

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse MCAM/CD146 in direct ELISAs. In direct ELISAs, less than 5% cross-reactivity with recombinant mouse (rm) MAdCAM-1 is observed, and no cross-reactivity with rmALCAM, rmNCAM, rmL1CAM, rmOCAM, rmTROP-2, recombinant human MCAM, or recombinant rat MCAM is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 733216
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse MCAM/CD146 Met1-Val563 Accession # Q8R2Y2
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	2.5 µg/10 ⁶ cells	See Below
Immunocytochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA

<p>Flow Cytometry</p>	<p>Detection of MCAM/CD146 in NK1.1+ Mouse Splenocytes by Flow Cytometry. Mouse NK1.1+ splenocytes were stained with Rat Anti-Mouse MCAM/CD146 Monoclonal Antibody (Catalog # MAB7718, filled histogram) or isotype control antibody (Catalog # MAB006, open histogram), followed by Allophycocyanin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0113).</p>	<p>Immunocytochemistry</p>	<p>MCAM/CD146 in bEnd.3 Mouse Cell Line. MCAM/CD146 was detected in immersion fixed bEnd.3 mouse endothelioma cell line using Rat Anti-Mouse MCAM/CD146 Monoclonal Antibody (Catalog # MAB7718) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the Northern-Lights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cell surfaces and cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.</p>
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PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

MCAM (Melanoma cell adhesion molecule; also CD146 and MUC18) is a 110-120 kDa member of a small group of Ig-superfamily molecules that includes CD239 and CD166. MCAM has also been reported at a molecular weight of approximately 150 kDa. In rodent, MCAM is reportedly expressed on neurons, endothelial cells, NK cells, neutrophils, mesenchymal stem cells and melanoma cells. MCAM appears to contribute to intercellular endothelial cell junctions, and possibly contributes to the migration of select cell types. Mature mouse MCAM is a 625 amino acid (aa) type I transmembrane glycoprotein. Its extracellular region is 540 aa in length (aa 24-563). It contains two V-type Ig-like domains (aa 24-244) followed by three C2-type Ig-like domains (aa 246-512). One cytoplasmic region splice form shows a seven aa substitution for aa 600-648. Unlike human, rodent MCAM does not undergo a splicing event that will generate a soluble isoform. Over aa 24-563, mouse MCAM shares 90% and 74% aa identity with rat and human MCAM, respectively.