

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FCRL5/FCRL3 in direct ELISAs. In direct ELISAs, 100% cross-reactivity with recombinant human (rh) FCRL3 is observed and no cross-reactivity with rhFCRL1, 2, or 4 is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 307307
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human FCRL5/FCRL3 Gln16-Arg844 Accession # AAI01067
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human blood-derived CD19 ⁺ lymphocytes

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Fc Receptor-Like 5 (FCRL5), also known as FcRH5, IRTA2, and CD307, is a 120 kDa protein with sequence homology to classical Fc receptors. The type 1 transmembrane FCRL proteins contain from three to nine immunoglobulin-like domains. They are differentially expressed within the B cell lineage and can either promote or inhibit B cell proliferation and activation (1, 2). According to R&D Systems testing, FCRL5 binds to purified human IgG with high affinity. Mature human FCRL5 consists of a 836 amino acid (aa) extracellular domain (ECD) with nine Ig-like domains, a 21 aa transmembrane segment, and a 105 aa cytoplasmic domain with one immunotyrosine activation motif (ITAM) and two immunotyrosine inhibitory motifs (ITIMs) (1, 3). Mouse FCRL5 contains only five Ig-like domains in its ECD. It shares 49% aa sequence identity with human FCRL5 within common regions. Alternate splicing of human FCRL5 generates isoforms that consist of approximately the first one, six, or eight Ig-like domains (3, 4). FCRL5 expression is restricted to mature B lineage cells in lymphoid tissues and blood (3, 5-7). Its ligation inhibits signaling through the B cell antigen receptor (8). Epstein-Barr virus transformation of B cells induces the up-regulation of surface FCRL5 by a direct effect of its EBNA2 protein on FCRL5 gene transcription (9). The FCRL5 gene maps to the 1q21 chromosomal locus, a common site of rearrangements in B cell malignancies, and the FCRL5 protein is preferentially expressed in cell lines with 1q21 abnormalities (3). FCRL5 is up-regulated on tumor cells in some types of B cell malignancies (6, 10-12). In addition, soluble FCRL5 is elevated in the serum of many B cell leukemia patients (11, 13).

References:

1. Davis, R.S. (2007) *Annu. Rev. Immunol.* **25**:525.
2. Maltais, L.J. *et al.* (2006) *Nat. Immunol.* **7**:431.
3. Hatzivassiliou, G. *et al.* (2001) *Immunity* **14**:277.
4. SwissProt # Q96RD9.
5. Miller, I. *et al.* (2002) *Blood* **99**:2662.
6. Polson, A.G. *et al.* (2006) *Int. Immunol.* **18**:1363.
7. Vidal-Laliena, M. *et al.* (2005) *Cell. Immunol.* **236**:6.
8. Haga, C.L. *et al.* (2007) *Proc. Natl. Acad. Sci.* **104**:9770.
9. Mohan, J. *et al.* (2006) *Blood* **107**:4433.
10. Ise, T. *et al.* (2005) *Clin. Cancer Res.* **11**:87.
11. Ise, T. *et al.* (2007) *Leukemia* **21**:169.
12. Kazemi, T. *et al.* (2009) *Cancer Immunol. Immunother.* **58**:989.
13. Ise, T. *et al.* (2006) *Clin. Chem. Lab. Med.* **44**:594.

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