

#### DESCRIPTION

**Source** Human embryonic kidney cell, HEK293-derived human C1qR1/CD93 protein  
Ala24-Lys580, with a C-terminal 6-His tag and Avi-tag  
Accession # Q9NPY3.3

**N-terminal Sequence Analysis** Ala24

**Structure / Form** Biotinylated via Avi-tag

**Predicted Molecular Mass** 61 kDa

#### SPECIFICATIONS

**SDS-PAGE** 82-105 kDa, under reducing conditions.

**Activity** Measured by its binding ability in a functional ELISA.  
Biotinylated Recombinant Human C1qR1/CD93 (24-580) His-tag Avi-tag binds to Recombinant Human IGFBP-rp1/IGFBP-7 (K95R) Protein (Catalog # 1334-B7) with an ED<sub>50</sub> of 1.50-15.0 µg/mL.

**Endotoxin Level** <0.10 EU per 1 µg of the protein by the LAL method.

**Purity** >90%, 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 200 µg/mL in water.

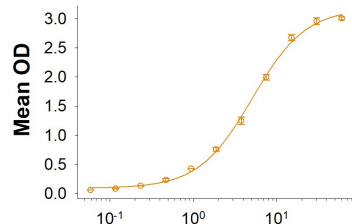
**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**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

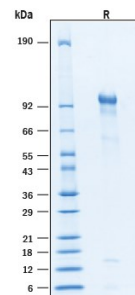
##### Binding Activity



**Biotinylated Recombinant Human C1qR1/CD93 Avi-tag (µg/mL)**

**Biotinylated Recombinant Human C1qR1/CD93 (24-580) His-tag Avi-tag Protein Binding Activity.** Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human C1qR1/CD93 (24-580) His-tag Avi-tag Protein (Catalog # AV111656) binds to Recombinant Human IGFBP-rp1/IGFBP-7 (K95R) Protein (Catalog # 1334-B7) with an ED<sub>50</sub> of 1.50-15.0 µg/mL.

##### SDS-PAGE



**Biotinylated Recombinant Human C1qR1/CD93 (24-580) His-tag Avi-tag Protein SDS-PAGE.** 2 µg/lane of Biotinylated Recombinant Human C1qR1/CD93 (24-580) His-tag Avi-tag Protein (Catalog # AV111656) was resolved with SDS-PAGE under reducing (R) condition and visualized by Coomassie® Blue staining, showing bands at 82-105 kDa.

## BACKGROUND

C1qR1, also known as CD93 and C1qRp, is an approximately 125 kDa type-1 transmembrane glycoprotein that is involved in various aspects of inflammatory reactions (1). Mature human CD93 consists of a 557 amino acid (aa) extracellular domain (ECD) containing C-type lectin and EGF-like domains, followed by a 21 aa transmembrane segment and a 51 aa cytoplasmic domain (2, 3). Within the ECD, human CD93 shares 65% aa sequence identity with mouse and rat CD93. CD93 is expressed by vascular endothelial cells (5) and by a variety of hematopoietic cells (3-9). Various sized fragments of soluble CD93 (50-75 kDa) can be shed from monocytes, neutrophils, and vascular endothelial cells following inflammatory stimulation, leaving a residual stub in the membrane (11-13). Cross-linking of cell surface CD93 enhances phagocytosis by monocytes and enhances the uptake of apoptotic cells *in vivo* (10, 15). Soluble CD93 promotes the differentiation of monocytes to macrophages, phagocytosis of apoptotic cells, and inflammatory responsiveness to multiple TLR ligands (12, 14). CD93 plays a role in cardiovascular disease progression and modulates angiogenesis, inflammation and tumor growth and its interaction with insulin-like growth factor binding protein 7 (IGFBP7) contributes to abnormal tumor vasculature (16-17). Our Avi-tag Biotinylated Human C1qR1/CD93 (24-580) features biotinylation at a single site contained within the Avi-tag, a unique 15 amino acid peptide. Protein orientation will be uniform when bound to streptavidin-coated surface due to the precise control of biotinylation and the rest of the protein is unchanged so there is no interference in the protein's bioactivity.

## References:

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