

# Human FCER1A Protein; His Tag

## Product Information

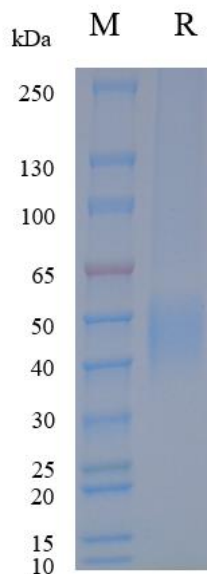
Product Name	Human FCER1A Protein; His Tag
Storage temp	Store at $\leq -70^{\circ}\text{C}$ , stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Catalog# / Size	GM-88156RP-100 / 100 $\mu\text{g}$ GM-88156RP-1000 / 1 mg

## Protein Information

Alternative Names	FCER1A, FCE1A, FcERI
Source	Human FCER1A Protein; His Tag (GM-88156RP) is expressed from human 293 cells (HEK-293). It contains AA Val 26 - Gln 205 (Accession # P12319-1). This protein carries a His tag at the C-terminus.
Purity	> 90% as determined by SDS-PAGE
Endotoxin	< 1 EU/ $\mu\text{g}$ , determined by LAL gel clotting assay
Predicted Mol Mass	21.9 KDa
Formulation	Supplied as a 0.2 $\mu\text{m}$ filtered solution of PBS, pH7.2-7.4.
Description	FCER1A is the alpha subunit of the high-affinity IgE receptor (Fc $\epsilon$ RI), primarily expressed on the surface of mast cells and basophils, with additional presence on certain dendritic cells and platelets. This subunit plays a central role in initiating allergic responses by binding to the Fc portion of IgE with high affinity, thereby forming the functional receptor complex when paired with beta and gamma subunits (FCER1B and FCER1G). Crosslinking of Fc $\epsilon$ RI-bound IgE by multivalent allergens triggers rapid degranulation and release of histamine, leukotrienes, and cytokines, driving immediate hypersensitivity reactions. FCER1A expression is tightly regulated during development and in various tissues, and its signaling influences mast cell maturation, survival, and mediator production. Genetic variations or altered expression of FCER1A can affect IgE binding efficiency and the strength of allergic responses, contributing to susceptibility or severity of allergic diseases such as asthma, allergic rhinitis, and atopic dermatitis. Understanding FCER1A's regulation and its interaction within the Fc $\epsilon$ RI complex provides insight for strategies to modulate allergic inflammation, including targeted therapies aimed at reducing Fc $\epsilon$ RI signaling or IgE binding.

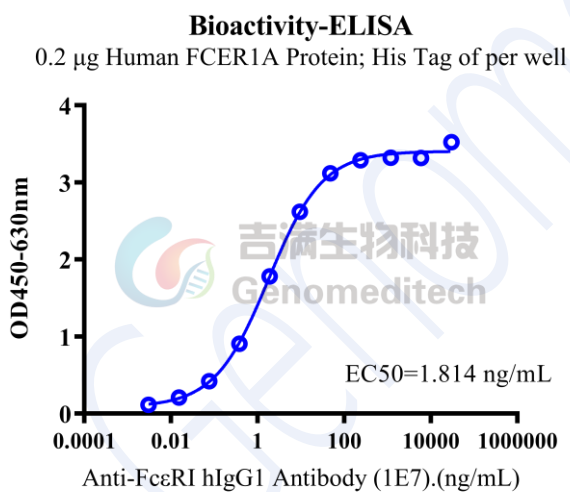
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## SDS-PAGE

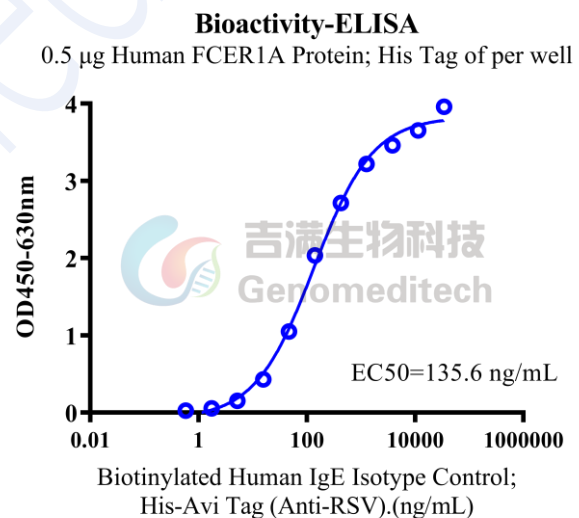


On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

## Bioactivity-ELISA



Human FCER1A Protein; His Tag (Catalog # GM-88156RP) was immobilized at 2 µg/ml (100 µL/well). Increasing concentrations of Anti-FcεRI hIgG1 Antibody (1E7) (Catalog # GM-88159AB) were added.



Human FCER1A Protein; His Tag (Catalog # GM-88156RP) was immobilized at 5 µg/ml (100 µL/well). Increasing concentrations of Biotinylated Human IgE Isotype Control; His-Avi Tag (Anti-RSV) (Catalog # GM-88131MAB) were added.