

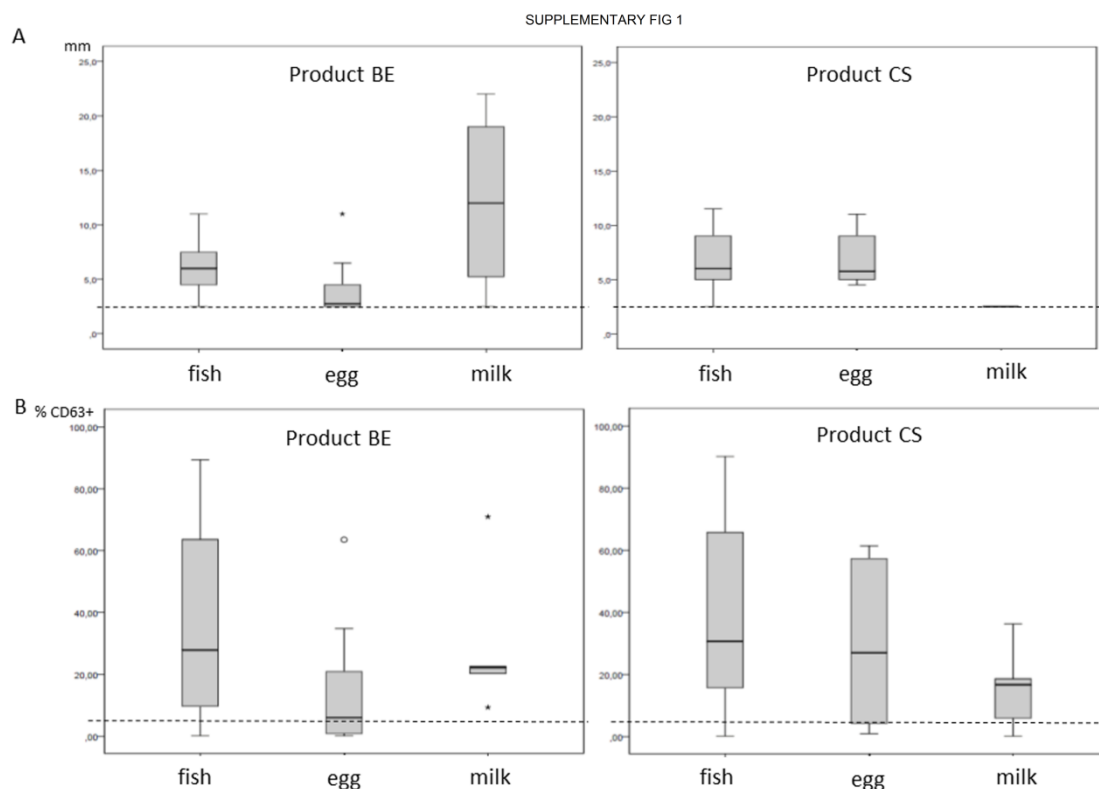
Supplementary material

Supplementary Table 1. Characteristics of age, total IgE and relevant specific IgE of patients included.

