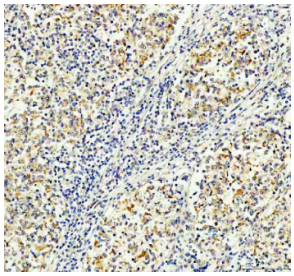
MALT1 Antibody / Mucosa-associated lymphoid tissue lymphoma translocation protein 1 (R31020)

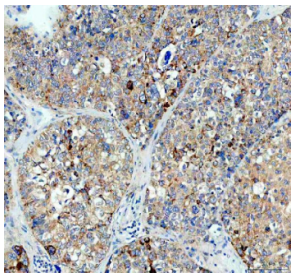
Catalog No.	Formulation	Size
R31020	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

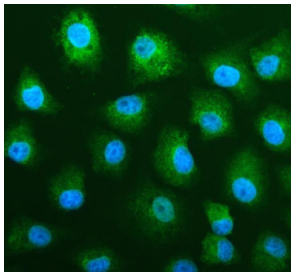
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q9UDY8
Localization	Nuclear, Perinuclear, Cytoplasmic
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This MALT1 antibody is available for research use only.



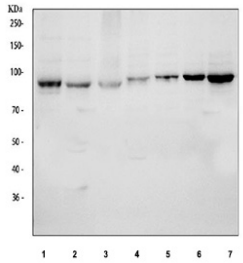
Immunohistochemical staining of FFPE human lymphoma tissue with MALT1 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



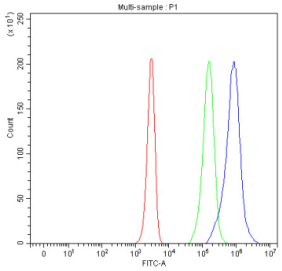
Immunohistochemical staining of FFPE human liver cancer tissue with MALT1 antibody, HRP-secondary and DAB substrate. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human A549 cells with MALT1 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) human 293T, 2) human Jurkat, 3) human Raji, 4) rat C6, 5) rat PC-12, 6) mouse RAW264.7 and 7) mouse ANA-1 cell lysate using the MALT1 antibody. Expected molecular weight ~92 kDa.



Flow cytometry analysis of fixed and permeabilized human Jurkat cells with MALT1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Jurkat antibody.

Description

MALT1 antibody detects MALT1, also known as Mucosa-associated lymphoid tissue lymphoma translocation protein 1, a key signaling protease and scaffold protein required for antigen receptor induced NF kappa B activation. The UniProt recommended name is Mucosa-associated lymphoid tissue lymphoma translocation protein 1. MALT1 functions as both an adaptor and a paracaspase enzyme, making it essential for immune receptor signaling, lymphocyte activation, and controlled inflammatory responses. Because of its central role in coordinating downstream transcriptional programs, MALT1 is widely studied in immunology, cancer biology, and signal transduction research.

MALT1 is a cytoplasmic protein of approximately 824 amino acids and contains several important functional domains. The N terminal region contributes to oligomerization, followed by immunoglobulin-like domains that mediate protein-protein interactions, and a central paracaspase domain responsible for its proteolytic function. MALT1 does not function alone; instead, it forms the core of the CBM complex consisting of CARD11, BCL10, and MALT1. This complex assembles rapidly following antigen receptor stimulation in T cells and B cells, where it links proximal receptor events to downstream activation of NF kappa B, AP1, and other transcriptional pathways that shape immune responses.

As a scaffold, MALT1 recruits signaling intermediates, ubiquitin ligases, and kinases that enable full activation of downstream pathways. As a protease, MALT1 cleaves several signaling regulators to amplify NF kappa B activation and

fine tune the duration and intensity of immune signaling. Substrates of MALT1 include molecules that negatively regulate NF kappa B, meaning proteolytic activity helps switch cells into a strongly activated state following antigen recognition. This dual function gives MALT1 broad influence over lymphocyte activation, survival, and effector differentiation.

The MALT1 gene is located on chromosome 18q21.32 and is expressed in immune cells including T cells, B cells, dendritic cells, and macrophages, as well as in mucosal and epithelial tissues. In lymphocytes, MALT1 is indispensable for antigen receptor driven activation. In T cells, MALT1 influences cytokine production, proliferation, and differentiation into specialized effector lineages. In B cells, MALT1 contributes to activation, class switching, and antibody production. In innate immune cells, MALT1 modulates pattern recognition receptor signaling and contributes to cytokine responses to microbial stimuli.

MALT1 is also significant in mucosal biology. It participates in epithelial and stromal signaling processes that support barrier immunity, particularly within the gastrointestinal tract. Interactions between epithelial cells and immune cells can involve MALT1 dependent pathways that influence inflammation, tissue repair, and local immune tone.

Pathologically, dysregulated MALT1 activity has been associated with several disorders. Chromosomal translocations involving MALT1 are a hallmark of certain mucosa-associated lymphoid tissue lymphomas, where fusion proteins drive constitutive NF kappa B activation and malignant B cell survival. Aberrant MALT1 activation has also been observed in activated B cell type diffuse large B cell lymphoma and in other lymphoproliferative diseases where chronic antigen receptor signaling contributes to transformation. MALT1 hyperactivity can promote uncontrolled proliferation, survival signaling, and inflammatory mediator expression.

Conversely, insufficient MALT1 activity can impair immune responses, leading to defects in lymphocyte activation or reduced cytokine production. Rare inherited MALT1 deficiencies result in combined immunodeficiency characterized by impaired T cell and B cell function, increased susceptibility to infection, and disrupted immune regulation.

MALT1 is also being explored in inflammatory and autoimmune diseases. Because MALT1 controls the magnitude of NF kappa B activation, abnormal regulation may contribute to chronic inflammation or dysregulated immune responses. Pharmacologic inhibition of MALT1 protease activity has become a significant area of research, with the aim of selectively dampening hyperactive immune signaling while preserving baseline immune function.

Beyond immunology, MALT1 participates in broader signaling networks involving cell survival, proliferation, and stress adaptation. It has been studied in epithelial biology, stromal-immune interactions, and signal amplification events in several disease models. Because MALT1 integrates signals from receptors, kinases, and ubiquitin modifying enzymes, it is considered a major node in cellular communication networks.

MALT1 antibody supports investigation of these signaling pathways by enabling detection of MALT1 expression in cells and tissues. Researchers use MALT1 antibody to examine activation states, CBM complex assembly, and disease-associated changes in expression patterns. It is validated for use in relevant research applications aimed at detecting Mucosa-associated lymphoid tissue lymphoma translocation protein 1. NSJ Bioreagents provides MALT1 antibody reagents suitable for immunology, lymphoma research, mucosal biology, and studies of NF kappa B signaling.

Application Notes

The stated application concentrations are suggested starting amounts. Titration of the MALT1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the C-terminus of human MALT1 (DEIPFSFSDRLRISEK) was used as the immunogen for this MALT1 antibody.

Storage

After reconstitution, the MALT1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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