

# Fc $\epsilon$ R $\gamma$ (A-18): sc-33496

## BACKGROUND

IgE Fc Receptor I binds to the Fc region of immunoglobulins  $\epsilon$  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  $\alpha$  chain, a  $\beta$  chain, and two disulfide linked  $\gamma$  chains. The  $\gamma$  chains from Fc  $\epsilon$  RI are also subunits of other Fc receptors. The  $\gamma$  subunit is thought to be functionally significant in allowing the IgE Fc receptor to reach the cell surface. The cytoplasmic domains of the  $\beta$  and  $\gamma$  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

- Hackel, W., et al. 1968. Foreign body as cause of a large urethral calculus and diverticulum formation. *Z. Urol. Nephrol.* 61: 827-829.
- Shimizu, A., et al. 1988. Human and rat mast cell high-affinity immunoglobulin E receptors: characterization of putative  $\alpha$ -chain gene products. *Proc. Natl. Acad. Sci. USA* 85: 1907-1911.

## CHROMOSOMAL LOCATION

Genetic locus: FCER1G (human) mapping to 1q23; Fc $\epsilon$ r1g (mouse) mapping to 1 H3.

## SOURCE

Fc  $\epsilon$  R $\gamma$  (A-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of Fc  $\epsilon$  R $\gamma$  of mouse origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-33496 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Fc  $\epsilon$  R $\gamma$  (A-18) is recommended for detection of Fc  $\epsilon$  R $\gamma$  of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\epsilon$  R $\gamma$  siRNA (m): sc-45268, Fc $\epsilon$  R $\gamma$  siRNA (m): sc-45268, Fc  $\epsilon$  R $\gamma$  shRNA Plasmid (m): sc-45268-SH, Fc  $\epsilon$  R $\gamma$  shRNA Plasmid (m): sc-45268-SH, Fc  $\epsilon$  R $\gamma$  shRNA (m) Lentiviral Particles: sc-45268-V and Fc  $\epsilon$  R $\gamma$  shRNA (m) Lentiviral Particles: sc-45268-V.

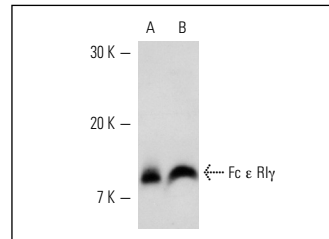
Molecular Weight of Fc  $\epsilon$  R $\gamma$ : 9 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242 or J774.A1 cell lysate: sc-3802.

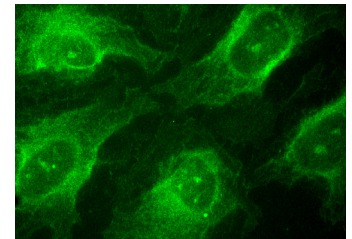
## RECOMMENDED SECONDARY REAGENTS

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.

## DATA



Fc  $\epsilon$  R $\gamma$  (A-18): sc-33496. Western blot analysis of Fc  $\epsilon$  R $\gamma$  expression in CTLL-2 (A) and J774.A1 (B) whole cell lysates.



Fc  $\epsilon$  R $\gamma$  (A-18): sc-33496. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane and cytoplasmic localization.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **Fc  $\epsilon$  R $\gamma$  (E-12): sc-390222** or **Fc  $\epsilon$  R $\gamma$  (F-1): sc-390221**, our highly recommended monoclonal alternatives to Fc  $\epsilon$  R $\gamma$  (A-18).