Recombinant Human DNAM-1/CD226 Fc Chimera

Catalog Number: 666-DN

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived human DNAM-1/CD226 protein

Human DNAM-1/CD226 (Glu19-Asn247) Accession # Q15762	HIEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Glu19
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	53 kDa (monomer)

SPECIFICATIONS

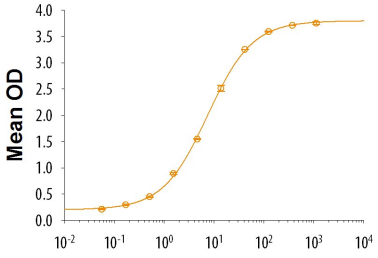
SDS-PAGE	75-80 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human DNAM-1/CD226Fc Chimera is immobilized at 1 µg/mL, 100 µL/well, it binds Biotinylated Recombinant Human CD155/PVR Fc Chimera (Catalog # BT9174) with an ED_{50} of 3-18 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile 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



When Recombinant Human DNAM-1 Fc Chimera (Catalog # 666-DN) is immobilized at 1 µg/mL, 100 µL/well, Biotinylated Recombinant Human CD155/PVR (Catalog # BT9174) binds with an ED_{50} of 3-18 ng/mL.

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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 China TEL +86 (21) 52380373
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BACKGROUND

DNAX accessory molecule-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 forrmation 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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