d 5 sera; r&B5M: rabbit anti-B5M sera.

Patients	OD values			% Inhibition to Bos d 5	
	Pre	r&nB5	r&B5M[a]	r&nB5	r&B5M
1	0.367	0.151	0.158	58.86	56.95
2	0.348	0.14	0.17	59.77	51.15
3	0.335	0.131	0.138	60.90	58.81
4	0.35	0.115	0.131	67.14	62.57
5	0.376	0.124	0.159	67.02	57.71
6	0.347	0.126	0.168	63.69	51.59
7	0.337	0.128	0.166	62.02	50.74
8	0.341	0.132	0.174	61.29	48.97
9	0.322	0.155	0.186	51.86	42.24
10	0.332	0.099	0.113	70.18	65.96
11	0.35	0.121	0.15	65.43	57.14
12	0.319	0.103	0.122	67.71	61.76
13	0.326	0.158	0.152	51.53	53.37
14	0.362	0.111	0.192	69.34	46.96
15	0.304	0.143	0.168	52.96	44.74
16	0.341	0.119	0.178	65.10	47.80
17	0.41	0.107	0.153	73.90	62.68
18	0.302	0.115	0.155	61.92	48.68
19	0.381	0.13	0.149	65.88	60.89
20	0.345	0.089	0.13	74.20	62.32
21	0.368	0.120	0.133	67.39	63.86
22	0.353	0.125	0.135	64.59	61.76
23	0.389	0.132	0.171	66.07	56.04

24	0.388	0.116	0.159	70.10	59.02
25	0.342	0.116	0.178	66.08	47.95
26	0.331	0.118	0.162	64.35	51.06
27	0.365	0.129	0.142	64.66	61.10
28	0.294	0.105	0.113	64.29	61.56
26	0.373	0.11	0.132	70.51	64.61
29	0.346	0.085	0.145	75.43	58.09
30	0.317	0.128	0.172	59.62	45.74
31	0.34	0.102	0.133	70.00	60.88
32	0.339	0.1	0.153	70.50	54.87
33	0.314	0.085	0.117	72.93	62.74
34	0.294	0.103	0.13	64.97	55.78
35	0.296	0.089	0.113	69.93	61.82
36	0.304	0.105	0.166	65.46	45.39
37	0.347	0.09	0.12	74.06	65.42
38	0.345	0.131	0.159	62.03	53.91
39	0.364	0.105	0.138	71.15	62.09
40	0.318	0.14	0.168	55.97	47.17
41	0.39	0.108	0.13	72.31	66.67
42	0.328	0.089	0.155	72.87	52.74
43	0.403	0.112	0.163	72.21	59.55
44	0.345	0.103	0.162	70.14	53.04
45	0.34	0.12	0.15	65.35	55.41
Mean				65.95	56.12

a pre: the rabbit sera before immunized with the proteins; r&nB5: the rabbit sera obtained by immunized with nBos d 5; r＆B5M: the rabbit sera by immunized with B5M.

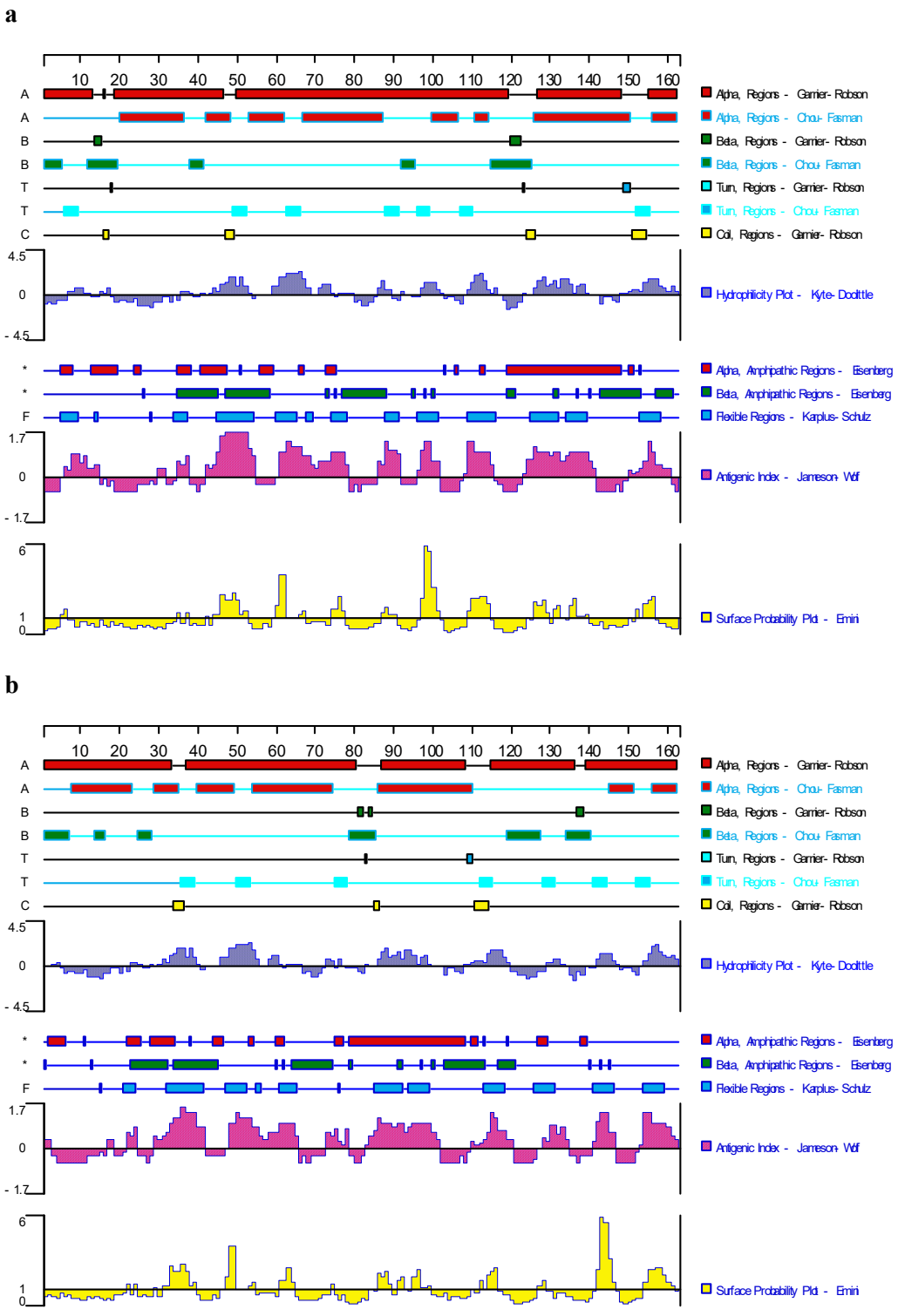

Fig S1. The secondary components of Bos d 5 (a) and B5M (b) were predicted by DNAStar.

a

b

Fig S2. The secondary components of Bos d 5 (a) and B5M (b) were predicted by SOMPA.