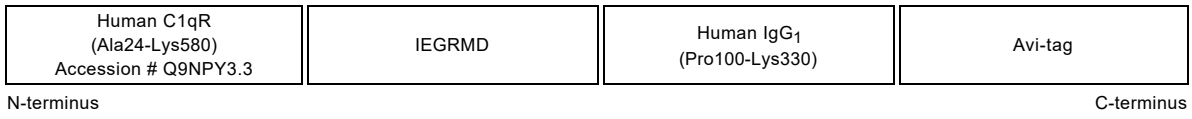
Biotinylated Recombinant Human C1qR1/CD93 Fc Chimera Avi-tag

Catalog Number: AVI2379

DESCRIPTION

Source

Human embryonic kidney cell, HEK293-derived human C1qR1/CD93 protein



N-terminal Sequence Analysis	Ala24
Structure / Form	Disulfide linked homodimer, Biotinylated via Avi-tag
Predicted Molecular Mass	87 kDa

SPECIFICATIONS

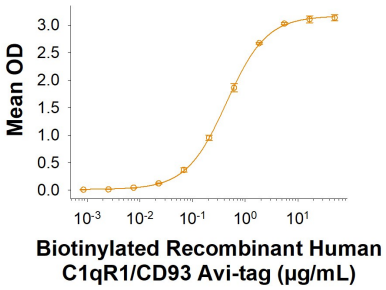
SDS-PAGE	120-130 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human C1qR1/CD93 Fc Chimera Avi-tag binds to Human IGFBP-rp1/IGFBP-7 (K95R) Protein (Catalog # 1334-B7) with an ED_{50} of 0.250-2.50 µg/mL.
Endotoxin Level	<0.10 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.

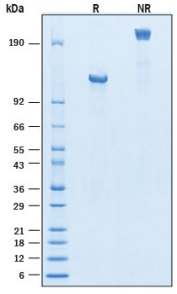
DATA

Binding Activity



Biotinylated Recombinant Human C1qR1/CD93 Fc Chimera Avi-tag Protein Binding Activity. Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human C1qR1/CD93 Fc Chimera Avi-tag Protein (Catalog # AVI2379) binds to Human IGFBP-rp1/IGFBP-7 (K95R) Protein (Catalog # 1334-B7) with an ED_{50} of 0.250-2.50 µg/mL.

SDS-PAGE



Biotinylated Recombinant Human C1qR1/CD93 Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human C1qR1/CD93 Fc Chimera Avi-tag Protein (Catalog # AVI2379) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 120-130 kDa and 240-260 kDa, respectively.

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Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475

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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 Fc Chimera protein 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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