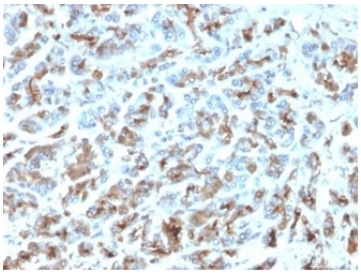
MICA Antibody / Human Tissue-Enriched Detection Antibody [clone MICA/4443] (V9703)

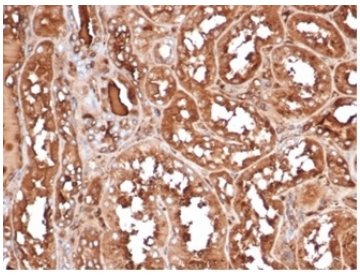
Catalog No.	Formulation	Size
V9703-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9703-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9703SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

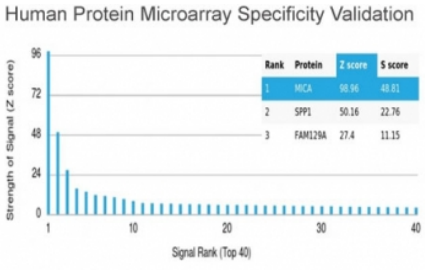
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	MICA/4443
Purity	Protein A/G affinity
UniProt	Q29983
Localization	Cell surface, Cytoplasm
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This MICA Antibody / Human Tissue-Enriched Detection Antibody is available for research use only.



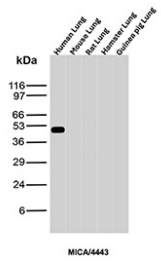
MICA Antibody Human Stomach IHC. Immunohistochemistry staining of FFPE human stomach with MICA antibody (clone MICA/4443). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



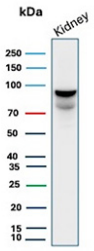
MICA Antibody Human Kidney IHC. Immunohistochemistry staining of FFPE human kidney tissue with MICA antibody (clone MICA/4443). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



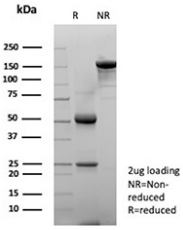
MICA Antibody Protein Microarray Specificity Analysis. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using MICA antibody (clone MICA/4443). These results demonstrate the foremost specificity of the MICA/4443 mAb. Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



MICA Antibody Human Lung WB. Western blot analysis of MHC class I polypeptide-related sequence A (MICA) expression in multi-species lung tissue lysates using MICA antibody clone MICA/4443. Lane 1: human lung lysate, Lane 2: mouse lung lysate, Lane 3: rat lung lysate, Lane 4: hamster lung lysate, Lane 5: guinea pig lung lysate. A distinct band is detected at approximately 50-60 kDa in human lung lysate, consistent with glycosylated forms of MICA. Minimal or no detectable signal is observed in the non-human lanes under these conditions, supporting a human tissue-enriched detection profile for this clone.



MICA Antibody Kidney Tissue WB. Western blot analysis of MHC class I polypeptide-related sequence A (MICA) expression in human kidney tissue lysate using MICA antibody clone MICA/4443. Lane 1: human kidney lysate. A broad band is detected at approximately 70-90 kDa, consistent with heavily glycosylated forms of MICA. The higher apparent molecular weight and band heterogeneity reflect tissue-specific glycosylation and post-translational modification commonly observed in epithelial-rich tissues such as kidney, supporting a human tissue-enriched detection profile for this clone.



SDS-PAGE analysis of purified, BSA-free MICA antibody (MICA/4443) as confirmation of integrity and purity.

Description

MHC class I polypeptide-related sequence A (MICA) is a stress-inducible glycoprotein belonging to the non-classical MHC class I family that functions as a ligand for the activating receptor NKG2D. MICA is primarily expressed on epithelial cells and is upregulated in response to cellular stress, infection, and malignant transformation, where it serves as a key mediator of immune recognition. The MICA Antibody / Human Tissue-Enriched Detection Antibody is designed to detect this clinically relevant protein with strong performance in human tissue, supporting studies focused on human-specific

biology and disease mechanisms.

MICA antibody, also referred to as MHC class I-related protein A antibody in the literature, recognizes a glycosylated cell surface protein that functions as a stress signal for immune activation. Western blot analysis demonstrates clear detection of MICA in human lung tissue lysate, while minimal or no detectable signal is observed in non-human species under comparable conditions. This pattern supports preferential detection in human tissue and provides a meaningful differentiation for applications centered on human samples, where consistent signal in human lysates is prioritized over cross-species compatibility.

Structurally, MICA contains extracellular alpha domains similar to classical MHC class I molecules, a transmembrane region, and a short cytoplasmic tail, but does not bind beta-2 microglobulin. The protein undergoes extensive glycosylation, resulting in an apparent molecular weight that is higher than predicted and often observed as a band in the 50Ã¢Â€Â“70 kDa range on SDS-PAGE. Variability in band intensity and migration reflects differences in glycosylation state and cellular context, which are particularly relevant in human tissue where MICA expression is tightly regulated by stress signaling pathways.

Functionally, MICA plays a central role in immune surveillance by activating NKG2D-expressing natural killer cells and cytotoxic T lymphocytes. Its expression is frequently altered in cancer, where tumor cells may shed soluble MICA or modulate surface expression to evade immune detection. Because these processes are highly relevant to human disease, reliable detection of MICA in human tissue is essential for studies of tumor immunology, immune evasion, and therapeutic targeting.

The preferential detection of MICA in human tissue lysates provides a focused advantage for research centered on human biology, including cancer progression, epithelial stress responses, and immune signaling. Clone MICA/4443 is designed to recognize epitopes that enable strong detection in human samples, supporting applications where human tissue analysis is the primary objective. This positioning distinguishes the antibody from cross-species reagents and makes it particularly well suited for studies that emphasize human-specific expression patterns and clinical relevance.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the MICA Antibody / Human Tissue-Enriched Detection Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-200 was used as the immunogen for the MICA antibody.

Storage

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

Alternate Names

MICA antibody, MHC class I-related protein A antibody, MICA human antibody, MICA WB antibody, MICA tissue detection antibody

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