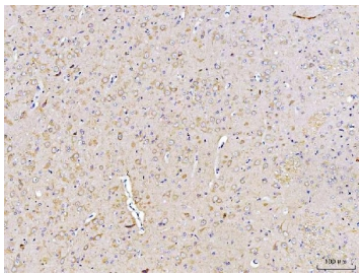
DUSP6 Antibody / MAPK Signaling Regulator Antibody (RQ6707)

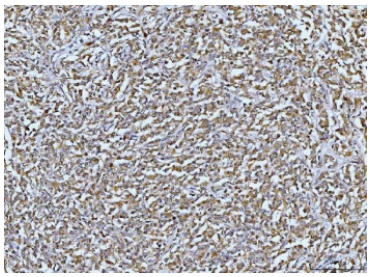
Catalog No.	Formulation	Size
RQ6707	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

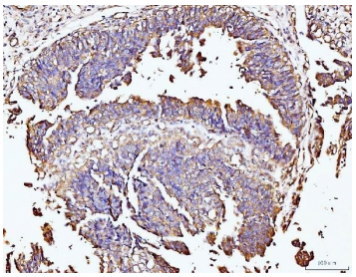
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q16828
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence (FFPE): 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This DUSP6 Antibody / MAPK Signaling Regulator Antibody is available for research use only.



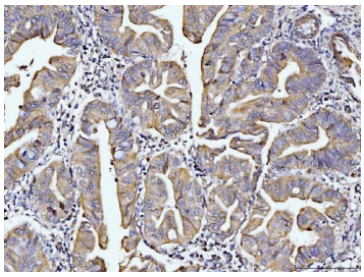
DUSP6 Antibody Rat Brain IHC. Immunohistochemical staining of FFPE rat brain tissue using DUSP6 antibody demonstrates diffuse cytoplasmic HRP-DAB brown staining throughout neuronal-rich regions of the brain. The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. By dephosphorylating activated ERK proteins, DUSP6 helps control signaling intensity and duration, thereby regulating cellular responses associated with differentiation, survival, and tissue homeostasis. The observed neural expression pattern is consistent with the importance of tightly regulated MAPK signaling in nervous system function and cellular communication. HIER: boil tissue sections in pH 8 EDTA for 20 minutes and allow to cool before testing.



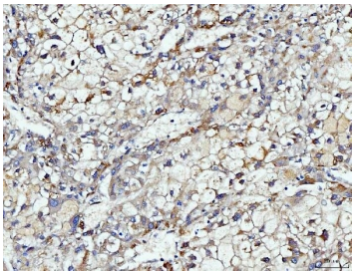
DUSP6 Antibody Human Lymphadenoma IHC. Immunohistochemical staining of FFPE human lymphadenoma tissue using DUSP6 antibody demonstrates widespread cytoplasmic HRP-DAB brown staining throughout neoplastic lymphoid cell populations. The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. By controlling the phosphorylation state of ERK proteins, DUSP6 helps modulate signaling networks involved in cellular proliferation, differentiation, survival, and responses to growth factor stimulation. The observed staining supports the role of DUSP6 in regulating intracellular signaling pathways that influence cellular homeostasis and tissue biology. HIER: boil tissue sections in pH 8 EDTA for 20 minutes and allow to cool before testing.



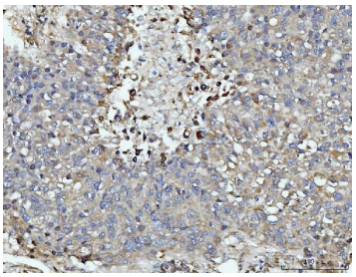
DUSP6 Antibody Human Colonic Adenocarcinoma IHC. Immunohistochemical staining of FFPE human colonic adenocarcinoma tissue using DUSP6 antibody demonstrates moderate to strong cytoplasmic HRP-DAB brown staining within neoplastic gland-forming epithelial cells. The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. DUSP6 modulates cellular responses to growth factor stimulation by controlling ERK phosphorylation and signaling duration, thereby influencing pathways associated with cellular proliferation, differentiation, and survival. The observed staining within tumor epithelial structures supports the role of DUSP6 in regulating intracellular signaling networks that contribute to tissue homeostasis and cellular growth control. HIER: boil tissue sections in pH 8 EDTA for 20 minutes and allow to cool before testing.



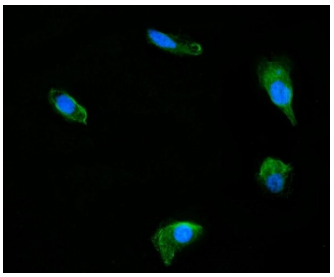
DUSP6 Antibody Human Rectal Cancer IHC. Immunohistochemical staining of FFPE human rectal cancer tissue using DUSP6 antibody demonstrates moderate cytoplasmic HRP-DAB brown staining within neoplastic glandular epithelial cells. The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. By dephosphorylating activated ERK proteins, DUSP6 helps control signaling intensity and duration, thereby influencing cellular proliferation, differentiation, survival, and responses to growth factor stimulation. The observed expression within malignant glandular structures supports the role of DUSP6 in regulating intracellular signaling networks that contribute to tissue homeostasis and cellular growth control. HIER: boil tissue sections in pH 8 EDTA for 20 minutes and allow to cool before testing.



