

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human DNAM-1/CD226 protein			
	Human DNAM-1 (Glu19-Asn247) Accession # Q15762	HIEGRMD	Human IgG ₁ (Pro100-Lys330)	Avi-tag
	N-terminus		C-terminus	
N-terminal Sequence	Glu19			
Analysis				
Structure / Form	Disulfide-linked homodimer, biotinylated via Avi-tag			
Predicted Molecular Mass	55 kDa			

SPECIFICATIONS

SDS-PAGE	83-95 kDa
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD155/PVR Fc Chimera (Catalog # 9174-CD) is immobilized at 2 µg/mL (100 µL/well), the concentration of Recombinant Human DNAM-1/CD226 Fc Chimera Avi-tag (Catalog # AVI666) that produces 50% of the optimal binding response is 0.07-0.42 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 500 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. <ul style="list-style-type: none"> • 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

When Recombinant Human CD155/PVR Fc Chimera (Catalog # 9174-CD) is immobilized at 2 µg/mL, Recombinant Human DNAM-1/CD226 Fc Chimera Avi-tag (Catalog # AVI666) binds with an ED₅₀ of 0.07-0.42 µg/mL.

SDS-PAGE

2 µg/lane of Recombinant Human DNAM-1/CD226 Fc Chimera Avi-tag (Catalog # AVI666) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 83-95 kDa and 170-190 kDa, respectively.

BACKGROUND

DNAM-1 (DNAM-1), also known as CD226, is a 65 kDa type I transmembrane glycoprotein in the immunoglobulin superfamily (1). Mature human DNAM-1 contains a 236 amino acid (aa) extracellular domain (ECD) with two Ig-like C2-set domains and a 61 aa cytoplasmic region that contains motifs for binding PDZ domains and band 4.1 family proteins (1, 2). Within the ECD, human DNAM-1 shares 50% and 52% aa sequence identity with mouse and rat DNAM-1, respectively. DNAM-1 is expressed on multiple lymphoid and myeloid cells and interacts with CD155/PVR and Nectin-2/CD112 (3, 4). Ligation of DNAM-1 promotes the activation of NK cells, CD8⁺ T cells, and mast cells (2-6), dendritic cell maturation, megakaryocyte and activated platelet adhesion to vascular endothelial cells, and monocyte extravasation; it inhibits the formation of osteoclasts (7-10). Platelet-endothelium interactions mediated by DNAM-1 enable the metastasis of tumor cells to the lung (11). In activated, but not in resting NK, T, and mast cells, the *cis* association of DNAM-1 with CD18 contributes to the tyrosine and serine phosphorylation of DNAM-1 during activation (6, 9, 12-14).

References:

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