

#### DESCRIPTION

|                           |  |
|---------------------------|--|
| <b>Species Reactivity</b> | Human  |
| <b>Specificity</b>        | Detects human FCRLB/FCRY in direct ELISAs and Western blots.   |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 454217  |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant   |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant human FCRLB/FCRY<br>Ala18-Ser426<br>Accession # Q6BAA4   |
| <b>Conjugate</b>          | Alexa Fluor 488<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 515-545 nm  |
| <b>Formulation</b>        | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*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>Intracellular Staining by Flow Cytometry</b> | 0.25-1 µg/10 <sup>6</sup> cells  | Daudi human Burkitt's lymphoma cell line fixed with paraformaldehyde and permeabilized with methanol |

#### 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

FCRLB, also known as FCRL2, FCRY, and FREB2, is a 60 kDa protein with sequence homology to classical Fc receptors. There are at least six type 1 transmembrane FCRL proteins and two that lack transmembrane segments. Each family member contains between three and nine immunoglobulin-like domains. FCRL proteins 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, FCRLB binds to purified human IgG with high affinity. Human FCRLB shares 82% and 85% amino acid sequence identity with mouse and rat FCRLB, respectively. It contains a putative signal peptide, three immunoglobulin-like domains, and a mucin-like stalk that is rich in Pro, Ser, and Thr residues (1-3). The stalk region also contains di-Leu motifs and an unpaired cysteine (1-3). Alternative splicing generates isoforms with deletions in the putative signal peptide and substitutions and/or truncations in the third Ig-like domain (3). When expressed in transfectants, FCRLB is not secreted but shows a diffuse intracellular localization (3, 4). FCRLB is expressed at a low level in placenta and in B lineage cells of the germinal center (3, 4). It is upregulated in B cells by BAFF and LPS (5). Among non-hematopoietic cells, FCRLB is expressed in fibroblasts, melanocytes, and melanoma (3, 5). It is preferentially expressed in nonproliferating cells and at the onset of apoptosis (4, 5).

#### References:

- Davis, R.S. (2007) *Annu. Rev. Immunol.* **25**:525.
- Maltais, L.J. *et al.* (2006) *Nat. Immunol.* **7**:431.
- Chikae, N.A. *et al.* (2005) *Genomics* **85**:264.
- Wilson, T.J. and M. Colonna (2005) *Genes Immun.* **6**:341.
- Masuda, K. *et al.* (2005) *Gene* **363**:32.

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