Electronic Supplementary Material (ESI) for Food & Function.

Fig. S1. Purification and identification of TM from *Haliotis discus hannai*, *Alectryonella plicatula*, and *Mimachlamys nobilis*.

(A~C) SDS-PAGE and western blot analysis of HTM, ATM, and MTM. Primary antibody: HTM polyclonal antibody, dilution at 1: 1×10^6 (A). ATM polyclonal antibody, dilution at 1:1×10^5 (B). MTM polyclonal antibody, dilution at 1:2×10^4 (C). Lane M: protein marker, goat anti-rabbit IgG antibody labeled with horseradish peroxidase as secondary antibody, dilution at 1:2×10^4.

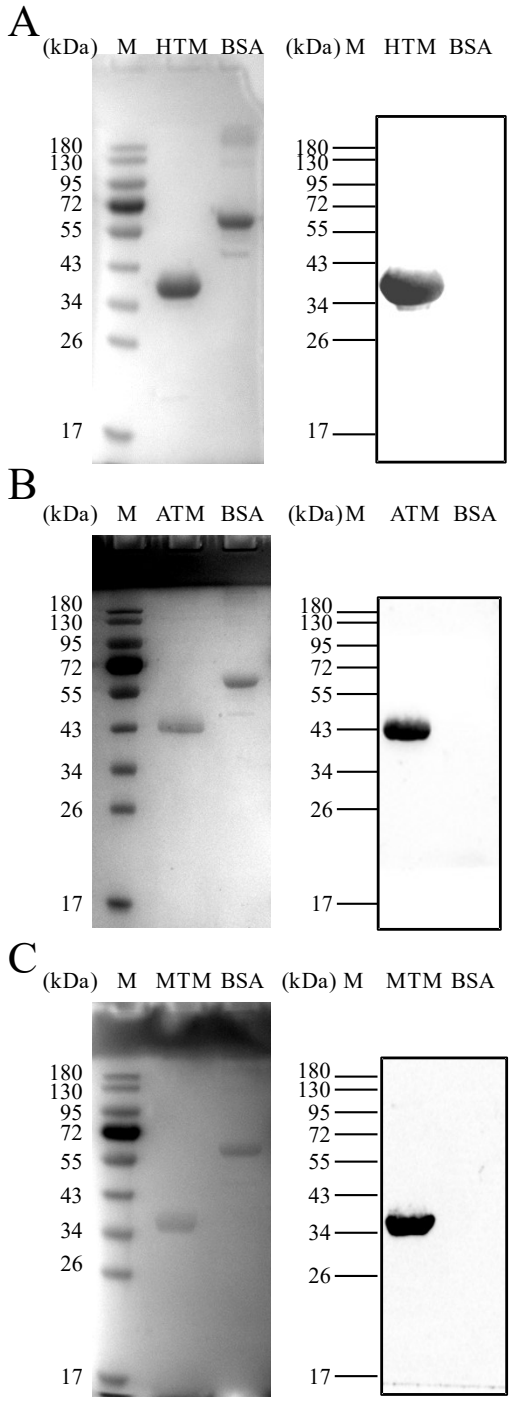

Fig. S2. Flow cytometry diagram of basophil activation test assays.

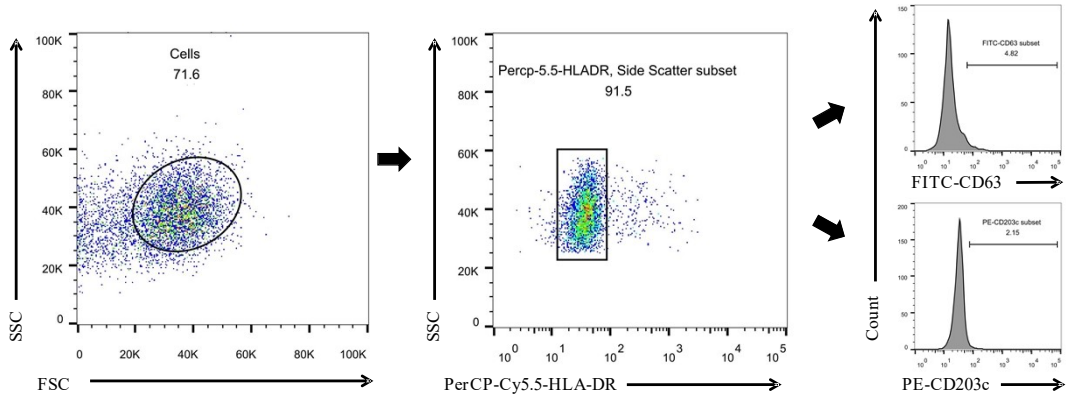

Fig. S3. Flow cytometry diagram of bone-marrow dendritic cells during antigen presentation.

