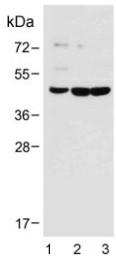
DUSP6 Antibody (F51142)

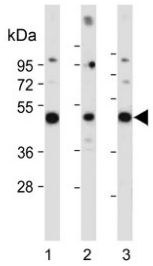
Catalog No.	Formulation	Size
F51142-0.4ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.4 ml
F51142-0.08ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.08 ml

Bulk quote request

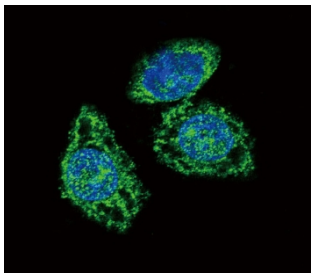
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Purified
UniProt	Q16828
Applications	Immunofluorescence: 1:10-1:50 Western blot: 1:1000 Immunohistochemstry (FFPE): 1:250-1:500
Limitations	This DUSP6 antibody is available for research use only.



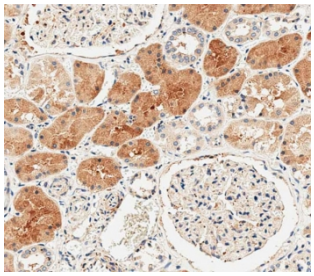
DUSP6 Antibody Brain Tissue Western Blot. Western blot analysis of human brain (lane 1), mouse brain (lane 2), and rat brain (lane 3) tissue lysates using DUSP6 antibody demonstrates distinct bands at approximately 42 kDa, consistent with the expected molecular weight of DUSP6 isoform 1. DUSP6 (Dual Specificity Phosphatase 6) is a key negative regulator of ERK/MAPK signaling pathways, functioning to dephosphorylate activated ERK proteins and modulate downstream signal transduction. By regulating signaling intensity and duration, DUSP6 influences pathways involved in cellular differentiation, survival, growth factor responses, and tissue homeostasis. Detection across human, mouse, and rat brain tissues supports the conserved role of DUSP6 in maintaining MAPK signaling balance within the nervous system. Predicted molecular weights for DUSP6 isoforms are approximately 42 kDa and 26 kDa.



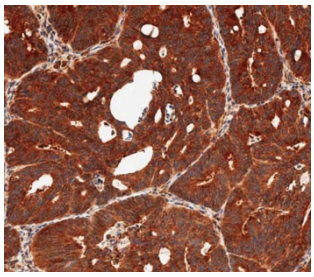
DUSP6 Antibody Human and Brain Tissue Western Blot. Western blot analysis of human HepG2 cells (lane 1), human brain tissue (lane 2), and rat brain tissue (lane 3) using DUSP6 antibody demonstrates distinct bands at approximately 42-45 kDa, consistent with the expected molecular weight of DUSP6 isoform 1. DUSP6 (Dual Specificity Phosphatase 6) is a key negative regulator of ERK/MAPK signaling pathways, functioning to dephosphorylate activated ERK proteins and thereby modulate signal transduction, growth factor responses, cellular differentiation, and tissue homeostasis. Detection of DUSP6 in both hepatic and neural tissues supports its broad role in maintaining MAPK signaling balance across diverse biologic systems. Predicted molecular weights for DUSP6 isoforms are approximately 42 kDa and 26 kDa.



DUSP6 Antibody HeLa Cell Confocal IF. Confocal immunofluorescent analysis of HeLa cells using DUSP6 antibody demonstrates prominent cytoplasmic green fluorescence surrounding DAPI-stained nuclei (blue), consistent with expression of DUSP6. DUSP6 (Dual Specificity Phosphatase 6) is a key negative regulator of ERK/MAPK signaling pathways that functions by dephosphorylating activated ERK proteins and controlling downstream signal transduction. The predominantly cytoplasmic localization observed in HeLa cells is consistent with the established role of DUSP6 in regulating MAPK pathway activity and maintaining signaling homeostasis. Alexa Fluor 488-conjugated goat anti-rabbit IgG was used for signal detection, and nuclei were counterstained with DAPI.



