Biotinylated Recombinant Human CD96v2 Fc Chimera Avi-tag

Catalog Number: AVI9556

DESCRIPTION

Source

Chinese Hamster Ovary cell line, CHO-derived human CD96 protein

Human CD96v2 (Lys25-Met503) Accession # NP_005807.1	IEGRMD	Human IgG_1 (Pro100-Lys330)	Avi-tag

N-terminus C-terminus

N-terminal Sequence Analysis	Lys25
Structure / Form	Disulfide-linked homodimer Biotinylated via Avi-tag
Predicted Molecular Mass	82 kDa

SPECIFICATIONS

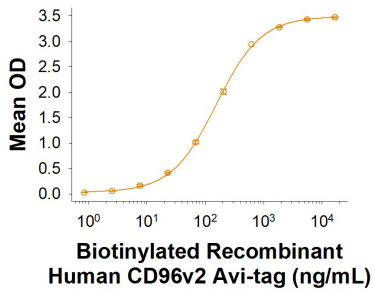
SDS-PAGE	117-146 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Biotinylated Recombinant Human CD96v2 Fc Chimera Avi-tag (Catalog # AVI9556) binds Recombinant Human CD155/PVR Fc Chimera (Catalog # 9174-CD) with an ED_{50} of 30.0-300 ng/mL.
Endotoxin Level	<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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 250 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.

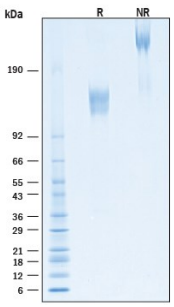
DATA

Binding Activity



Biotinylated Recombinant Human CD96v2 Fc Chimera Avi-tag Protein Binding Activity. Biotinylated Recombinant Human CD96v2 Fc Chimera Avi-tag Protein (Catalog # AVI9556) binds Recombinant Human CD155/PVR Fc Chimera (Catalog # 9174-CD) with an ED_{50} of 30.0-300 ng/mL.

SDS-PAGE



Biotinylated Recombinant Human CD96v2 Fc Chimera Avi-tag Protein SDS-PAGE. 2 µg/lane of Biotinylated Recombinant Human CD96v2 Fc Chimera Avi-tag Protein (Catalog # AVI9556) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 117-146 kDa, and 230-290 kDa, respectively.

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Catalog Number: AVI9556

BACKGROUND

Human CD96, also known as Tactile (T cell-activated increased late expression), is a 160 kDa type I transmembrane glycoprotein of the Ig superfamily that shows peak expression 6-9 days after activation of T, NK, and a subpopulation of B cells (1, 2). CD96 is also frequently expressed on acute myeloid leukemia and myelodysplastic stem cells (3, 4). It is expressed on $CD4^+$ and $CD8^+$ T cells, plus NK cells and select B cells (5). Low expression of adhesive human CD69 is a rare cause of C syndrome, a set of developmental anomalies in cranial bone (trigonocephaly), skin and viscera, demonstrating a role for CD96 in development of these tissues (2, 6). Human CD96 has two isoforms generated by alternative splicing. Isoform 2 is the most common form of CD96 that shows a 16 amino acid (aa) deletion comparing to isoform 1. Mature human CD96 isoform 2 is a 548 amino acid (aa), type I transmembrane glycoprotein. It contains a 482 aa extracellular region that contains three Ig-like domains. The two N-terminal domains are V-type and I-type, while the distal domain is a C-type structure (2). Within the ECD, human CD96 shares 53% and 52% aa sequence identity with mouse CD96 and rat CD96, respectively (7). The ECD is highly N- and O-glycosylated (1). An 80 kDa soluble form is elevated in human serum during chronic hepatitis B (9). The most N-terminal Ig-like domain of human CD96 binds to CD155/PVR (poliovirus receptor), but CD96/CD155 interaction is species-specific (2, 7, 10). Mouse CD96 also binds Nectin-1 (7). On NK cells, costimulatory CD96 and DNAM-1 (CD226) are thought to have paired activity with inhibitory TIGIT, all of which bind CD155 and various Nectins (11, 12). CD96 can promote NK cell adhesion to, and killing of target cells, including tumors that express CD155 (10, 11). Our Avi-tag Biotinylated CD96 Fc Chimera 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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