

Fc ϵ R γ (h): 293T Lysate: sc-115131

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. The γ chains from Fc ϵ RI are also subunits of other Fc receptors. The γ subunit is thought to be functionally significant in allowing the IgE Fc receptor to reach the cell surface. 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.

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.
4. 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.
5. Pang, J., et al. 1993. Characterization of the gene for the human high affinity IgE receptor (Fc ϵ RI) α -chain. *J. Immunol.* 151: 6166-6174.
6. Penhallow, R.C., et al. 1995. Temporal activation of nontransmembrane protein-tyrosine kinases following mast cell Fc ϵ RI engagement. *J. Biol. Chem.* 270: 23362-23365.
7. 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.
8. Taube, C., et al. 2004. Mast cells, Fc ϵ RI, and IL-13 are required for development of airway hyperresponsiveness after aerosolized allergen exposure in the absence of adjuvant. *J. Immunol.* 172: 6398-6406.
9. SWISS-PROT/TrEMBL (P30273). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: FCER1G (human) mapping to 1q23.3.

PRODUCT

Fc ϵ R γ (h): 293T Lysate represents a lysate of human Fc ϵ R γ transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Fc ϵ R γ (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Fc ϵ R γ antibodies. Recommended use: 10-20 μ l per lane.

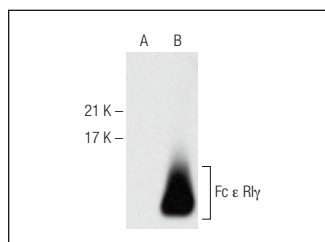
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Fc ϵ R γ (A-5): sc-374335 is recommended as a positive control antibody for Western Blot analysis of enhanced human Fc ϵ R γ expression in Fc ϵ R γ transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

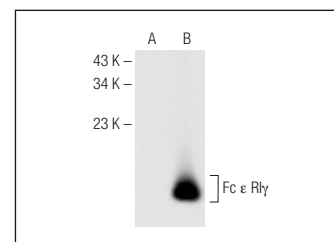
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Fc ϵ R γ (A-5): sc-374335. Western blot analysis of Fc ϵ R γ expression in non-transfected: sc-117752 (A) and human Fc ϵ R γ transfected: sc-115131 (B) 293T whole cell lysates.



Fc ϵ R γ (H-5): sc-374385. Western blot analysis of Fc ϵ R γ expression in non-transfected: sc-117752 (A) and human Fc ϵ R γ transfected: sc-115131 (B) 293T whole cell lysates.

RESEARCH USE

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