

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Gln16-Arg844 with a C-terminal 6-His tag  
Accession # AAK93971

**N-terminal Sequence Analysis** No results obtained: Gln16 predicted

**Predicted Molecular Mass** 91.5 kDa

**SPECIFICATIONS**

**SDS-PAGE** 110-120 kDa, reducing conditions

**Activity** Measured by its ability to bind human IgG with an estimated  $K_D$  <30 nM.

**Endotoxin Level** <0.01 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 100 µg/mL in PBS.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Fc Receptor-Like 5 (FCRL5), also known as FcRH5, IRTA2, and CD307, is a 120 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, FCRL5 binds to purified human IgG with high affinity. Mature human FCRL5 consists of a 836 amino acid (aa) extracellular domain (ECD) with nine Ig-like domains, a 21 aa transmembrane segment, and a 105 aa cytoplasmic domain with one immunotyrosine activation motif (ITAM) and two immunotyrosine inhibitory motifs (ITIMs) (1, 3). Mouse FCRL5 contains only five Ig-like domains in its ECD. It shares 49% aa sequence identity with human FCRL5 within common regions. Alternate splicing of human FCRL5 generates isoforms that consist of approximately the first one, six, or eight Ig-like domains (3, 4). FCRL5 expression is restricted to mature B lineage cells in lymphoid tissues and blood (3, 5 - 7). Its ligation inhibits signaling through the B cell antigen receptor (8). Epstein-Barr virus transformation of B cells induces the upregulation of surface FCRL5 by a direct effect of its EBNA2 protein on FCRL5 gene transcription (9). The FCRL5 gene maps to the 1q21 chromosomal locus, a common site of rearrangements in B cell malignancies, and the FCRL5 protein is preferentially expressed in cell lines with 1q21 abnormalities (3). FCRL5 is upregulated on tumor cells in some types of B cell malignancies (6, 10 - 12). In addition, soluble FCRL5 is elevated in the serum of many B cell leukemia patients (11, 13).

**References:**

1. Davis, R.S. (2007) *Annu. Rev. Immunol.* **25**:525.
2. Maltais, L.J. *et al.* (2006) *Nat. Immunol.* **7**:431.
3. Hatzivassiliou, G. *et al.* (2001) *Immunity* **14**:277.
4. SwissProt # Q96RD9
5. Miller, I. *et al.* (2002) *Blood* **99**:2662.
6. Polson, A.G. *et al.* (2006) *Int. Immunol.* **18**:1363.
7. Vidal-Laliena, M. *et al.* (2005) *Cell. Immunol.* **236**:6.
8. Haga, C.L. *et al.* (2007) *Proc. Natl. Acad. Sci.* **104**:9770.
9. Mohan, J. *et al.* (2006) *Blood* **107**:4433.
10. Ise, T. *et al.* (2005) *Clin. Cancer Res.* **11**:87.
11. Ise, T. *et al.* (2007) *Leukemia* **21**:169.
12. Kazemi, T. *et al.* (2009) *Cancer Immunol. Immunother.* **58**:989.
13. Ise, T. *et al.* (2006) *Clin. Chem. Lab. Med.* **44**:594.