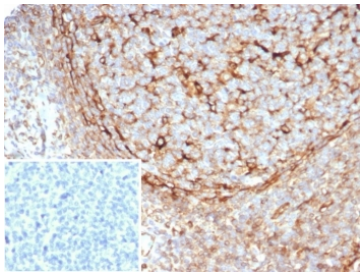
Stimulator of interferon genes protein Antibody / STING1 / TMEM17 [clone STING1/7434] (V5094)

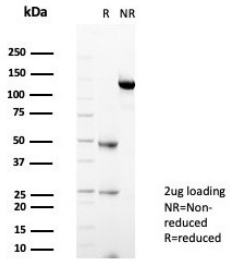
Catalog No.	Formulation	Size
V5094-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5094-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5094SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

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	STING1/7434
Purity	Protein A/G affinity
UniProt	Q86WV6
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Stimulator of interferon genes protein antibody is available for research use only.



Stimulator of interferon genes protein Antibody STING1/7434 immunohistochemistry analysis of human tissue. IHC staining of formalin-fixed, paraffin-embedded human tonsil using Stimulator of interferon genes protein antibody (clone STING1/7434) demonstrates HRP-DAB brown cytoplasmic staining in lymphoid immune cells consistent with expression of Stimulator of interferon genes protein / STING1 (TMEM173) in antigen-presenting cell populations. 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 Stimulator of interferon genes protein antibody (clone STING1/7434) as confirmation of integrity and purity.

Description

Stimulator of interferon genes protein (STING1) is an intracellular signaling adaptor encoded by the TMEM173 gene that functions as a key regulator of cytosolic DNA sensing and innate immune activation. STING1 is a transmembrane protein primarily localized to the endoplasmic reticulum, where it coordinates signaling pathways that lead to production of type I interferons and inflammatory mediators. The Stimulator of interferon genes protein Antibody STING1/7434 recognizes STING1, a critical component of the cGAS-STING signaling pathway responsible for detecting abnormal cytoplasmic DNA derived from viral infection, intracellular bacteria, mitochondrial damage, or genomic instability.

STING1 is widely referred to in the literature by several alternate names including STING, MITA (Mediator of IRF3 activation), ERIS (endoplasmic reticulum interferon stimulator), and TMEM173. These names reflect the protein's role as a signaling hub linking cytosolic DNA detection to interferon production. In the cGAS-STING pathway, cyclic GMP-AMP synthase (cGAS) detects cytoplasmic DNA and synthesizes the cyclic dinucleotide cGAMP. Binding of cGAMP to STING induces conformational activation and promotes trafficking of STING from the endoplasmic reticulum to Golgi-associated vesicles. At these sites STING recruits TBK1 kinase and facilitates phosphorylation of the transcription factor IRF3, which subsequently activates expression of interferon-stimulated genes and inflammatory cytokines.

STING1 expression is observed in a wide range of immune and non-immune cell types including macrophages, dendritic cells, epithelial cells, endothelial cells, and lymphoid tissues. Activation of the STING pathway is essential for antiviral immunity and host defense against intracellular pathogens. In addition to pathogen recognition, STING signaling participates in immune surveillance mechanisms that detect damaged DNA or genomic instability within cells.

Because of its central role in immune regulation, STING1 has become an important focus in studies of cancer immunology, inflammatory disease, and antiviral immunity. Dysregulated STING signaling has been associated with interferon-driven autoinflammatory disorders, while therapeutic activation of the STING pathway is being explored to enhance anti-tumor immune responses. Mouse monoclonal antibodies such as Stimulator of interferon genes protein Antibody STING1/7434 support investigation of STING expression and localization in research examining innate immune signaling pathways and interferon-mediated host defense mechanisms.

Application Notes

Optimal dilution of the Stimulator of interferon genes protein antibody STING1/7434 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 Stimulator of interferon genes protein antibody.

Storage

Aliquot the Stimulator of interferon genes protein antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

STING antibody, STING1 antibody, TMEM173 antibody, MITA antibody, ERIS antibody