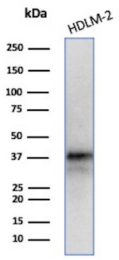
STING1 Antibody STING1/7433 / ERIS / MITA / TMEM17 [clone STING1/7433] (V5093)

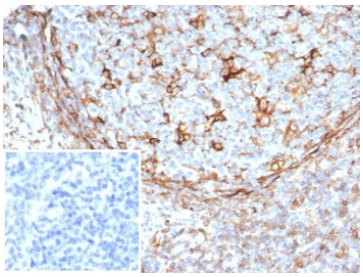
Catalog No.	Formulation	Size
V5093-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5093-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5093SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

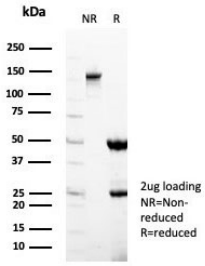
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG, kappa
Clone Name	STING1/7433
Purity	Protein A/G affinity
UniProt	Q86WV6
Localization	Cytoplasm
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This STING1 antibody is available for research use only.



STING1 Antibody STING1/7433 western blot analysis. Western blot analysis of human HDLM-2 cell lysate using STING1 Antibody Clone STING1/7433 detects a band at approximately 42 kDa, consistent with the predicted molecular weight of Stimulator of interferon genes protein / STING1 (TMEM173), a key adaptor of the cGAS-STING cytosolic DNA sensing pathway involved in interferon signaling.



STING1 Antibody STING1/7433 immunohistochemistry analysis of human tissue. IHC staining of formalin-fixed, paraffin-embedded human tonsil using STING1 Antibody Clone STING1/7433 shows HRP-DAB brown cytoplasmic staining in numerous lymphoid immune cells, consistent with expression of Stimulator of interferon genes protein / STING1 (TMEM173) in antigen-presenting cell populations within tonsillar tissue. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling prior to antibody incubation. The inset shows PBS used in place of the primary antibody as a negative control.



SDS-PAGE analysis of purified, BSA-free STING1 antibody (clone STING1/7433) as confirmation of integrity and purity.

Description

Stimulator of interferon genes protein (STING1) is an intracellular signaling adaptor encoded by the TMEM173 gene that plays a central role in cytosolic DNA sensing and innate immune activation. STING1 is a transmembrane protein primarily localized to the endoplasmic reticulum where it coordinates signaling events that lead to production of type I interferons and inflammatory mediators. The STING1 Antibody STING1/7433 recognizes STING1, a critical component of the cGAS-STING pathway that links detection of abnormal cytosolic DNA to activation of antiviral immune responses.

STING1 is widely known by several alternate names including MITA (Mediator of IRF3 activation), ERIS (endoplasmic reticulum interferon stimulator), and TMEM173. These names reflect the protein's role as a signaling hub that connects cytosolic DNA detection to transcriptional activation of interferon-stimulated genes. In the cGAS-STING pathway, cyclic GMP-AMP synthase (cGAS) detects cytoplasmic DNA and synthesizes the cyclic dinucleotide cGAMP. Binding of cGAMP to STING1 induces conformational activation and promotes trafficking of STING from the endoplasmic reticulum to Golgi-associated vesicles where it recruits the kinase TBK1. TBK1-mediated phosphorylation of the transcription factor IRF3 then drives expression of type I interferons and inflammatory cytokines that initiate antiviral immune responses.

Expression of STING1 occurs in a wide range of immune and non-immune cell types including macrophages, dendritic cells, epithelial cells, endothelial cells, and lymphoid tissues. Through activation of interferon signaling pathways, STING plays an important role in host defense against viral infection and intracellular bacterial pathogens. In addition to pathogen sensing, STING signaling also contributes to immune surveillance mechanisms that detect damaged DNA or genomic instability within cells.

Because of its central role in innate immunity, STING1 has become an important focus in studies of antiviral defense, inflammatory disease, and cancer immunology. Dysregulated activation of the cGAS-STING pathway has been associated with interferon-driven autoinflammatory disorders, while pharmacologic stimulation of STING signaling is being explored as a strategy to enhance anti-tumor immune responses. Mouse monoclonal antibodies such as STING1 Antibody STING1/7433 support investigation of STING1 expression and localization in research examining DNA sensing pathways and interferon-mediated immune signaling.

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 STING1 Antibody STING1/7433 should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 190-290) from the human protein was used as the immunogen for the STING1 antibody.

Storage

Aliquot the STING1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

STING antibody, TMEM173 antibody, MITA antibody, ERIS antibody, Stimulator of interferon genes protein antibody

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