CLAIMS

1. A polypeptide dimer, comprising:
two monomers, each of which contains an extracellular domain of an alpha subunit of an IgE Fc receptor (FcεRIa-ECD) consisting of the amino acid sequence of SEQ ID NO: 1, wherein the monomer contains a modified Fc region consisting of the amino acid sequence of SEQ ID NO: 2, and the modified Fc region and the FcεRIa-ECD are linked via a hinge, wherein the hinge is a variant of a hinge region derived from immunoglobulin IgD, which is Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Xaa1 Xaa2 Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys Pro (SEQ ID NO: 17) or Ala Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Xaa3 Xaa4 Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys Pro (SEQ ID NO: 18), Xaa1 and Xaa3 are Gly, and Xaa2 and Xaa4 are Gly or Ser.

2. The polypeptide dimer of claim 1, wherein the hinge has the amino acid sequence of SEQ ID NO: 3, or SEQ ID NO: 4.

3. A polynucleotide that encodes a monomer which contains an extracellular domain of an alpha subunit of an IgE Fc receptor (FcεRIa-ECD) and consists of the amino acid sequence of SEQ ID NO: 21 or SEQ ID NO: 22.

4. An expression vector, loaded with the polynucleotide according to claim 3.

5. A host cell, into which the expression vector according to claim 4 is introduced.

6. A pharmaceutical composition for treating or preventing an allergic disease, comprising, as an active ingredient, a polypeptide dimer, wherein the polypeptide dimer comprises an extracellular domain of an alpha subunit of an IgE Fc receptor (FcεRIa-ECD) consisting of the amino acid sequence of SEQ ID NO: 1, and a modified Fc region consisting of the amino acid sequence of SEQ ID NO: 2, and the modified Fc region and the FcεRIa-ECD are linked via a hinge,

wherein the hinge is a variant of a hinge region derived from immunoglobulin IgD, which is Ala Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Xaa3 Xaa4 Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys Pro (SEQ ID NO: 18), Xaa3 is Gly, and Xaa4 is Gly or Ser.

7. The pharmaceutical composition of claim 6, wherein the allergic disease is any one selected from the group consisting of food allergy, atopic dermatitis, asthma, allergic rhinitis, allergic conjunctivitis, allergic dermatitis, chronic idiopathic urticaria, and allergic contact dermatitis.

8. A food composition for ameliorating or alleviating an allergic symptom, comprising, as an active ingredient, a polypeptide dimer, wherein the polypeptide dimer comprises an extracellular domain of an alpha subunit of an IgE Fc receptor (FcεRIa-ECD) consisting of the amino acid sequence of SEQ ID NO: 1, and a modified Fc region consisting of the amino acid sequence of SEQ ID NO: 2, and the modified Fc region and the FcεRIa-ECD are linked via a hinge, wherein the hinge is a variant of a hinge region derived from immunoglobulin IgD, which is Ala Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Xaa3 Xaa4 Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys Pro (SEQ ID NO: 18), Xaa3 is Gly, and Xaa4 is Gly or Ser.

9. A method for producing a polypeptide dimer, comprising:
a step of culturing a cell into which a polynucleotide consisting of the nucleic acid sequence of SEQ ID NO: 12 and an α-2,6-sialic acid transferase gene consisting of the nucleic acid sequence of SEQ ID NO: 16 are introduced; and
a step of recovering a polypeptide dimer consisting of the amino acid sequence of SEQ ID NO: 21.

10. The polypeptide dimer obtained in claim 9.