SANTA CRUZ BIOTECHNOLOGY, INC.

Fcrl5 (E-17): sc-46595

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Fc receptor homolog (FcRH) family of proteins are related to the classical Fc receptors (FcR) and belong to the immunoglobulin receptor superfamily. The proteins in the FcRH family (namely FcRH1-FcRH6) are type I transmembrane glycoproteins that are involved in immune system regulation and have immunoreceptor-tyrosine inhibitory motifs in their cytoplasmic domains. Fcrl5 (Fc receptor-like protein 5), also known as Fcrh3 (Fc receptor homolog 3), is a 596 amino acid single-pass type I membrane protein that is the mouse homolog of human FcRH3. Localized to the cell membrane and expressed in marginal zone B cells, Fcrl5 contains five Ig-like C2-type domains and is thought to function as an inhibitory coreceptor for B cells. Two isoforms of Fcrl5 exist due to alternative splicing events.

REFERENCES

1. Davis, R.S., et al. 2001. Identification of a family of Fc receptor homologs with preferential B cell expression. Proc. Natl. Acad. Sci. USA 98: 9772-9777.
2. Davis, R.S., et al. 2002. Fc receptor homologs: newest members of a remarkably diverse Fc receptor gene family. Immunol. Rev. 190: 123-136.
3. Ehrhardt, G.R., et al. 2003. The inhibitory potential of Fc receptor homolog 4 on memory B cells. Proc. Natl. Acad. Sci. USA 100: 13489-13494.
4. Davis, R.S., et al. 2004. Differential B cell expression of mouse Fc receptor homologs. Int. Immunol.16: 1343-1353.
5. Davis, R.S., et al. 2005. An extended family of Fc receptor relatives. Eur. J. Immunol. 35: 674-680.
6. Won, W.J., et al. 2006. Fc receptor homolog 3 is a novel immunoregulatory marker of marginal zone and B1 B cells. J. Immunol. 177: 6815-6823.
7. Fayngerts, S.A., et al. 2007. Species-specific evolution of the FcR family in endothermic vertebrates. Immunogenetics 59: 493-506.
8. Haga, C.L., et al. 2007. Fc receptor-like 5 inhibits B cell activation via SHP-1 tyrosine phosphatase recruitment. Proc. Natl. Acad. Sci. USA 104: 9770-9775.

CHROMOSOMAL LOCATION

Genetic locus: Fcrh3 (mouse) mapping to 3 F1.

SOURCE

Fcrl5 (E-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Fcrl5 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.

Blocking peptide available for competition studies, sc-46595 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Fcrl5 (E-17) is recommended for detection of Fcrl5 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fcrl5 siRNA (m): sc-45697, Fcrl5 shRNA Plasmid (m): sc-45697-SH and Fcrl5 shRNA (m) Lentiviral Particles: sc-45697-V.

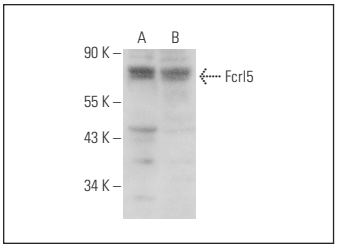
Molecular Weight of Fcrl5: 67 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210 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 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



Fcrl5 (E-17): sc-46595. Western blot analysis of Fcrl5 expression in LADMAC (**A**) and NIH/3T3 (**B**) whole cell lysates.

STORAGE

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

PROTOCOLS

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