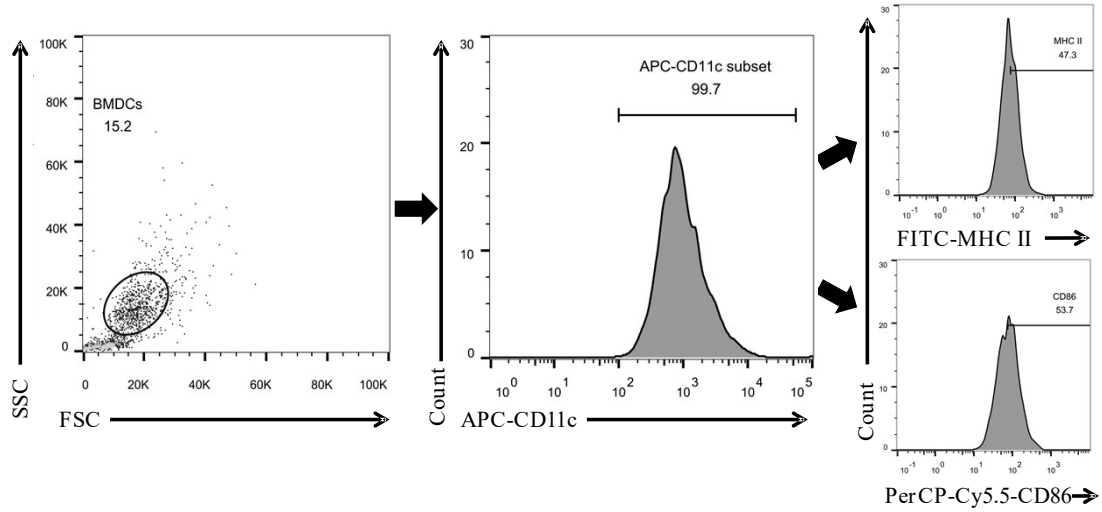

Fig. S4. Surface hydrophobicity of HTM, ATM, and MTM.

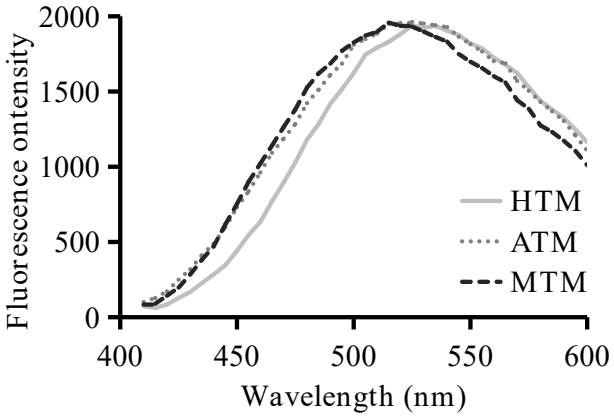

Fig. S5. Quality evaluation of the tertiary structure of HTM, ATM, and MTM.
(A~C) Ramachandran plots, QMEANDisCo Local, and GMQE of HTM;
(D~F) Ramachandran plots, QMEANDisCo Local, and GMQE of ATM;
(G~I) Ramachandran plots, QMEANDisCo Local, and GMQE of MTM;
(J) Superimposing the structures of HTM, ATM, and MTM.

