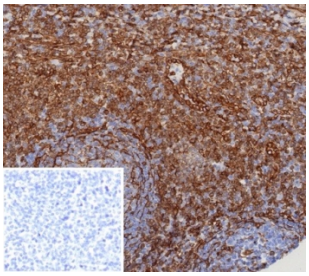
MITA Antibody STING1/8129R / Mediator of IRF3 Activation Antibody [clone STING1/8129R] (V5100)

Catalog No.	Formulation	Size
V5100-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5100-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5100SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

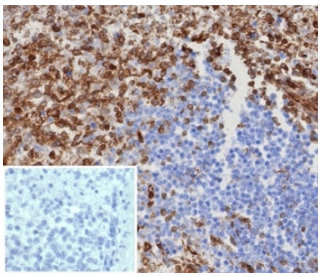
Recombinant RABBIT MONOCLONAL

Bulk quote request

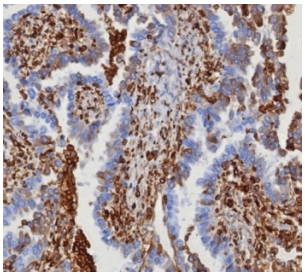
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	STING1/8129R
Purity	Protein A/G affinity
UniProt	Q86WV6
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This MITA Antibody STING1/8129R / Mediator of IRF3 Activation Antibody is available for research use only.



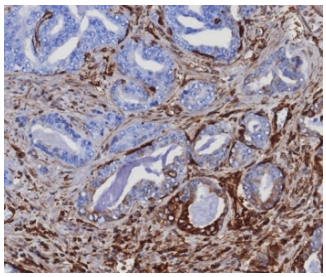
MITA Antibody STING1/8129R in Human Tonsil IHC. Immunohistochemistry staining of FFPE human tonsil tissue with MITA Antibody, clone STING1/8129R. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before testing. Strong, widespread brown cytoplasmic staining is present throughout much of the lymphoid tissue, while the PBS negative control inset shows minimal background signal. The staining demonstrates detection of STING1, also known as Mediator of IRF3 Activation, in human tonsil.



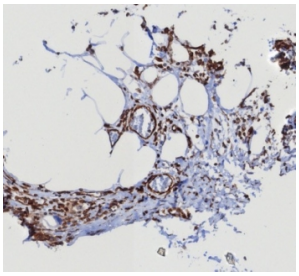
MITA Antibody STING1/8129R in Human Spleen IHC. Immunohistochemistry staining of FFPE human spleen tissue with MITA Antibody, clone STING1/8129R. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before testing. Strong cytoplasmic immunoreactivity is evident in numerous cells surrounding a comparatively weakly stained lymphoid region, producing a clearly heterogeneous staining pattern. The result demonstrates detection of Mediator of IRF3 Activation/STING1 in human spleen tissue.



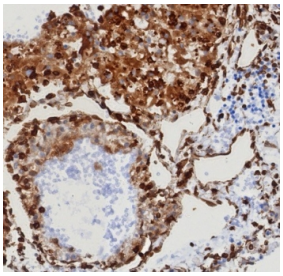
MITA Antibody STING1/8129R in Human Serous Ovarian Carcinoma IHC. Immunohistochemistry staining of FFPE human serous ovarian carcinoma with MITA Antibody, clone STING1/8129R. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before testing. Strong brown cytoplasmic staining is visible in numerous cells throughout the carcinoma, with particularly prominent immunoreactivity associated with epithelial tumor structures and surrounding cells. This result demonstrates detection of Mediator of IRF3 Activation/STING1 in human serous ovarian carcinoma.



MITA Antibody STING1/8129R in Human Prostate Carcinoma IHC. Immunohistochemistry staining of FFPE human prostate carcinoma tissue with MITA Antibody, clone STING1/8129R. 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. Cytoplasmic staining is evident throughout the specimen, with prominent brown immunoreactivity surrounding glandular structures and within intervening stromal areas. The heterogeneous staining demonstrates detection of STING1, also known as Mediator of IRF3 Activation, in human prostate carcinoma.



MITA Antibody STING1/8129R in Human Mammary Cancer IHC. Immunohistochemistry staining of FFPE human mammary cancer tissue with MITA Antibody, clone STING1/8129R. 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. The image shows heterogeneous brown immunoreactivity concentrated primarily within cellular regions bordering relatively unstained adipose spaces, with additional focal staining elsewhere in the specimen. This result demonstrates detection of Mediator of IRF3 Activation/STING1 in human mammary cancer tissue.



MITA Antibody STING1/8129R in Human Renal Cell Carcinoma IHC. Immunohistochemistry staining of FFPE human renal cell carcinoma with MITA Antibody, clone STING1/8129R. 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 staining is present in numerous carcinoma cells, with marked regional heterogeneity and areas showing comparatively little immunoreactivity. The staining demonstrates detection of STING1, also known as Mediator of IRF3 Activation, in human renal cell carcinoma.

Description

MITA Antibody STING1/8129R / Mediator of IRF3 Activation Antibody recognizes STING1, an intracellular signaling protein encoded by the TMEM173 gene. STING1 is also widely known as STING, MITA, ERIS, and MPYS and functions as a central regulator of cytosolic DNA sensing and innate immune signaling. The name MITA, or Mediator of IRF3 activation, reflects the protein's important role in connecting detection of cytosolic DNA with activation of interferon regulatory factor 3 and subsequent type I interferon responses.

STING1 is a major component of the cyclic GMP-AMP synthase (cGAS)-STING pathway. When double-stranded DNA

accumulates in the cytosol, cGAS binds the DNA and catalyzes production of the second messenger cyclic GMP-AMP (cGAMP). cGAMP binds directly to STING1, inducing conformational changes and promoting movement of the protein from the endoplasmic reticulum toward Golgi-associated compartments. This trafficking step is integral to downstream STING signaling.

Activated STING1 recruits TANK-binding kinase 1 (TBK1), which phosphorylates IRF3. Activated IRF3 subsequently translocates to the nucleus and promotes transcription of type I interferons and interferon-stimulated genes. Through this mechanism, MITA links intracellular DNA recognition to antiviral and inflammatory responses. STING1 signaling can be initiated by DNA associated with viral or bacterial infection as well as endogenous DNA arising from mitochondrial damage, genomic instability, or other forms of cellular stress.

The biological importance of Mediator of IRF3 Activation extends beyond antimicrobial defense. The cGAS-STING pathway is studied in tumor immunology, autoinflammatory disease, cellular stress, DNA damage responses, and immune surveillance. Both excessive and insufficient STING activity can alter immune homeostasis, making regulation of this pathway an important area of research.

Clone STING1/8129R is a recombinant rabbit monoclonal antibody generated against a human STING1 protein sequence within amino acids 190-290. NSJ Bioreagents offers this MITA Antibody as a clone-defined reagent for investigating STING1 and its role in cytosolic DNA sensing and interferon regulation. A MITA Antibody can support research into innate immunity, IRF3 activation, inflammatory signaling, host defense, and cGAS-STING pathway biology.

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 MITA Antibody STING1/8129R / Mediator of IRF3 Activation Antibody 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 MITA antibody.

Storage

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

Alternate Names

MITA antibody, Mediator of IRF3 activation antibody, STING1 antibody, STING antibody, TMEM173 antibody, ERIS antibody, Stimulator of interferon genes antibody

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