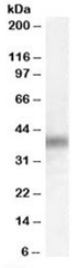
DUSP1 Antibody / MAPK Signaling Regulator Antibody (R36116)

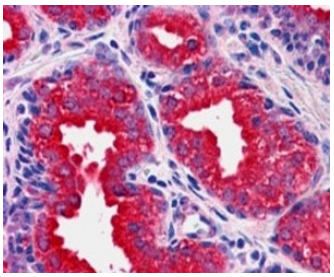
Catalog No.	Formulation	Size
R36116-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Mouse, Rat, Dog, Cow
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	1843
Localization	Cytoplasmic
Applications	Western Blot : 0.3-1ug/ml Immunohistochemistry (FFPE) : 3-5ug/ml ELISA (peptide) LOD : 1:32000
Limitations	This DUSP1 Antibody / MAPK Signaling Regulator Antibody is available for research use only.



DUSP1 Antibody HeLa WB. Western blot analysis of DUSP1 expression was performed using anti-DUSP1 antibody in human HeLa cell lysate. DUSP1, also known as Dual Specificity Phosphatase 1 or MKP1 (MAP Kinase Phosphatase 1), is a stress-inducible phosphatase that negatively regulates MAPK signaling through dephosphorylation of ERK, JNK, and p38 kinases. A specific immunoreactive band is detected at approximately 39 kDa, corresponding to the predicted molecular weight of DUSP1. Expression in HeLa cells is consistent with the established role of DUSP1 as a feedback regulator of cellular stress responses, inflammatory signaling, and growth factor-mediated pathways. The blot was performed using DUSP1 antibody at 0.3 ug/ml. These results support the utility of DUSP1 Antibody for studies of MAPK regulation, signal transduction, cellular adaptation, and stress-responsive signaling networks.



DUSP1 Antibody Human Prostate IHC. IHC staining of FFPE human prostate tissue with DUSP1 antibody demonstrated strong cytoplasmic staining of glandular epithelial cells, consistent with the expression pattern of DUSP1 (Dual Specificity Phosphatase 1), also known as MKP1. DUSP1 is a stress-inducible phosphatase that negatively regulates MAPK signaling by dephosphorylating ERK, JNK, and p38 kinases, thereby controlling cellular proliferation, differentiation, and stress responses. The prominent epithelial staining observed is consistent with the role of DUSP1 in maintaining signaling homeostasis within secretory epithelial tissues. Immunostaining was performed using DUSP1 antibody at 4 ug/ml with an alkaline phosphatase detection system. Heat-induced epitope retrieval was achieved by steaming tissue sections in pH 6 citrate buffer prior to staining. These results support the utility of DUSP1 Antibody for studies of MAPK regulation, signal transduction, cellular stress responses, and prostate biology.

Description

DUSP1 Antibody / MAPK Signaling Regulator Antibody recognizes Dual Specificity Phosphatase 1 (DUSP1), also known as MAP Kinase Phosphatase 1 (MKP1), a critical negative regulator of mitogen-activated protein kinase (MAPK) signaling pathways. DUSP1 functions by removing phosphate groups from both threonine and tyrosine residues on activated MAP kinases, including ERK, JNK, and p38. Through this activity, DUSP1 serves as an essential feedback mechanism that limits the duration and magnitude of cellular signaling responses. DUSP1 Antibody / MAPK Signaling Regulator Antibody is widely used to investigate pathways governing cell proliferation, differentiation, survival, and stress adaptation.

DUSP1 expression is rapidly induced by growth factors, cytokines, oxidative stress, DNA damage, inflammatory stimuli, and environmental challenges. Once activated, MAPK pathways stimulate DUSP1 expression, which subsequently suppresses MAPK activity and restores signaling homeostasis. This feedback regulation helps prevent excessive inflammatory responses and uncontrolled cellular activation. DUSP1 Antibody / MAPK Signaling Regulator Antibody is therefore valuable for studies of signal transduction, cellular adaptation, and mechanisms that regulate tissue homeostasis under normal and stress conditions.

DUSP1 plays important roles in immune regulation, inflammation, cancer biology, metabolic disease, cardiovascular function, and neurobiology. Altered DUSP1 expression has been associated with chronic inflammatory disorders, tumor progression, treatment resistance, and abnormal stress responses. In many cancers, dysregulation of MAPK signaling contributes to uncontrolled growth, while DUSP1 expression may influence tumor survival and therapeutic sensitivity. DUSP1 has also emerged as an important regulator of cytokine production and inflammatory signaling, making it relevant to studies of innate immunity and tissue injury. DUSP1 Antibody / MAPK Signaling Regulator Antibody supports investigations across a broad range of biological systems and disease models.

DUSP1 Antibody / MAPK Signaling Regulator Antibody is a valuable tool for studies of MAPK pathway regulation, cellular stress responses, inflammation, cancer, and signal transduction. Researchers frequently use DUSP1 Antibody / MAPK Signaling Regulator Antibody to examine ERK, JNK, and p38 signaling networks, evaluate feedback control mechanisms, and investigate pathways that influence cellular adaptation and survival. Its central role in regulating MAPK activity makes DUSP1 an important biomarker and research target in both basic and translational studies.

Explore our Signal Transduction Antibodies page for additional regulators of MAPK signaling, cellular stress responses, and signal transduction networks.

Application Notes

Optimal dilution of the DUSP1 Antibody / MAPK Signaling Regulator Antibody should be determined by the researcher.

Immunogen

Amino acids SYLQSPITTSPSC were used as the immunogen for this DUSP1 antibody.

Storage

Aliquot and store the DUSP1 antibody at -20oC.

Alternate Names

DUSP1 antibody, MKP1 antibody, MAP Kinase Phosphatase 1 antibody, Dual Specificity Phosphatase 1 antibody, Stress Response Phosphatase antibody, MAPK Signaling Regulator antibody