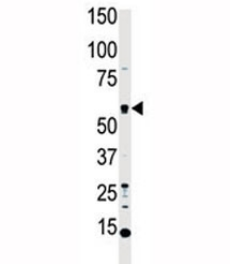
MST1 Kinase Antibody / Serine Threonine Kinase 4 Polyclonal Antibody (F50888)

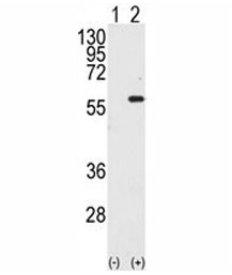
Catalog No.	Formulation	Size
F50888-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F50888-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

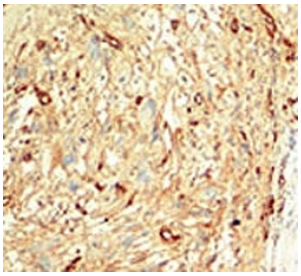
Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Bovine
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q13043
Applications	Western blot: 1:1000 IHC (Paraffin): 1:50-1:100
Limitations	This MST1 Kinase Antibody / Serine Threonine Kinase 4 Polyclonal Antibody is available for research use only.



MST1 Kinase Antibody by WB showing STK4 detection. Western blot analysis using MST1 Kinase Antibody reveals a distinct immunoreactive band at approximately 56 kDa, consistent with the predicted molecular weight of serine/threonine-protein kinase 4 (STK4). The band is indicated by an arrowhead and appears with minimal background staining. This Serine Threonine Kinase 4 Polyclonal Antibody detects the protein also known as mammalian STE20-like kinase 1, a regulator of Hippo pathway signaling.



MST1 Kinase Antibody by WB in STK4-transfected cells. Western blot analysis comparing negative-control and STK4-transfected cell lysates using MST1 Kinase Antibody. Lane 1: negative control (-); lane 2: STK4-transfected cells (+). A distinct band near 56 kDa is detected in the transfected sample but is absent from the negative control, supporting recognition of the expressed STK4 protein. This Serine Threonine Kinase 4 Polyclonal Antibody demonstrates target-associated detection of mammalian STE20-like kinase 1 under the tested conditions.



MST1 Kinase Antibody by IHC in human breast carcinoma. Immunohistochemistry of human breast carcinoma tissue using MST1 Kinase Antibody. Brown immunoreactivity is distributed among tumor-associated cells and stromal structures, with variable staining intensity and predominantly cytoplasmic localization. Hematoxylin counterstaining highlights blue-purple nuclei. The heterogeneous staining pattern demonstrates immunoreactivity within the tissue without establishing uniform expression across all cell populations. This Serine Threonine Kinase 4 Polyclonal Antibody detects the kinase also known as mammalian STE20-like kinase 1.

Description

MST1 Kinase Antibody recognizes serine/threonine-protein kinase 4 (STK4), a signaling enzyme also known as mammalian STE20-like kinase 1. This protein belongs to the STE20 family of serine/threonine kinases and functions as an upstream regulator of the Hippo signaling pathway, which controls cell proliferation, apoptosis, tissue growth, and organ size. Although commonly called MST1, this kinase is encoded by the STK4 gene and should not be confused with macrophage stimulating 1, an unrelated protein encoded by the MST1 gene.

The human STK4 gene is located on chromosome 20 and encodes a protein of approximately 487 amino acids with a calculated molecular weight near 56 kDa. STK4 contains an N-terminal catalytic kinase domain and a C-terminal SARAH domain involved in protein interactions and kinase regulation. Activation of the enzyme involves phosphorylation within its catalytic domain, while interactions with regulatory proteins such as SAV1 influence its signaling activity. STK4 is closely related to STK3, also known as MST2, and both kinases participate in the regulation of Hippo pathway signaling.

Within the canonical Hippo pathway, STK4 promotes activation of downstream LATS1 and LATS2 kinases, which regulate the transcriptional coactivators YAP and TAZ. When this pathway is active, phosphorylation of YAP and TAZ restricts their nuclear activity and limits transcriptional programs associated with cell proliferation and survival. Disruption of Hippo signaling can contribute to abnormal tissue growth and tumor development. The Serine Threonine Kinase 4 Polyclonal Antibody is relevant to research investigating these kinase-dependent regulatory mechanisms.

Beyond Hippo signaling, STK4 participates in cellular stress responses, apoptosis, and immune regulation. Caspase-mediated cleavage during apoptosis can generate an active kinase fragment involved in nuclear signaling and chromatin condensation. STK4 also contributes to lymphocyte survival, migration, and cytoskeletal organization. Inherited STK4 deficiency causes a rare immunodeficiency associated with lymphopenia and recurrent infections, highlighting its importance in maintaining immune homeostasis.

STK4 signaling has been investigated in cancer biology, inflammatory disorders, and diseases involving abnormal cellular growth or survival. Its biological effects depend on cellular context and interactions with other signaling proteins. NSJ Bioreagents offers this antibody for studies of kinase regulation and cellular signaling. An MST1 Kinase Antibody provides a research tool for examining STK4 expression and its involvement in Hippo pathway activity, apoptosis, and immune function.

For an alternative antibody targeting the same kinase, see our STK4 Antibody.

Application Notes

Titration of the MST1 Kinase Antibody / Serine Threonine Kinase 4 Polyclonal Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 385-415 from the human protein was used as the immunogen for this MST1 / STK4 antibody.

Storage

Aliquot the MST1 / STK4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

STK4 antibody, Mammalian STE20-like Kinase 1 antibody, Serine/Threonine-Protein Kinase 4 antibody, MST1/STK4 antibody, Hippo Pathway Kinase MST1 antibody

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