

**Synonym**

CD89,FCAR,IgA Fc receptor

**Source**

Human CD89, His Tag(CD9-H52Ha) is expressed from human 293 cells (HEK293). It contains AA Gln 22 - Asn 227 (Accession # [P24071-1](#) ).

Predicted N-terminus: Gln 22

**Molecular Characterization**

CD89(Gln 22 - Asn 227)  
P24071-1 Poly-his

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 25.4 kDa. The protein migrates as 38-55 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per µg by the LAL method.

**Purity**

>90% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

**Formulation**

Lyophilized from 0.22 µm filtered solution in PBS, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

**Reconstitution**

Please see Certificate of Analysis for specific instructions.

*For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.*

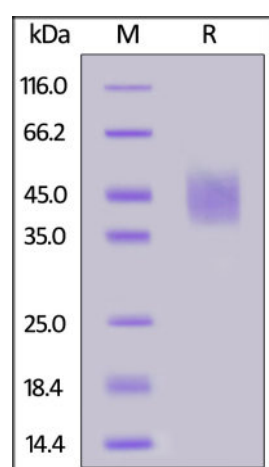
**Storage**

For long term storage, the product should be stored at lyophilized state at -20°C or lower.

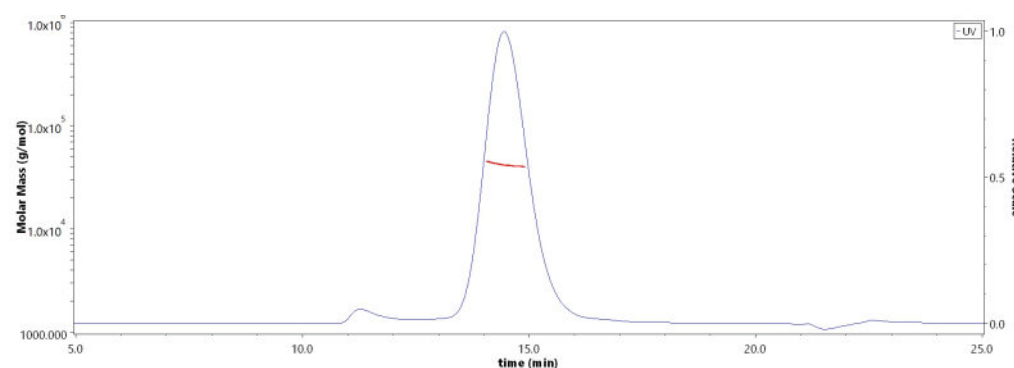
*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

**SDS-PAGE**

Human CD89, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

**SEC-MALS**

The purity of Human CD89, His Tag (Cat. No. CD9-H52Ha) is more than 90% and the molecular weight of this protein is around 35-45 kDa verified by SEC-MALS.

[Report](#)

**Background**

CD89 (FCAR) is a variably glycosylated 50-100 kDa myeloid-specific type I transmembrane (TM) Fc receptor for IgA that is a member of the multichain immune recognition receptor (MIRR) family. Human CD89 contains a 21 amino acid (aa) signal sequence and extracellular (ECD), TM and cytoplasmic domains of 206, 19 and 41 aa, respectively. Arg230 within the TM domain supports interaction with the ITAM-containing signaling subunit, FcR gamma, which contains a TM Asp .

Two ECD C2-type Ig-like domains (EC1 and 2) are oriented at right angles. Up to two molecules of FCAR can bind one molecule of serum IgA via EC1. Many splice variants have been reported, but only two have been identified as proteins. The  $\alpha$ 2 form, which lacks 22 aa just prior to the TM domain, is exclusively expressed in alveolar macrophages. The  $\alpha$ 3 form lacks EC2. FCAR binds monomeric, polymeric and secretory IgA, but does not mediate the barrier function of secretory IgA in mucosal epithelium. CD89 (Fc  $\alpha$ RI) is the human myeloid IgA Fc receptor expressed on cells, such as neutrophils, eosinophils and monocytes/macrophages. Cross-linking of CD89 on these cells, by IgA-opsonised particles (e.g. bacteria, viruses) or anti-CD89 monoclonal antibodies, can trigger various immunological effector functions which are generally protective but may also cause harm to the body.

### Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.