

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived human FCRL3/FcRH3 protein
Arg14-Arg569, with a C-terminal 6-His tag
Accession # Q96P31.1

N-terminal Sequence Analysis Arg14

Predicted Molecular Mass 62 kDa

SPECIFICATIONS

SDS-PAGE 70-90 kDa, under reducing conditions

Activity Measured by its binding ability in a functional ELISA.
Recombinant Human FCRL3/FcRH3 His-tag binds to human IgG with an ED₅₀ of 1.00-10.0 µg/mL.

Endotoxin Level <0.10 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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 250 µg/mL in water.

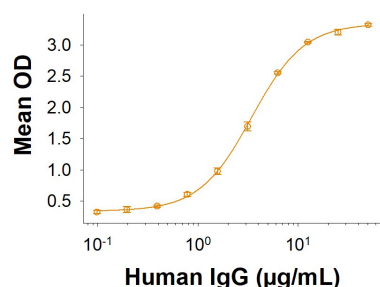
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

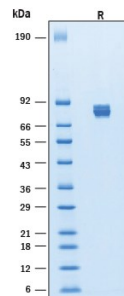
DATA

Binding Activity



Recombinant Human FCRL3/FcRH3 His-tag Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Human FCRL3/FcRH3 His-tag Protein (Catalog # 11737-F3) binds to human IgG with an ED₅₀ of 1.00-10.0 µg/mL.

SDS-PAGE



Recombinant Human FCRL3/FcRH3 His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human FCRL3/FcRH3 His-tag Protein (Catalog # 11737-F3) was resolved with SDS-PAGE under reducing (R) condition and visualized by Coomassie® Blue staining, showing bands at 70-90 kDa.

BACKGROUND

FCRL3 (Fc Receptor-Like 3), also known as FcRH3, IRTA3, and SPAP2, is a 110 kDa molecule 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). Mature human FCRL3 consists of a 556 amino acid (aa) extracellular domain (ECD) with six Ig-like domains, a 21 aa transmembrane segment, and a 140 aa cytoplasmic domain with four immunotyrosine inhibitory motifs (ITIMs) (2 - 4). Within the ECD, human and mouse FCRL3 share 35% aa sequence identity. Alternate splicing generates several additional isoforms with deletions or substitutions in both the extracellular and intracellular regions. These include potentially secreted forms that are truncated following the second Ig-like domain (4). FCRL3 is expressed in secondary lymphoid organs on the surface of mature naïve and memory B cells, NK cells, and B cell lines derived from chronic lymphocytic leukemias (2, 3, 5). It is upregulated on B cells following LPS or anti-CD40 stimulation (6). A polymorphism in the FCRL3 promoter induces enhanced transcription and is associated with the development of autoimmune disorders in a Japanese population (6, 7). Tyrosine phosphorylation within the ITIMs of FCRL3 enables its association with SHP-1 (4).

References:

1. Davis, R.S. (2007) *Annu. Rev. Immunol.* **25**:525.
2. Miller, I. *et al.* (2002) *Blood*, **99**:2662.
3. Davis, R.S. *et al.* (2001) *Proc. Natl. Acad. Sci.* **98**:9772.
4. Xu, M.-J. *et al.* (2002) *Biochem. Biophys. Res. Commun.* **293**:1037.
5. Polson, A.G. *et al.* (2006) *Int. Immunol.* **18**:1363.
6. Kochi, Y. *et al.* (2005) *Nat. Genet.* **37**:478.
7. Chistiakov, D.A. and A.P. Chistiakov (2007) *Hum. Immunol.* **68**:375.