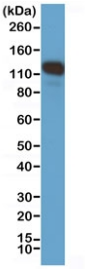
Recombinant CD146 Antibody / MCAM [clone RM249] (R20269)

Catalog No.	Formulation	Size
R20269-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

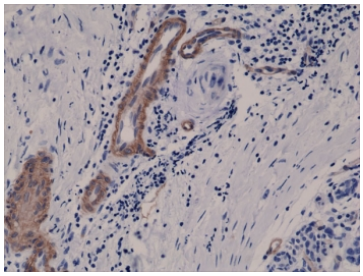
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM249
Purity	Protein A purified from animal origin-free supernatant
UniProt	P43121
Gene ID	4162
Applications	Immunohistochemistry (FFPE) : 1:200-1:500 (1) Western Blot : 1:1000-1:2000
Limitations	This recombinant CD146 antibody is available for research use only.



Western blot testing of human A375 cell lysate with recombinant CD146 antibody at 1:1000. Observed molecular weight 70-120 kDa depending on glycosylation level.



IHC testing of FFPE human breast cancer tissue with recombinant CD146 antibody at 1:400.

Description

The Recombinant CD146 antibody is a recombinant reagent engineered to detect CD146, also known as melanoma cell adhesion molecule (MCAM). CD146 is a transmembrane glycoprotein and a member of the immunoglobulin superfamily expressed primarily on endothelial cells, smooth muscle cells, activated T cells, and certain tumor cells. It plays a multifaceted role in angiogenesis, cell adhesion, signal transduction, and immune regulation. Because of its association with vascular biology and tumor progression, CD146 has become a valuable biomarker in oncology, cardiovascular research, and immunology. The Recombinant CD146 antibody provides precise and reproducible detection of this molecule across experimental systems.

CD146 is a 113-kDa protein composed of five extracellular Ig-like domains, a single transmembrane region, and a cytoplasmic tail that mediates interactions with intracellular signaling partners. Its extracellular domains support both homophilic and heterophilic binding, enabling CD146 to facilitate endothelial cell-cell adhesion and leukocyte transmigration. In endothelial biology, CD146 is critical for vascular development and remodeling, as well as for maintaining vascular integrity. In oncology, CD146 overexpression is linked to tumor angiogenesis, invasion, and metastasis, especially in melanoma and other solid tumors. The Recombinant CD146 antibody ensures reliable measurement of expression levels in these contexts.

In immunohistochemistry, the Recombinant CD146 antibody highlights vascular endothelium and tumor-associated vasculature, aiding in the evaluation of angiogenic activity. In immunofluorescence, it reveals endothelial junctions and cell surface localization in tumor cells. In western blotting, the antibody detects CD146 protein in tissue or cell lysates, enabling quantitative assessment of expression. Recombinant production ensures consistent performance across lots, addressing variability common with hybridoma-derived antibodies.

The Recombinant CD146 antibody is especially useful in translational research, where CD146 serves as both a diagnostic and prognostic marker. In cancer studies, it provides insight into tumor vascularization and metastatic potential. In cardiovascular research, CD146 expression reflects endothelial activation and vascular remodeling. In immunology, CD146-positive subsets of T cells have been implicated in autoimmune diseases, highlighting its broader role in immune regulation. Synonym terms such as recombinant MCAM antibody, recombinant melanoma cell adhesion molecule antibody, and recombinant endothelial junction antibody broaden accessibility for researchers using alternate nomenclature.

By providing validated and reproducible detection, the Recombinant CD146 antibody supports diverse applications in cancer, vascular biology, and immunology. NSJ Bioreagents ensures strict quality control for this reagent, giving scientists confidence in its use across western blotting, immunohistochemistry, and immunofluorescence. With specificity for MCAM, the Recombinant CD146 antibody is an indispensable tool for exploring cell adhesion, vascular remodeling, and tumor progression.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant CD146 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide corresponding to the residues near C-terminus of human CD146 was used as the immunogen for this recombinant CD146 antibody.

Storage

Store the recombinant CD146 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).