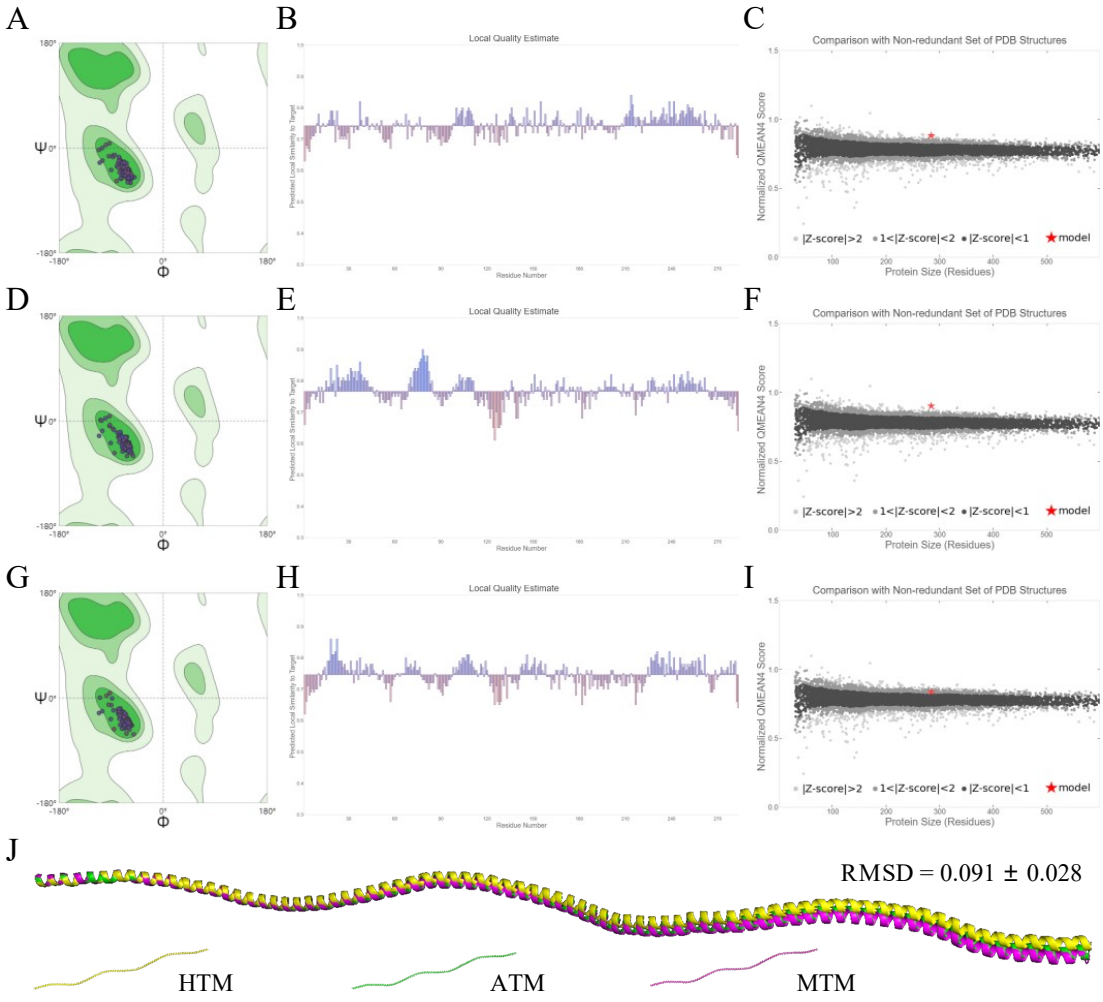

Fig. S6. Primary structure distribution of IgE epitopes of HTM, ATM, and MTM.

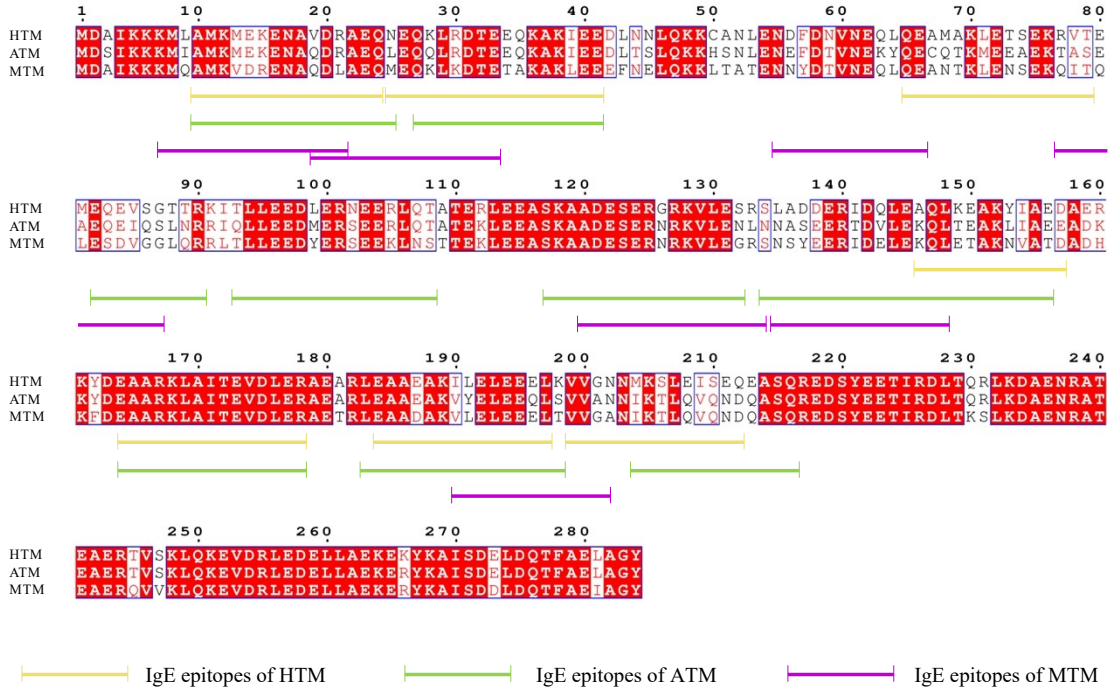

Fig. S7. Analysis of polar hydrogens-bonds number and non-polar amino acid frequency in IgE epitopes.

(A) Polar hydrogens-bonds number in IgE epitopes;

(B) Non-polar amino acid frequency in IgE epitopes.