SANTA CRUZ BIOTECHNOLOGY, INC.

Fc ε RIα (M-70): sc-68943

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IgE Fc Receptor I binds to the Fc region of immunoglobulin ε chain with high affinity, and is responsible for initiating the allergic response. Binding of allergen to receptor-bound IgE leads to cell activation and the release of mediators such as histamines, responsible for the manifestations of allergy. IgE Fc Receptor I also induces the secretion of important lymphokines, effectors of the hypersensitivity response. Receptor I is a tetramer of a heavily glycosylated α chain (Fc ε RIα), β chain and two disulfide linked γ chains. Fc ε RIα is exposed to the outer surface of the cell and contains the IgE binding site. Expression of IgE Fc RI mRNA appears to be highly specific and has been identified in mast cells and IL-3 dependent myeloid-monocyte precursor. Alternative splicing of the genomic transcript for the a chain has also been identified.

REFERENCES

1. Hackel, W., et al. 1968. Foreign body as cause of a large urethral calculus and diverticulum formation. Z. Urol. Nephrol. 61: 827-829.
2. Shimizu, A., et al. 1988. Human and rat mast cell high-affinity immunoglobulin E receptors: characterization of putative α chain gene products. Proc. Natl. Acad. Sci. USA 85: 1907-1911.
3. Le Coniat, M., et al. 1990. The human genes for the α and γ subunits of the mast cell receptor for immunoglobulin E are located on human chromosome band 1q23. Immunogenetics 32: 183-186.

CHROMOSOMAL LOCATION

Genetic locus: Fcer1a (mouse) mapping to 1 H3.

SOURCE

Fc ε RIα (M-70) is a rabbit polyclonal antibody raised against amino acids 136-205 mapping within an extracellular domain of Fc ε RIα of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Fc ε RIα (M-70) is recommended for detection of Fc ε RIα of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fc ε RIα siRNA (m): sc-45259, Fc ε RIα shRNA Plasmid (m): sc-45259-SH and Fc ε RIα shRNA (m) Lentiviral Particles: sc-45259-V.

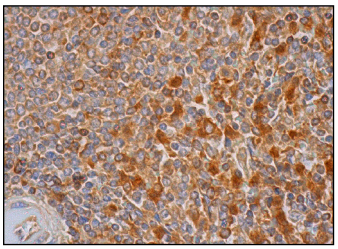
Molecular Weight of Fc ε RIα: 60 kDa.

Positive Controls: AMJ2-C8 whole cell lysate: sc-364366 or LADMAC whole cell lysate: sc-364189.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Fc ε RIα (M-70): sc-68943. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.