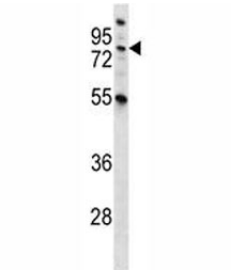
MST1 Antibody / Macrophage Stimulating Protein Polyclonal Antibody (F42112)

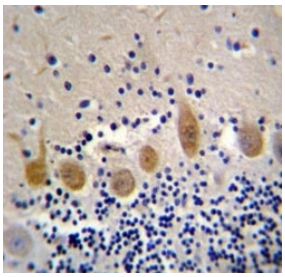
Catalog No.	Formulation	Size
F42112-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F42112-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

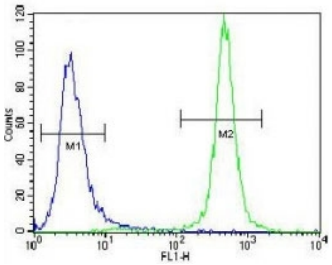
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	P26927
Applications	Western blot: 1:1000 IHC (Paraffin): 1:10-1:50 Flow Cytometry: 1:10-1:50
Limitations	This MST1 Antibody / Macrophage Stimulating Protein Polyclonal Antibody is available for research use only.



MST1 Antibody by WB in NCI-H460 cells. Western blot analysis of human NCI-H460 cell lysate using MST1 Antibody. A distinct immunoreactive band is detected at approximately 80 kDa, consistent with the predicted molecular weight of macrophage stimulating protein (MSP). The band is indicated by an arrowhead, with limited background staining. MSP is synthesized as a precursor that undergoes proteolytic processing into disulfide-linked alpha and beta chains. The observed band is compatible with detection of the precursor protein, although its processing state cannot be established from this image alone. This Macrophage Stimulating Protein Polyclonal Antibody recognizes the protein also known as hepatocyte growth factor-like protein.



MST1 Antibody by IHC in human cerebellum. Immunohistochemistry of FFPE human cerebellum tissue using MST1 Antibody. Brown immunoreactivity is visible in large neuronal cell bodies within the cerebellar cortex, with prominent cytoplasmic staining in cells consistent with Purkinje neurons. Numerous smaller surrounding nuclei exhibit blue hematoxylin counterstaining. The staining pattern demonstrates localized immunoreactivity rather than uniform labeling throughout the tissue. This Macrophage Stimulating Protein Polyclonal Antibody detects MSP, a secreted signaling protein associated with RON receptor activation and cellular regulation.



MST1 Antibody by FACS in NCI-H460 cells. Flow cytometric analysis of human NCI-H460 cells using MST1 Antibody. The green fluorescence histogram shows a substantial rightward shift relative to the blue negative-control population, indicating increased antibody-associated fluorescence. FITC-conjugated goat anti-rabbit IgG was used for secondary detection. The clear separation between the positive and control populations supports detection of macrophage stimulating protein under the tested conditions. This Macrophage Stimulating Protein Polyclonal Antibody recognizes MSP, also known as hepatocyte growth factor-like protein.

Description

MST1 Antibody recognizes macrophage stimulating protein (MSP), a secreted signaling protein encoded by the MST1 gene. Also known as hepatocyte growth factor-like protein, MSP belongs to the plasminogen-related growth factor family and functions as the primary ligand for the RON receptor tyrosine kinase, encoded by MST1R. The MSP-RON signaling pathway regulates cellular migration, adhesion, survival, and inflammatory responses. MST1 should not be confused with mammalian STE20-like kinase 1, a distinct serine/threonine kinase encoded by the STK4 gene.

The human MST1 gene is located on chromosome 3 and encodes a precursor protein of approximately 711 amino acids. MSP contains an N-terminal hairpin domain, four kringle domains, and a C-terminal serine protease-like domain. Although structurally related to proteolytic enzymes, MSP lacks conventional serine protease activity. The protein is synthesized as an inactive single-chain precursor that undergoes proteolytic processing to generate an alpha chain and a beta chain linked by disulfide bonds. This processing is necessary for efficient activation of the RON receptor.

Macrophage stimulating protein was originally identified through its ability to influence macrophage morphology and motility. Binding of mature MSP to RON promotes receptor dimerization and autophosphorylation, activating downstream signaling pathways that include PI3K-AKT, MAPK-ERK, and other regulators of cellular behavior. These signaling events influence epithelial cell migration, tissue remodeling, and responses to injury. The Macrophage Stimulating Protein Polyclonal Antibody is relevant to investigations of this ligand-receptor signaling system.

MSP-RON signaling also contributes to the regulation of innate immune responses. Depending on cellular context, RON activation can modify macrophage inflammatory activity and influence cytokine production. The pathway has been investigated in wound healing, epithelial regeneration, and inflammatory disease. Abnormal RON signaling is additionally associated with several malignancies, where it may contribute to tumor cell survival, migration, and invasive behavior.

Research involving MST1 frequently examines the relationship between growth factor processing, receptor activation, and downstream cellular responses. Distinguishing MSP from the unrelated STK4 kinase is particularly important when interpreting antibody data and gene expression studies. NSJ Bioreagents offers antibodies for investigating these signaling mechanisms. An MST1 Antibody provides a research tool for studying macrophage stimulating protein expression and its involvement in RON-dependent signaling, inflammation, and tissue homeostasis.

Explore our Signal Transduction Antibodies collection for additional antibodies targeting growth factors, receptors, and intracellular signaling proteins involved in cellular communication.

Application Notes

Titration of the MST1 Antibody / Macrophage Stimulating Protein Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 454-483 from the human protein was used as the immunogen for this MST1 antibody.

Storage

Aliquot the MST1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Macrophage Stimulating Protein antibody, MSP antibody, Hepatocyte Growth Factor-like Protein antibody, Macrophage Stimulating Protein 1 antibody, MST1 Polyclonal antibody

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