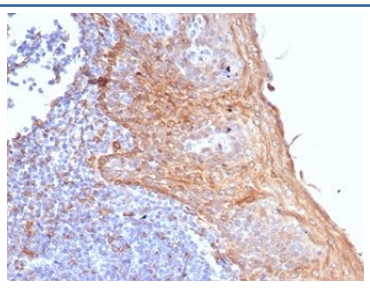
TMEM173 Antibody STING1/7431 / Transmembrane Protein 173 Antibody [clone STING1/7431] (V9626)

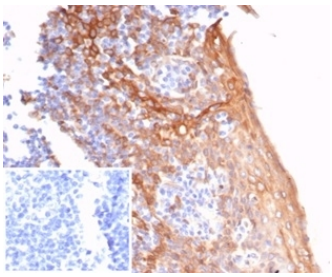
Catalog No.	Formulation	Size
V9626-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9626-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9626SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG
Clone Name	STING1/7431
Purity	Protein A/G affinity
UniProt	Q86WV6
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This TMEM173 Antibody STING1/7431 / Transmembrane Protein 173 Antibody is available for research use only.



TMEM173 Antibody STING1/7431 in Human Tonsil IHC. Immunohistochemistry staining of FFPE human tonsil tissue with TMEM173 Antibody, clone STING1/7431. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before testing. Strong brown cytoplasmic immunoreactivity is visible in numerous cells, with particularly prominent staining along the epithelial-associated region and adjacent lymphoid tissue. The heterogeneous cellular staining demonstrates detection of Transmembrane Protein 173/STING1 in human tonsil tissue.



TMEM173 Antibody STING1/7431 in Human Tonsil with Negative Control IHC. Immunohistochemistry staining of FFPE human tonsil tissue with TMEM173 Antibody, clone STING1/7431. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before testing. Strong cytoplasmic staining is present in numerous cells within the tissue, while the PBS negative-control inset shows minimal background signal. The clear contrast with the negative control supports detection of Transmembrane Protein 173/STING1 in human tonsil tissue.

Description

TMEM173 Antibody STING1/7431 / Transmembrane Protein 173 Antibody recognizes the protein encoded by the TMEM173 gene, more commonly known as STING or STING1. TMEM173 is a transmembrane signaling protein that serves as a central adaptor in innate immune recognition of cytosolic DNA. Through the cGAS-STING pathway, the protein connects detection of aberrantly localized DNA with production of type I interferons and other inflammatory mediators, contributing to cellular defense against infection and other sources of intracellular DNA.

Cyclic GMP-AMP synthase (cGAS) initiates this pathway by recognizing double-stranded DNA within the cytosol. DNA binding activates cGAS and promotes synthesis of cyclic GMP-AMP (cGAMP), a second messenger that binds directly to TMEM173. Ligand binding induces conformational activation of STING and promotes its trafficking from the endoplasmic reticulum toward Golgi-associated compartments, an important step in propagation of the downstream immune response.

Activated TMEM173 facilitates recruitment and activation of TANK-binding kinase 1 (TBK1), which phosphorylates interferon regulatory factor 3 (IRF3). Activated IRF3 subsequently promotes transcription of type I interferons and interferon-stimulated genes. This signaling mechanism allows cells to respond to DNA originating from intracellular pathogens as well as endogenous DNA associated with mitochondrial damage, genomic instability, and other forms of cellular stress.

Transmembrane Protein 173 is consequently studied across a broad range of innate immune processes. STING signaling contributes to antimicrobial defense, inflammatory regulation, immune surveillance, and responses to cellular damage. The pathway is also important in cancer immunology, where sensing of tumor-derived DNA can promote inflammatory signaling and antitumor immune responses. Dysregulated TMEM173 activity has additionally been investigated in autoinflammatory and autoimmune disease mechanisms.

Clone STING1/7431 is a mouse monoclonal antibody directed against human TMEM173/STING1. NSJ Bioreagents offers this TMEM173 Antibody as a clone-defined reagent for investigating cytosolic DNA sensing and innate immune signaling. A TMEM173 Antibody can support research into STING biology, interferon regulation, host defense, inflammation, and cGAS-STING pathway mechanisms.

For a polyclonal antibody with broader validation across the cGAS-STING signaling pathway, see our STING1 Antibody / cGAS-STING Pathway Antibody page.

Application Notes

Optimal dilution of the TMEM173 Antibody STING1/7431 / Transmembrane Protein 173 Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 190-290 was used as the immunogen for the TMEM173 Antibody STING1/7431.

Storage

Aliquot the TMEM173 Antibody STING1/7431 and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

TMEM173 antibody, Transmembrane protein 173 antibody, STING1 antibody, STING antibody, Stimulator of interferon genes antibody, ERIS antibody, MITA antibody, MPYS antibody

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