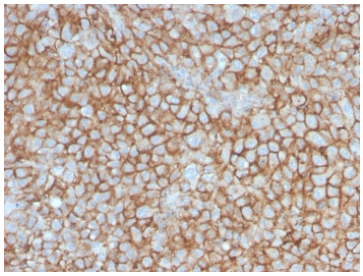
MCAM Antibody MCAM/3046 / Melanoma Cell Adhesion Molecule Antibody [clone MCAM/3046] (V7943)

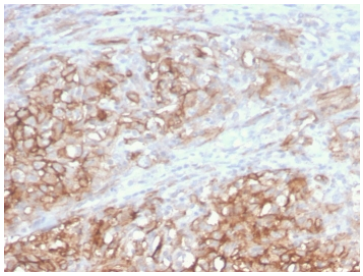
Catalog No.	Formulation	Size
V7943-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7943-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7943SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

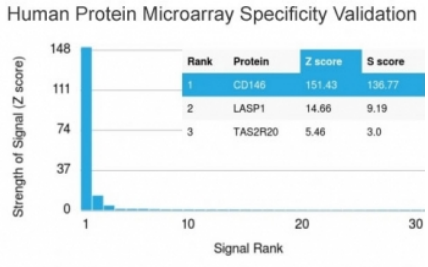
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MCAM/3046
Purity	Protein G affinity chromatography
UniProt	P43121
RRID	AB_3756925
Localization	Cell surface, cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This MCAM Antibody MCAM/3046 / Melanoma Cell Adhesion Molecule Antibody is available for research use only.



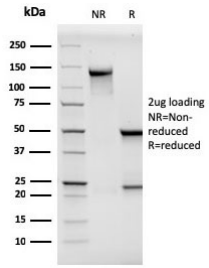
MCAM Antibody MCAM/3046 by IHC in Human Melanoma Tissue. Immunohistochemistry staining of FFPE human melanoma tissue using mouse monoclonal MCAM antibody (MCAM/3046). Heat-induced epitope retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA (pH 9.0) for 20 minutes, followed by cooling before antibody incubation. Strong brown immunoreactivity outlines numerous melanoma cells, producing a prominent membranous staining pattern consistent with the cell surface localization of melanoma cell adhesion molecule (CD146/MUC18). Nuclear staining is comparatively minimal.



MCAM Antibody MCAM/3046 by IHC in Human Melanoma Tissue. Immunohistochemistry staining of FFPE human melanoma tissue using mouse monoclonal MCAM antibody (MCAM/3046). Heat-induced epitope retrieval was performed using 10 mM Tris with 1 mM EDTA (pH 9.0) at boiling temperature for 20 minutes, followed by cooling. Brown immunoreactivity is observed in clusters of melanoma cells, with prominent membranous and peripheral cytoplasmic staining. Staining intensity varies across the tissue, with strongly positive tumor regions separated by areas of comparatively weak staining. The pattern demonstrates MCAM/CD146 expression in malignant melanocytic cells.



MCAM Antibody MCAM/3046 by Protein Microarray Specificity Analysis. Protein microarray analysis using mouse monoclonal MCAM antibody (MCAM/3046) against a HuProt array containing more than 19,000 full-length human proteins. MCAM/CD146 produces the highest-ranked binding signal, with a Z-score of approximately 111 and an S-score of approximately 109.7. The next-ranked proteins, including LASP1 and TAF9B, exhibit substantially weaker signals. The marked separation between the intended target and other array proteins supports the binding specificity of clone MCAM/3046 for melanoma cell adhesion molecule.



SDS-PAGE analysis of purified, BSA-free MCAM antibody as confirmation of integrity and purity.

Description

MCAM Antibody MCAM/3046 recognizes melanoma cell adhesion molecule (MCAM), a transmembrane glycoprotein belonging to the immunoglobulin superfamily. Also known as CD146, MUC18, and Mel-CAM, this protein is encoded by the MCAM gene on human chromosome 11. MCAM was originally identified as a melanoma-associated cell surface antigen but is now recognized as an important adhesion molecule expressed in several normal tissues. Its functions include regulating cell-cell interactions, endothelial behavior, cellular migration, and signaling pathways involved in tissue organization.

MCAM contains five extracellular immunoglobulin-like domains, a single transmembrane region, and a cytoplasmic tail involved in intracellular signaling. The protein is extensively glycosylated, contributing to its apparent molecular weight and interactions at the cell surface. Alternative splicing produces isoforms with different cytoplasmic domains that can influence cellular localization and signaling behavior. Through interactions with extracellular and intracellular partners, CD146 contributes to the regulation of cell adhesion, cytoskeletal organization, and cellular responses to the surrounding microenvironment.

CD146 is expressed by vascular endothelial cells, vascular smooth muscle cells, pericytes, and subsets of mesenchymal stromal cells. In endothelial biology, MCAM participates in processes associated with vascular development, endothelial junction organization, and angiogenesis. Its expression is also observed in certain activated immune cell populations, including subsets of T lymphocytes, where it has been investigated as a marker associated with cellular activation and migration.

In cancer research, MCAM is particularly associated with melanoma, where its expression has been linked to invasive behavior, cell motility, and metastatic progression. CD146 expression is also reported in several other malignancies,

including subsets of breast, prostate, and ovarian cancers. Experimental studies suggest that MCAM can participate in signaling pathways that influence tumor cell migration, interactions with the extracellular matrix, and communication with vascular cells. However, its biological effects vary according to tumor type and cellular context.

Because MCAM is expressed in both normal vascular tissues and certain tumors, its detection is useful for investigating endothelial differentiation, cell adhesion, tumor-associated signaling, and tissue-specific expression patterns. Immunohistochemical analysis can provide information about CD146 distribution within tissue sections, although expression alone does not establish a particular cellular function or malignant phenotype.

An MCAM Antibody MCAM/3046 from NSJ Bioreagents supports research investigating melanoma cell adhesion molecule expression, CD146-associated cellular interactions, vascular biology, angiogenesis, and the molecular mechanisms underlying tumor cell migration.

For additional antibodies targeting cell surface proteins involved in cellular adhesion, immune regulation, and endothelial biology, explore our CD Antibodies collection.

Application Notes

Optimal dilution of the MCAM Antibody MCAM/3046 / Melanoma Cell Adhesion Molecule Antibody should be determined by the researcher.

Immunogen

A recombinant human partial protein (amino acids 226-374) was used as the immunogen for the MCAM Antibody MCAM/3046.

Storage

Store the MCAM Antibody MCAM/3046 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

CD146 antibody, MUC18 antibody, Mel-CAM antibody, Melanoma Cell Adhesion Molecule antibody, Cell Surface Glycoprotein MUC18 antibody, CD146 Antigen antibody, Melanoma Adhesion Molecule antibody, MCAM Protein antibody

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