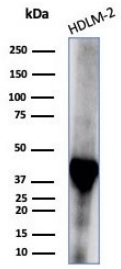
STING1 Antibody Clone STING1/7439 / ERIS [clone STING1/7439] (V5099)

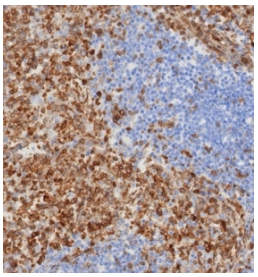
Catalog No.	Formulation	Size
V5099-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5099-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5099SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

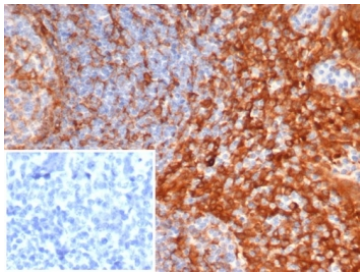
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	STING1/7439
Purity	Protein A/G affinity
UniProt	Q86WV6
Localization	Cytoplasm
Applications	Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This STING1 antibody is available for research use only.



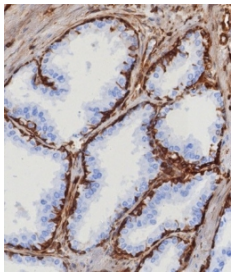
STING1 Antibody Clone STING1/7439 western blot analysis. Western blot analysis of human HDLM-2 cell lysate using STING1 Antibody Clone STING1/7439 detects a band at approximately 42 kDa, consistent with the predicted molecular weight of Stimulator of interferon genes protein / STING1 (TMEM173), a cytosolic DNA sensing adaptor involved in cGAS-STING innate immune signaling.



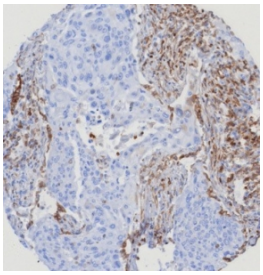
IHC staining of FFPE human spleen tissue with STING1 antibody (clone STING1/7439). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human tonsil tissue with STING1 antibody STING1/7439. 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.



IHC staining of FFPE human prostate tissue with STING1 antibody (clone STING1/7439). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human lung carcinoma with STING1 antibody STING1/7439. 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.

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 functions as a transmembrane protein primarily localized to the endoplasmic reticulum, where it coordinates signaling events that lead to production of type I interferons and inflammatory cytokines. The STING1 Antibody Clone STING1/7439 recognizes STING1, a critical mediator of the cGAS-STING pathway that links detection of abnormal cytosolic DNA to downstream antiviral immune responses.

STING1 is widely known by several functional names including MITA (Mediator of IRF3 activation), ERIS (endoplasmic reticulum interferon stimulator), and Stimulator of interferon genes protein. These alternate names reflect its central role in innate immune signaling. When cytosolic DNA is detected, cyclic GMP-AMP synthase (cGAS) generates the cyclic dinucleotide cGAMP, which binds directly to STING1 and induces a conformational change that activates the signaling complex. Activated STING then traffics from the endoplasmic reticulum to Golgi-associated vesicles where it recruits the kinase TBK1 and promotes phosphorylation of the transcription factor IRF3. This signaling cascade results in transcription of interferon-stimulated genes and inflammatory mediators that support antiviral defense.

Expression of STING1 occurs across a variety of immune and non-immune cell types including macrophages, dendritic

cells, epithelial cells, and endothelial cells. Because STING signaling regulates responses to intracellular pathogens and DNA damage, it has become an important area of investigation in cancer immunology, viral infection, autoimmune disease, and inflammatory signaling pathways. Aberrant activation of the cGAS-STING pathway has been associated with interferon-driven autoinflammatory syndromes, while therapeutic activation of STING is being explored to enhance anti-tumor immune responses.

Mouse monoclonal antibodies such as STING1 Antibody Clone STING1/7439 provide useful tools for investigating STING1 expression and localization in studies of innate immune signaling. Detection of STING1 can assist researchers studying DNA sensing pathways, interferon signaling mechanisms, and the regulation of immune responses triggered by infection, cellular stress, or genomic instability.

Application Notes

Optimal dilution of the STING1 Antibody Clone STING1/7439 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