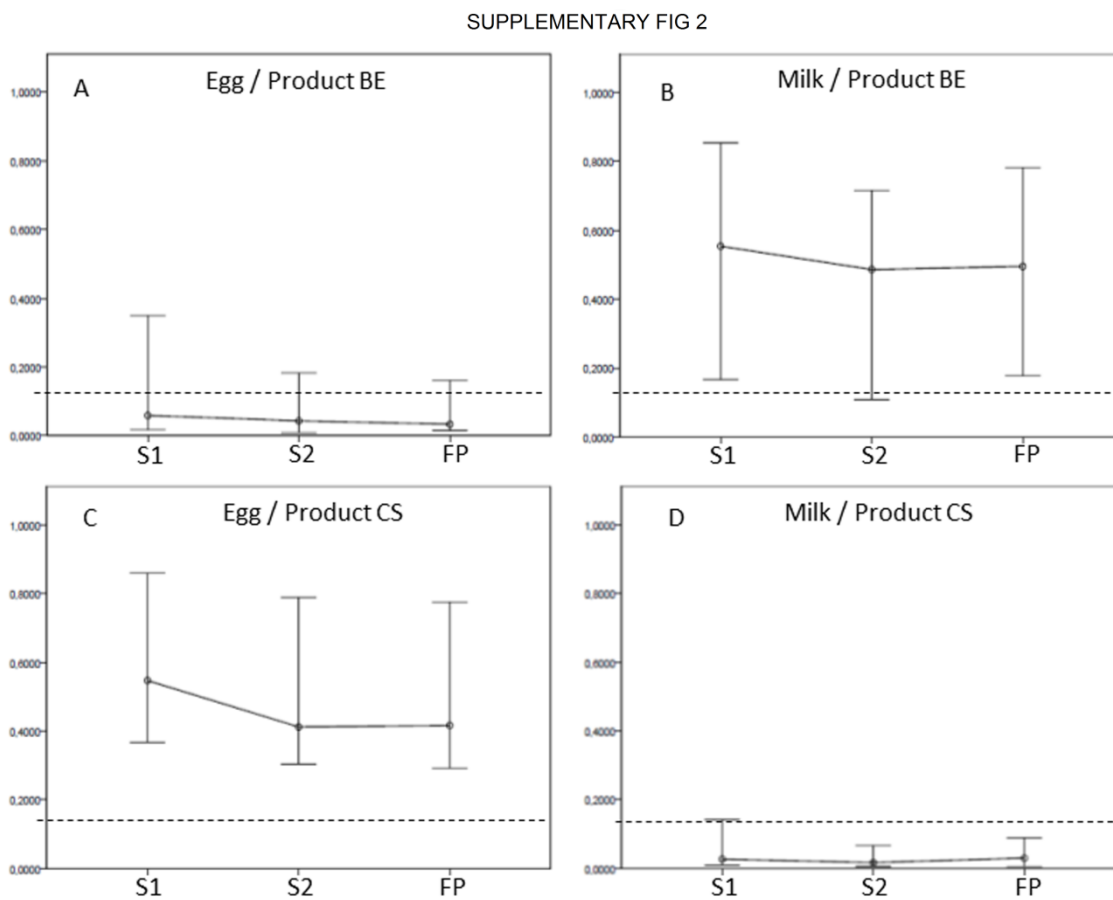
| | BAT and PPT population | ELISA population |
|-----------------|-----------------------------------|-------------------------|
| Fish (n) | 14 | 25 |
| Age (years) | 17.5 (14.0-35.0) | 17 (11.5-31.5) |
| IgE hake (kU/L) | 6.95 (2.3-14.7) | 4.0 (1.54-14.3) |
| IgE total | 604.5 (211.3-1669.3) | 575.0 (239.5-1267.0) |
| Egg (n) | 10 | 24 |
| Age (years; IR) | 13.8 (15.0-19.5) | 13.5 (8.25-15.75) |
| IgE white egg | 6.14 (1.76-24.5) | 8.8 (2.2-77.7) |
| IgE total | 912.5 (701.8-3194.0) | 917.5 (714.0-3546.5) |
| Milk (n) | 5 | 17 |
| Age (years; IR) | 16.5 (19.0-20.0) | 7.0 (3.0-16.5) |
| IgE milk | 20.95 (10.14-46.88) | 38.8 (17.2-100.0) |
| IgE total | 391.0 (80.6-985.5) | 325.0 (129.7-804.0) |

Data are express as median with interquartile range in brackets. Considering the whole group, the 50% were male and 50% female.

Supplementary Figure 1. A Box and whisker plot showing prick test results. Y axis shows the diameter of the wheal in mm obtained from the fish, egg and milk allergic patients studied. The bars, box and whiskers indicate the medians, 25th and 75th percentiles and the ranges, respectively. Product BE (baby eel surimi). Product CS (crab stick surimi). Dotted line: cut-off ≥ 3 mm. **B** basophil activation test results. Y axis shows the percentage of activated basophils (% CD63 +) obtained from the fish, egg and milk allergic patients studied. The bars, box and whiskers indicate the medians, 25th and 75th percentiles and the ranges, respectively. Product BE (baby eel surimi). Product CS (crab stick surimi). Dotted line: cut off $\geq 5\%$.



