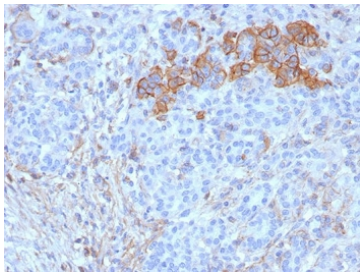
CD99/MIC2 Antibody [clone rMIC2/6939] (V5367)

Catalog No.	Formulation	Size
V5367-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5367-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5367SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

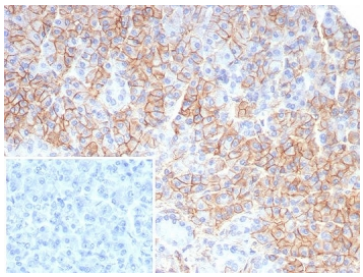
Recombinant MOUSE MONOCLONAL

Bulk quote request

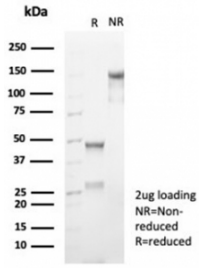
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	rMIC2/6939
Purity	Protein A affinity
UniProt	P14209
Localization	Cell surface
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This CD99/MIC2 antibody is available for research use only.



IHC staining of FFPE human pancreas tissue with recombinant CD99/MIC2 antibody (clone rMIC2/6939). Membranous brown staining is observed in a subset of pancreatic epithelial cells, while surrounding stromal cells show minimal to no signal. Nuclei are counterstained blue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling prior to staining.



IHC staining of FFPE human pancreas tissue with recominant CD99/MIC2 antibody (clone rMIC2/6939). Inset: PBS used in place of primary Ab (secondary Ab negative control). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free recombinant CD99/MIC2 antibody (clone rMIC2/6939) as confirmation of integrity and purity.

Description

CD99/MIC2 Antibody recognizes CD99, also known as MIC2, a 32 kDa transmembrane glycoprotein encoded by the CD99 gene located in the pseudoautosomal region of the X and Y chromosomes. CD99 antibody targets a cell surface protein that plays an important role in cell adhesion, migration, apoptosis, and T cell signaling. The CD99/MIC2 antigen is highly expressed on thymocytes, cortical T cells, certain B cell subsets, and a variety of mesenchymal and hematopoietic cells. In diagnostic pathology, CD99 antibody is widely used due to its strong and diffuse membranous staining pattern in Ewing sarcoma and peripheral primitive neuroectodermal tumors.

CD99 is a type I membrane protein composed of a short cytoplasmic tail, a single transmembrane domain, and an extracellular region that mediates homotypic cell adhesion. Through interactions with signaling molecules and cytoskeletal components, CD99 participates in leukocyte transendothelial migration and immune synapse formation. CD99/MIC2 Antibody is therefore frequently utilized in immunohistochemistry to evaluate lymphoid tissues, thymic neoplasms, and small round blue cell tumors. Its characteristic crisp membranous staining pattern makes it particularly valuable for distinguishing Ewing sarcoma from other morphologically similar malignancies.

Beyond oncology, CD99 has been implicated in the regulation of apoptosis and differentiation. Engagement of CD99 can trigger intracellular signaling cascades that influence cell survival, adhesion molecule expression, and cytoskeletal rearrangement. In certain contexts, CD99 signaling promotes T cell activation and modulates inflammatory responses. Aberrant expression of CD99 has also been described in some leukemias and lymphomas, supporting the use of CD99 antibody in hematopathology panels.

At the molecular level, alternative splicing generates distinct CD99 isoforms that may differ in signaling properties and functional outcomes. Expression levels vary across tissues, with strong expression in thymic cortex and Ewing sarcoma, and more variable staining in other epithelial and mesenchymal tumors. CD99/MIC2 Antibody enables evaluation of membranous antigen distribution in normal and neoplastic tissues, aiding in tumor classification and research into cell adhesion mechanisms. Clone rMIC2/6939 is designed to detect CD99/MIC2 expression in research applications, supporting studies in oncology, immunology, and tumor biology where accurate assessment of cell surface markers is essential.

By targeting a well-established surface antigen with diagnostic and biological relevance, CD99 antibody provides a reliable tool for investigating immune cell development, tumor differentiation, and cell adhesion pathways across diverse tissue types.

Application Notes

Optimal dilution of the CD99/MIC2 antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-185) from the human protein was used as the immunogen for the CD99/MIC2 antibody.

Storage

Aliquot the CD99/MIC2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.