

Recombinant Rat FCERG Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52304

Size: 10ug, 100ug

Protein Name: High affinity immunoglobulin epsilon receptor subunit gamma (Fc receptor gamma-chain) (FcRgamma) (Fc-epsilon RI-gamma) (IgE Fc receptor subunit gamma) (FceRI gamma)

Synonym: Fcer1g, Fce1g

UniProt ID: P20411

UniProt Link: www.uniprot.org/uniprotkb/P20411/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 86 AA

Molecular Weight: 10 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MIPAVILFLLLLVEEAAALGEPQLCYILDAILFLYGIVLTLLYCRLKIQVRKADIASREKSDAVYTGLNTRN
QETYETLKHEKPPQ

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant High affinity immunoglobulin epsilon receptor subunit gamma (Fc receptor gamma-chain) (FcRgamma) (Fc-epsilon RI-gamma) (IgE Fc receptor subunit gamma) (FceRI gamma) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Adapter protein containing an immunoreceptor tyrosine-based activation motif (ITAM) that transduces activation signals from various immunoreceptors. As a component of the high-affinity immunoglobulin E (IgE) receptor, mediates allergic inflammatory signaling in mast cells. As a constitutive component of interleukin-3 receptor complex, selectively mediates interleukin 4/IL4 production by basophils priming T-cells toward effector T-helper 2 subset. Associates with pattern recognition receptors CLEC4D and CLEC4E to form a functional signaling complex in myeloid cells. Binding of mycobacterial trehalose 6,6'-dimycolate (TDM) to this receptor complex leads to phosphorylation of ITAM, triggering activation of SYK, CARD9 and NF-kappa-B, consequently driving maturation of antigen-presenting cells and shaping antigen-specific priming of T-cells toward effector T-helper 1 and T-helper 17 cell subtypes. May function cooperatively with other activating receptors. Functionally linked to integrin beta-2/ITGB2-mediated neutrophil activation. Also involved in integrin alpha-2/ITGA2-mediated platelet activation.

Subcellular Localization: Cell membrane ; Single-pass type I membrane protein .

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.