

## Fc epsilon RIA/FCER1A Protein, Human (His-SUMO)

Cat. No.:	HY-P72191
Synonyms:	Fc epsilon RI alpha; Fc epsilon RI alpha chain ; high affinity I; receptor for; alpha subunit; Fc fragment of IgE; high affinity I; receptor for; alpha polypeptide; Fc IgE receptor; alpha chain; Fc IgE receptor; alpha polypeptide; Fc-epsilon RI-alpha; FCE 1A; FCE1A; FCER1A; Fcer1a; FCERA_HUMAN; FceRI alpha; FcERI; high affinity IgE receptor;
Species:	Human
Source:	E. coli
Accession:	P12319 (V26-Q205)
Gene ID:	2205
Molecular Weight:	Approximately 37 kDa

### PROPERTIES

AA Sequence	V P Q K P K V S L N    P P W N R I F K G E    N V T L T C N G N N    F F E V S S T K W F H N G S L S E E T N    S S L N I V N A K F    E D S G E Y K C Q H    Q Q V N E S E P V Y L E V F S D W L L L    Q A S A E V V M E G    Q P L F L R C H G W    R N W D V Y K V I Y Y K D G E A L K Y W    Y E N H N I S I T N    A T V E D S G T Y Y    C T G K V W Q L D Y E S E P L N I T V I    K A P R E K Y W L Q
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm solution of 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	Fc epsilon RIA/FCER1A Protein takes center stage as a high-affinity receptor designed for immunoglobulin epsilon/IgE, serving as a crucial mediator of IgE effector functions in myeloid cells. Upon binding to IgE and subsequent cross-linking with antigens/allergens, it activates signaling pathways that induce myeloid cell activation and differentiation. Particularly on mast cells, basophils, and eosinophils, Fc epsilon RIA triggers the secretion of vasoactive amines, lipid mediators, and cytokines, contributing to inflammatory responses, tissue remodeling, and cytotoxicity against microbes. This orchestrated response forms a part of the immediate hypersensitivity reaction to allergens, acting as a host defense mechanism against helminth parasites, pathogenic bacteria, and venom toxicity. However, when dysregulated, this receptor can lead to
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harmful and life-threatening allergic and anaphylactic reactions. Structurally, it exists as a tetramer comprising an alpha chain, a beta chain, and two disulfide-linked gamma chains, and it interacts with IGHE via the CH3 region.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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