# Mouse FCRL5 Alexa Fluor® 700-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF6757N
100 µg

## DESCRIPTION

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| **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<br>Gln27-Ala496 (predicted)<br>Accession # NP_899045 |
| **Conjugate** | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<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.*

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| **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

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| **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 FCLR5 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. CRL5 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).

## PRODUCT SPECIFIC NOTICES

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