

Fc ϵ RI β (S-17): sc-33489

BACKGROUND

IgE Fc Receptor I binds to the Fc region of immunoglobulins 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. It is a tetramer of a heavily glycosylated α chain, a β chain, and two disulfide linked γ chains. Structurally, the β chain contains four transmembrane regions with long cytoplasmic domains potentially involved in intracellular signaling. The cytoplasmic domains of the β and γ subunits each contain a conserved consensus sequence, ITAM (immunoreceptor tyrosine activation motif). Phosphorylation of a pair of conserved tyrosine residues within this motif is required for signal transduction in mast cells and other hemopoietic cell types. A variant identified at Glu237 of the β subunit has been implicated as a risk factor for atopic dermatitis and asthma.

REFERENCES

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- Kuster, H., et al. 1992. The gene and cDNA for the human high affinity immunoglobulin E receptor β chain and expression of the complete human receptor. *J. Biol. Chem.* 267: 12782-12787.
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- Gyimesi, E., et al. 2004. Basophil CD63 expression assay on highly sensitized atopic donor leucocytes—a useful method in chronic autoimmune urticaria. *Br. J. Dermatol.* 151: 388-396.

CHROMOSOMAL LOCATION

Genetic locus: FCER1B (human) mapping to 11q12.1.

SOURCE

Fc ϵ RI β (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Fc ϵ RI β of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-33489 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Fc ϵ RI β (S-17) is recommended for detection of Fc ϵ RI β of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (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 RI β siRNA (h): sc-45264, Fc ϵ RI β shRNA Plasmid (h): sc-45264-SH and Fc ϵ RI β shRNA (h) Lentiviral Particles: sc-45264-V.

Molecular Weight of Fc ϵ RI β : 33 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.


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Try **Fc ϵ RI β (5-RE9): sc-134340**, our highly recommended monoclonal alternative to Fc ϵ RI β (S-17).