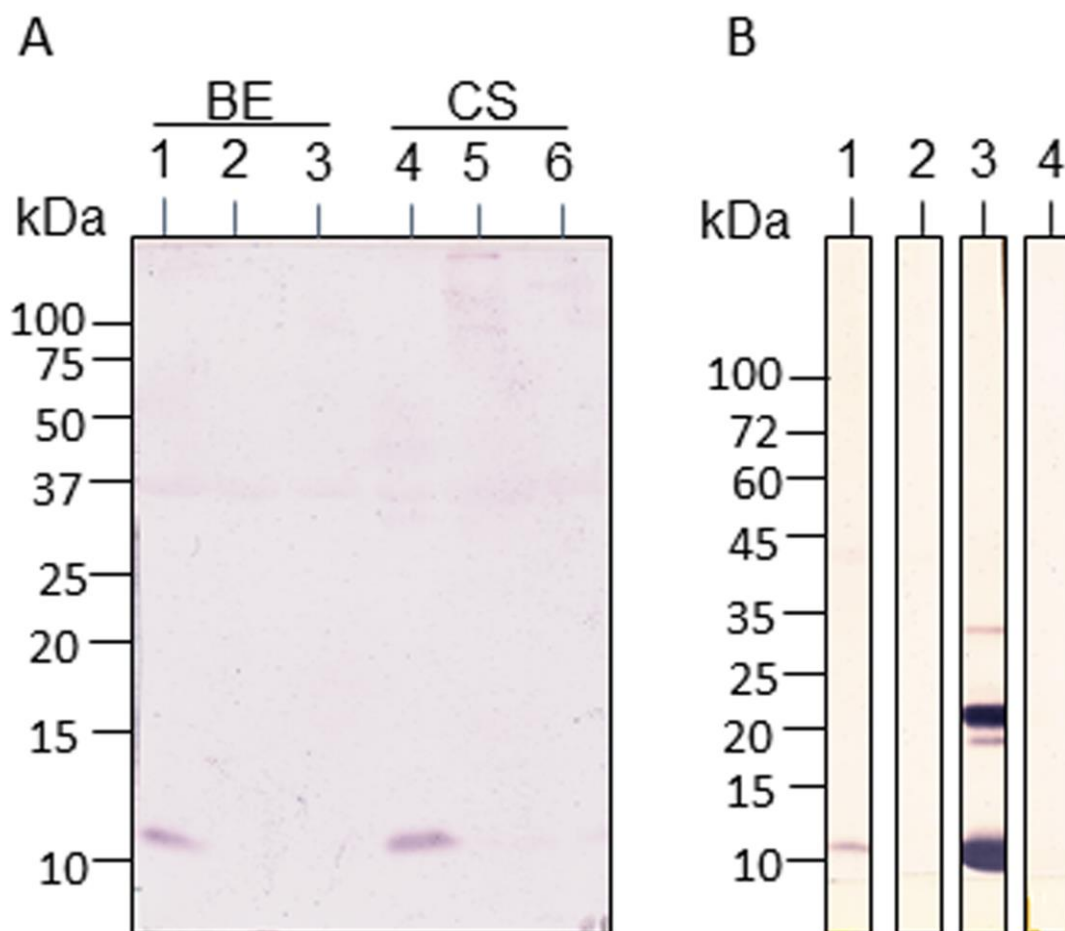
Supplementary Figure 2. Variation of IgE recognition during processing tested by ELISA.



Y axis shows absorbance units for egg and milk allergic patients tested with different extracts. Median and error bars (95% CI) are shown. S1: step 1, before surimi gelation; S2: step 2, after surimi gelation, FP: final product. **A**, egg allergic sera tested with product BE. **B**, milk allergic sera tested with product BE. **C**, egg allergic sera tested with product CS. **D**, milk allergic sera tested with product CS. Dotted line: cut-off \geq 0.14 Absorbance Units.

Supplementary Figure 3. Analysis of PBS extracts of product BE and CS and their steps of processing (20 μ g) by western blot.

SUPPLEMENTARY FIGURE 3



A, western blotting with fish allergic patient serum recognizing β -parvalbumin, lane 1: step 1, extract before surimi gelation; lane 2: step 2, extract after surimi gelation, lane 3: final product, extract from product BE; lane 4: step 1 from product CS; lane 5: step 2 from product CS; lane 6: final product CS. **B**, western blotting inhibition. Lane 1: step 1 extract, before surimi gelation of product BE no inhibited; Lane 2: step 1 extract of product BE inhibited with 10 μ g of mackerel β -parvalbumin; lane 3: 10 μ g of mackerel β -parvalbumin no inhibited; 4: 10 μ g of mackerel β -parvalbumin inhibited itself.