

FCER1A Human, HEK

Fc-Epsilon RI-Alpha Human Recombinant, HEK

RCP0841

Product Overview

Name	FCER1A Human, HEK
Accession(Primary)	P12319
Immunogen	Anti-human FCGR1A mAb, is derived from hybridization of mouse F0 myeloma cells with spleen cells from BALB/c mice immunized with a recombinant human FCGR1A protein 16-292 amino acids purified from E. coli.
Description	Fc-Epsilon RI-Alpha Human Recombinant, HEK

Target information (P12319)

Gene Name

About Gene Symbol

Background

The FCER1A gene encodes the alpha subunit of the high-affinity immunoglobulin E (IgE) receptor, known as FCER1A. This receptor is primarily expressed on mast cells and basophils, and its activation plays a pivotal role in allergic and inflammatory responses. This research aims to explore the significance of FCER1A and its potential implications in allergic disorders and immune-mediated diseases. By investigating the functions and regulation of FCER1A, we can gain insights into its role in immune responses and identify potential therapeutic targets. The FCER1A receptor is responsible for the binding of IgE antibodies, initiating a cascade of signaling events upon allergen exposure. Crosslinking of IgE-bound FCER1A leads to the release of various inflammatory mediators, such as histamine, cytokines, and leukotrienes, which contribute to the clinical manifestations of allergic

reactions. Understanding the molecular mechanisms underlying FCER1A activation and downstream signaling is crucial for comprehending allergic diseases. In addition to its role in allergies, FCER1A has been implicated in immune-mediated inflammatory diseases, including asthma, atopic dermatitis, and autoimmune conditions. Dysregulation of FCER1A expression and signaling pathways can lead to exaggerated immune responses and chronic inflammation. Investigating the genetic and epigenetic factors influencing FCER1A expression and the interplay between FCER1A and other immune molecules can provide valuable insights into disease pathogenesis. This research will delve into the molecular mechanisms governing FCER1A expression, activation, and downstream signaling pathways. The paper will explore the regulatory effects of FCER1A on mast cell and basophil activation, the release of inflammatory mediators, and the recruitment of other immune cells. Additionally, it will examine the impact of FCER1A dysregulation in allergic and immune-mediated diseases and discuss the potential of FCER1A as a therapeutic target for intervention. The study will also investigate the diagnostic and prognostic value of FCER1A in various allergic and immune disorders. Understanding the expression patterns and alterations of FCER1A in different diseases and patient populations may aid in disease stratification, treatment selection, and monitoring of treatment response. By unraveling the molecular mechanisms underlying FCER1A's functions in allergic and inflammatory responses, this research aims to contribute to our understanding of immune-mediated diseases. Furthermore, it highlights the potential of FCER1A as a target for therapeutic interventions and emphasizes the need for further investigations to develop novel treatments and improve patient outcomes.