DUSP6 Antibody Human Kidney IHC. Immunohistochemical staining of FFPE human kidney tissue using DUSP6 antibody demonstrates strong cytoplasmic HRP-DAB brown staining within renal tubular epithelial cells, with comparatively weaker staining in surrounding stromal and glomerular structures. The staining pattern is consistent with expression of DUSP6 (Dual Specificity Phosphatase 6), a key negative regulator of ERK/MAPK signaling pathways. By dephosphorylating activated ERK proteins, DUSP6 helps modulate intracellular signaling responses involved in cellular differentiation, survival, growth factor signaling, and tissue homeostasis. The prominent tubular epithelial staining supports the role of DUSP6 in maintaining regulated MAPK pathway activity within metabolically active epithelial tissues. HIER: steam section in pH 9 EDTA for 20 minutes and allow to cool prior to staining.



DUSP6 Antibody Human Colon Carcinoma IHC. Immunohistochemical staining of FFPE human colon carcinoma tissue using DUSP6 antibody demonstrates strong and widespread cytoplasmic HRP-DAB brown staining throughout neoplastic gland-forming epithelial cells. The staining pattern is consistent with expression of DUSP6 (Dual Specificity Phosphatase 6), a key negative regulator of ERK/MAPK signaling pathways. DUSP6 modulates intracellular signal transduction by dephosphorylating activated ERK proteins, thereby helping regulate cellular responses to growth factor stimulation, differentiation signals, and proliferative cues. The robust staining observed within malignant epithelial structures supports the role of DUSP6 in maintaining signaling homeostasis within pathways that influence cellular growth and tissue organization. HIER: steam sections in pH 9 EDTA for 20 minutes and allow to cool prior to staining.

Description

DUSP6 antibody is useful for studying Dual Specificity Phosphatase 6 (DUSP6), a member of the dual-specificity phosphatase family that functions as an important regulator of intracellular signaling pathways. DUSP6 is best known for its ability to dephosphorylate mitogen-activated protein kinases (MAPKs), particularly extracellular signal-regulated kinases (ERKs), thereby helping control the intensity and duration of signal transduction events. Through this activity, DUSP6 contributes to the regulation of cellular responses to growth factors, developmental cues, and environmental stimuli.

DUSP6 plays a central role in maintaining signaling homeostasis by acting as a negative feedback regulator within MAPK signaling networks. Precise regulation of these pathways is essential for coordinating cellular proliferation, differentiation, migration, survival, and tissue maintenance. By modulating kinase activity and downstream signaling responses, DUSP6 helps ensure that cells respond appropriately to external signals while preventing excessive pathway activation.

The biologic importance of DUSP6 has made it a widely studied target in developmental biology, cell signaling, regenerative medicine, and cancer research. Expression of DUSP6 is frequently associated with pathways that govern tissue patterning, organ development, cellular adaptation, and growth factor-mediated responses. Because MAPK signaling influences numerous aspects of normal physiology, proteins that regulate these pathways remain important subjects of investigation across many fields of biomedical research.

Beyond its role in signal transduction, DUSP6 participates in broader regulatory networks that influence cellular communication, tissue homeostasis, and responses to changing physiologic conditions. Analysis of DUSP6 expression can therefore provide valuable insight into mechanisms controlling intracellular signaling and cellular behavior. As a result, DUSP6 is commonly examined in studies involving developmental processes, cellular differentiation, disease-associated signaling pathways, and molecular mechanisms that regulate growth and survival.

DUSP6 antibodies are commonly used in immunohistochemistry, western blotting, immunofluorescence, flow cytometry, and related protein detection applications. These reagents support investigations of MAPK signaling, ERK pathway regulation, growth factor responses, developmental biology, regenerative processes, and intracellular signal transduction mechanisms.

Learn more about DUSP6 function in MAPK signaling regulation, ERK pathway control, growth factor responses, and intracellular signal transduction on our DUSP6 Antibody page.

Application Notes

Titration of the DUSP6 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 58-89 from the human protein was used as the immunogen for this DUSP6 antibody.

Storage

Aliquot the DUSP6 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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