

## DESCRIPTION

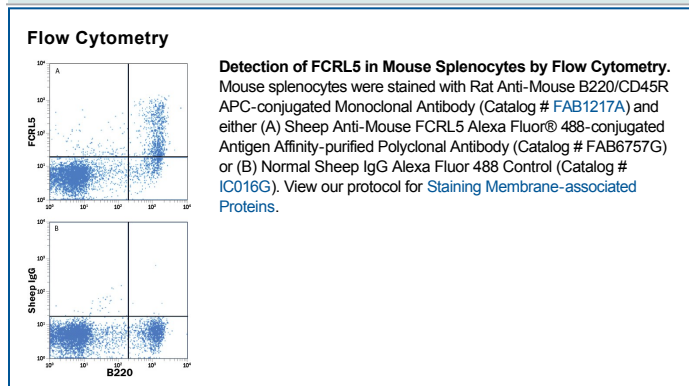
<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse FCRL5/FcRH3 in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human FCRL5 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant mouse FCRL5/FcRH3 Gln27-Ala496 (predicted) Accession # NP_899045
<b>Conjugate</b>	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
<b>Formulation</b>	Supplied 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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Flow Cytometry</b>	5 $\mu$ L/ $10^6$ cells	See Below

## DATA



## PREPARATION AND STORAGE

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

## BACKGROUND

Fc Receptor-Like 5 (FCRL5), also known as FcRH3 (FcRH5 in human), IRTA2, and CD307e, is a 90-95 kDa member of the FCRL family of proteins whose amino acid (aa) sequence is reminiscent of that for classical Fc receptors. FCRL molecules are type 1 transmembrane proteins that 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, 3). Mature mouse FCRL5 consists of a 470 aa extracellular domain (ECD), a 21 aa transmembrane segment, and a 79 aa cytoplasmic region. The ECD contains five Ig-like domains, while the cytoplasmic region possesses one ITAM-like motif and one immunotyrosine inhibitory motif (ITIM) (1, 3, 4). There are two major alleles for FCRL5 in mouse. The first was just described, and is found in BALB/c plus NZB mouse strains. The second is found in C57BL/6 mice, and differs by eleven scattered aa in the ECD. This creates one additional N-linked glycosylation site, and increases the SDS-PAGE MW by 5 kDa (3). Alternate splicing of mouse FCRL5 generates at least one additional isoform that lacks the first Ig-like domain (aa 3-90 of the mature molecule) (4). Human FCRL5, by contrast, contains up to nine Ig-like domains in a highly variable ECD, and over common regions, mouse and human FCRL5 share 49% aa sequence identity. FCRL5 expression is restricted to mature B lineage cells in lymphoid tissues and blood, and is particularly noted to be expressed on T-independent marginal zone and B1 B cells (3-8). Its ligation inhibits signaling through the B cell antigen receptor (9). 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 (10). FCRL5 on B cells functions as a receptor for the orthopoxvirus MHC class I-like protein OMCP (11). And based on the literature and R&D Systems testing, both mouse and human FCRL5 will bind to purified IgG with high affinity (5). In human, the FCRL5 gene maps to the 1q21 chromosomal locus, a common site of rearrangements in B cell malignancies. Notably, the FCRL5 protein is preferentially expressed in cell lines with 1q21 abnormalities, and is up-regulated on tumor cells in some types of B cell malignancies (5, 7, 12-14). In addition, soluble FCRL5 is elevated in the serum of many B cell leukemia patients (13, 15).

## References:

1. Davis, R.S. (2007) *Annu. Rev. Immunol.* **25**:525.
2. Maltais, L.J. *et al.* (2006) *Nat. Immunol.* **7**:431.
3. Won, W-J. *et al.* (2006) *J. Immunol.* **177**:6815.
4. Davis, R.S. *et al.* (2004) *Int. Immunol.* **16**:1343.
5. Hatzivassiliou, G. *et al.* (2001) *Immunity* **14**:277.
6. Miller, I. *et al.* (2002) *Blood* **99**:2662.
7. Polson, A.G. *et al.* (2006) *Int. Immunol.* **18**:1363.
8. Vidal-Laliena, M. *et al.* (2005) *Cell. Immunol.* **236**:6.
9. Haga, C.L. *et al.* (2007) *Proc. Natl. Acad. Sci.* **104**:9770.
10. Mohan, J. *et al.* (2006) *Blood* **107**:4433.
11. Campbell, J.A. *et al.* (2010) *J. Immunol.* **185**:28.
12. Ise, T. *et al.* (2005) *Clin. Cancer Res.* **11**:87.
13. Ise, T. *et al.* (2007) *Leukemia* **21**:169.
14. Kazemi, T. *et al.* (2009) *Cancer Immunol. Immunother.* **58**:989.
15. Ise, T. *et al.* (2006) *Clin. Chem. Lab. Med.* **44**:594.

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