Recombinant Human MXRA8/DICAM

Catalog Number: 8939-DM

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived His23-Gln341, with a C-terminal 6-his tag Accession # Q9BRK3
N-terminal Sequence Analysis	His23 & Ser34
Predicted Molecular Mass	36 kDa

SPECIFICATIONS

SDS-PAGE	38-45 kDa, reducing conditions
Activity	Measured by the ability of the immobilized protein to support the adhesion of SVEC4-10 mouse vascular endothelial cells. The ED_{50} for this effect is 2-10 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. 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.** ● 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.

BACKGROUND

DICAM, also known as Limitrin and MXRA8, is an approximately 70 kDa transmembrane adhesion protein that is expressed on the endothelium of many tissues (1). In the vascular system, it is found on pericytes, vascular endothelial cells (EC), and the vessel-contacting feet of astrocytes (2). It is up-regulated on EC by VEGF and functions as a negative regulator of angiogenesis (3). It inhibits VEGF-induced signaling, cell migration, capillary tube formation, and *in vivo* angiogenesis, and promotes EC apoptosis (3). The interaction of DICAM with Integrin αVβ3 enhances cell adhesion and inhibits the differentiation of osteoclasts (1, 4). Mature human DICAM consists of a 322 amino acid (aa) extracellular domain (ECD) with two Ig-like domains, a 21 aa transmembrane segment, and an 80 aa cytoplasmic domain (2). Within the ECD, human DICAM shares 79% aa sequence identity with mouse and rat DICAM. Alternative splicing generates additional isoforms that lack most of the first Ig-like domain or have a substituted signal peptide.

References:

1. Jung, Y.K. *et al.* (2008) J. Cell Physiol. **216**:603.
2. Yonezawa, T. *et al.* (2003) Glia **44**:190.
3. Han, S.-W. *et al.* (2013) Cardiovasc. Res. **98**:73.
4. Jung, Y.-K. *et al.* (2012) J. Bone Mineral Res. **27**:2024.

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