

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FCRL1/FcRH1 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) FCRL2, 3, 4, or 5 is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 282415
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human FCRL1/FcRH1 Ala17-His304 Accession # Q96LA6
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 whole blood CD19 ⁺ B cells

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.**

- 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Fc Receptor-Like 1 (FCRL1), also known as FcRH1, and IRTA5, is an approximately 50 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, FCRL1 binds to purified human IgG. Mature human FCRL1 consists of a 291 amino acid (aa) extracellular domain (ECD) with three Ig-like domains, a 21 aa transmembrane segment, and a 101 aa cytoplasmic domain with two immunotyrosine activation motifs (ITIMs) (3, 4). A charged glutamic acid within the transmembrane segment may mediate association with other signaling proteins. Alternative splicing may generate an isoform that lacks the transmembrane segment and an isoform that largely consists of the first two Ig-like domains (5). Mouse FCRL1 contains only two Ig-like domains, but it shares 62% aa sequence identity with homologous regions of the human FCRL1 ECD. FCRL1 is expressed on pre-B cells and naive B cells (6, 7). It is down-regulated upon B cell activation but up-regulated on memory B cells (6, 8). FCRL1 is expressed on many B cell lymphoma and leukemia tumor cells with the exception of B cell acute lymphoblastic leukemia (9-11). Antibody crosslinking of FCRL1 triggers its tyrosine phosphorylation and augments B cell proliferation induced by the B cell receptor (6).

References:

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