

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse FCRL5/FcRH3 in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human FCRL5 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse FCRL5/FcRH3 Gln27-Ala496 (predicted) Accession # NP_899045
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*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.

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	Optimal dilution of this antibody should be experimentally determined.

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 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. FCLR 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).

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