

Fc epsilon RI Protein, Human, Recombinant (His)

General Information

Synonyms:	Fc ε RI;α polypeptide;Fc fragment of IgE, high affinity I, receptor for;FcERI;alpha polypeptide;FCE1A
Protein Construction:	A DNA sequence encoding the human FCER1A (P12319) (Met1-Gln205) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Val 26
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P12319
Molecular Weight:	22.5 kDa (predicted); 42-48 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

FcERI, also known as FCER1A, is the alpha subunit of the immunoglobulin epsilon receptor (IgE receptor). IgE receptor is a high affinity IgE receptor which plays a central role in allergic disease, coupling allergen and mast cell to initiate the inflammatory and immediate hypersensitivity responses that are characteristic of disorders such as hay fever and asthma. The allergic response occurs when 2 or more IgE receptors are crosslinked via IgE molecules that in turn are bound to an allergen (antigen) molecule. A perturbation occurs that brings about the

release of histamine and proteases from the granules in the cytoplasm of the mast cell and leads to the synthesis of prostaglandins and leukotrienes--potent effectors of the hypersensitivity response. IgE receptor is comprised of an alpha subunit(FcERI), a beta subunit, and two gamma subunits. FcERI is glycosylated and contains 2 Ig-like (immunoglobulin-like) domains.

Reference

Sada K,et al.(2002) Regulation of FcepsilonRI-mediated degranulation by an adaptor protein 3BP2 in rat basophilic leukemia RBL-2H3 cells. *Blood*. 100(6):2138-44.

Takahashi K,et al.(2003) Transcriptional regulation of the human high affinity IgE receptor alpha-chain gene. *Mol Immunol*. 38(16-18):1193-9.

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