Recombinant Human MCAM/CD146 Fc Chimera

Catalog Number: 9709-MA

DESCRIPTION

Source

Mouse myeloma cell line, NS0-derived

Human MCAM/CD146 (Val24-Gly559) Accession # AAA20922	IEGRMD	Human IgG_1 (Pro100-Lys330)

N-terminus C-terminus

N-terminal Sequence Analysis	Val24
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	87 kDa

SPECIFICATIONS

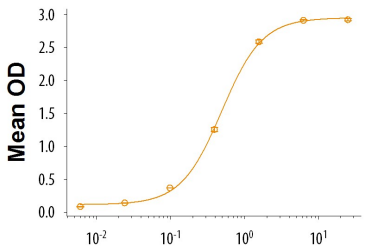
SDS-PAGE	108-124 kDa, reducing condtions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human MCAM/CD146 Fc Chimera is immobilized at 1 µg/mL, 100 µL/well, it binds Recombinant Human Galectin-3 (Catalog # 8259-GA). The concentration of Recombinant Human Galectin-3 that produces 50% of the optimal binding response is 0.25-1.25 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.

DATA

Bioactivity



When Recombinant Human MCAM/CD146 Fc Chimera is immobilized at 1 µg/mL, 100 µL/well, Recombinant Human Galectin-3 (Catalog # 8259-GA) binds with an ED_{50} of 0.25-1.25 ug/mL.

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BACKGROUND

Melanoma cell adhesion molecule (MCAM), also known as MUC18 or CD146, is a putative adhesion molecule that belongs to the immunoglobulin superfamily (IgSF) (1). MCAM is an approximately 113 kDa type I transmembrane glycoprotein that contains a 536 amino acid (aa) extracellular domain (ECD), a 24 aa transmembrane domain, and a 63 aa cytoplasmic domain. Two MCAM splice variants have been observed, which vary in the length of their cytoplasmic tail (2). The ECD of human MCAM contains 2 IgV and 3 IgC2 domains and shares 74% and 73% identity with mouse and rat, respectively. MCAM was originally described as a marker of malignant potential in melanoma and was reported to promote both invasion and metastasis (3). Since then, expression has been detected in endothelial cells throughout the body and MCAM has been shown to be involved multiple cellular events including adhesion, migration, proliferation and differentiation (4, 5). Additionally, MCAM has been implicated in recruitment of activated T cells to inflammatory sites and is up-regulated in various inflammatory diseases (5, 6). Inhibiting MCAM signaling has been suggested as a potential therapy for diverse diseases including inflammatory bowel disease and ovarian cancer (7, 8). As a cellular adhesion molecule (CAM), MCAM functions as a molecular mediator to facilitate inter-cellular interactions of homotypic or heterotypic cells, or to intervene in interactions of cell-to-extracellular matrix for responding to physiological signal (9). MCAM has also been shown to be the functional ligand for Galectin-3 on endothelial cell surfaces (9).

References:

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