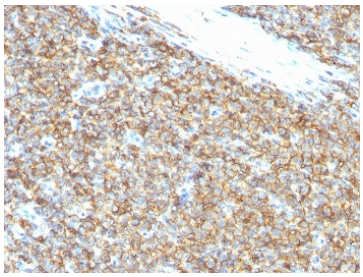
CD99 Antibody / MIC2 [clone 12E7] (V5764)

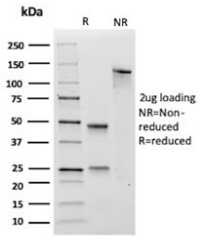
Catalog No.	Formulation	Size
V5764-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5764-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5764SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

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	12E7
Purity	Protein G affinity
UniProt	P14209
Localization	Membrane
Applications	Flow Cytometry : 1-2ug/million cells Immunofluorescence : 1-3ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This CD99 antibody is available for research use only.



IHC staining of FFPE human Ewing sarcoma tissue with CD99 antibody (clone 12E7). Membranous brown staining is observed in tumor cells, consistent with strong CD99 surface expression characteristic of Ewing sarcoma, while surrounding stromal elements show minimal to no staining. HIER was performed by boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min followed by cooling prior to staining.



SDS-PAGE analysis of purified, BSA-free CD99 antibody (clone 12E7) as confirmation of integrity and purity.

Description

CD99 Antibody (Clone 12E7) recognizes CD99, also known as MIC2 and CD99 molecule, a 32 kDa type I transmembrane glycoprotein broadly expressed in hematopoietic and selected non-hematopoietic tissues. CD99 antibody targets a cell surface protein encoded by the CD99 gene located in the pseudoautosomal region of the X and Y chromosomes. CD99 is highly conserved and functions in cell adhesion, migration, apoptosis, and immune cell signaling, making it an important marker in both immunology research and diagnostic pathology.

CD99 is expressed at high levels in thymocytes, cortical T cells, and subsets of B cells, with predominant localization to the plasma membrane where it mediates homotypic cell-cell interactions. It plays a critical role in T cell development within the thymus and contributes to leukocyte transendothelial migration during inflammatory responses. Because of its strong membranous staining pattern in lymphoid tissues, CD99 Antibody is widely used to evaluate lymphoid lineage differentiation and immune cell distribution in formalin-fixed, paraffin-embedded specimens.

In diagnostic pathology, CD99 is best known for its characteristic diffuse membranous expression in Ewing sarcoma and primitive neuroectodermal tumors. CD99 antibody is routinely incorporated into immunohistochemical panels for the evaluation of small round blue cell tumors, where its staining pattern provides valuable supportive evidence when interpreted alongside morphology and additional lineage-specific markers. CD99 expression has also been reported in lymphoblastic lymphoma, synovial sarcoma, and selected other neoplasms, highlighting the importance of panel-based interpretation rather than reliance on a single marker.

At the molecular level, CD99 exists in multiple isoforms generated through alternative splicing, which may influence downstream signaling and apoptotic pathways. CD99 has been implicated in modulation of cytoskeletal organization and tumor cell migration, and altered expression has been associated with changes in metastatic potential and immune microenvironment interactions. Dysregulation of CD99-mediated signaling can therefore contribute to tumor progression and altered immune responses.

CD99 Antibody (Clone 12E7) provides a reliable tool for detecting membranous CD99 expression in research applications. By targeting a key cell surface glycoprotein involved in immune development and tumor biology, CD99 antibody enables detailed assessment of lymphoid tissues, leukocyte trafficking, and neoplasms such as Ewing sarcoma across diverse biological and clinical contexts.

Application Notes

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

Immunogen

Human acute lymphocytic leukemia T-cells were used as the immunogen for the CD99 antibody.

Storage

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