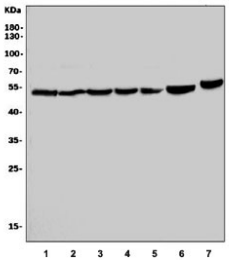
DUSP6 Antibody Human Liver Cancer IHC. Immunohistochemical staining of FFPE human liver cancer tissue using DUSP6 antibody demonstrates moderate membranous and cytoplasmic HRP-DAB brown staining within neoplastic hepatic cell populations. The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. DUSP6 modulates cellular responses to growth factor stimulation by controlling ERK phosphorylation and signaling duration, thereby influencing pathways associated with cellular proliferation, differentiation, survival, and tissue homeostasis. The observed expression within tumor cells supports the role of DUSP6 in regulating intracellular signaling networks that govern cellular growth and signal transduction. HIER: boil tissue sections in pH 8 EDTA for 20 minutes and allow to cool before testing.



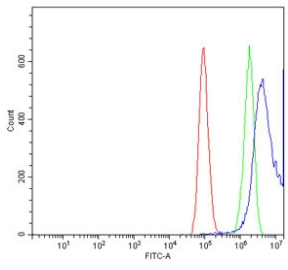
DUSP6 Antibody Human Liver Cancer Tissue IHC. Immunohistochemical staining of FFPE human liver cancer tissue using DUSP6 antibody demonstrates diffuse cytoplasmic HRP-DAB brown staining throughout neoplastic hepatic cell populations. The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. By dephosphorylating activated ERK proteins, DUSP6 helps modulate signaling intensity and duration, thereby influencing cellular proliferation, differentiation, survival, and responses to growth factor stimulation. The widespread staining observed within tumor cells supports the role of DUSP6 in maintaining signaling homeostasis within pathways that regulate cellular growth and tissue biology. HIER: boil tissue sections in pH 8 EDTA for 20 minutes and allow to cool before testing.



DUSP6 Antibody PC-3 Cell IF. Immunofluorescent staining of FFPE human PC-3 cells using DUSP6 antibody demonstrates prominent cytoplasmic green fluorescence with relative exclusion from DAPI-positive nuclei (blue). The staining pattern is consistent with expression of DUSP6, a dual-specificity phosphatase that functions as a key negative regulator of ERK/MAPK signaling pathways. DUSP6 modulates signal transduction by dephosphorylating activated ERK proteins, thereby helping control signaling intensity, duration, and downstream cellular responses. The predominantly cytoplasmic localization observed in PC-3 cells is consistent with the established role of DUSP6 in regulating MAPK pathway activity within the cytoplasmic compartment. HIER: steam section in pH 6 citrate buffer for 20 minutes.



DUSP6 Antibody Multi-Species Western Blot. Western blot analysis of human U-87 MG (lane 1), RT4 (lane 2), PC-3 (lane 3), HL-60 (lane 4), HepG2 (lane 5), rat brain (lane 6), and mouse brain (lane 7) lysates using DUSP6 antibody demonstrates prominent bands migrating at approximately 50-60 kDa across all tested samples. 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, cellular differentiation, proliferation, and growth factor responses. Detection of DUSP6 in multiple human cell lines and rodent brain tissues supports its broad role in maintaining MAPK signaling homeostasis across diverse tissue types and biologic systems. Predicted molecular weights are approximately 42 kDa and 26 kDa for DUSP6 isoforms 1 and 2, respectively.



DUSP6 Antibody MAPK Signaling Regulator FACS. Flow cytometric analysis of human HepG2 cells using DUSP6 antibody demonstrates a pronounced rightward shift of the positive cell population (blue) relative to both the isotype control (green) and unstained cells (red), consistent with expression of DUSP6. DUSP6 (Dual Specificity Phosphatase 6) functions as a key negative regulator of ERK/MAPK signaling pathways by dephosphorylating activated ERK proteins and modulating downstream signal transduction. Through this activity, DUSP6 helps regulate cellular responses to growth factor stimulation, differentiation cues, and proliferative signals. The observed fluorescence shift supports the utility of this antibody for flow cytometric detection of DUSP6 expression. Red=cells alone; Green=isotype control; Blue=DUSP6 antibody.

Description

DUSP6 antibody is useful for studying Dual Specificity Phosphatase 6 (DUSP6), a key regulator of mitogen-activated protein kinase (MAPK) signaling pathways. DUSP6 functions as a dual-specificity phosphatase capable of removing phosphate groups from both tyrosine and serine/threonine residues. Its best-characterized activity involves the selective dephosphorylation and inactivation of extracellular signal-regulated kinases (ERKs), making DUSP6 an important negative regulator of MAPK pathway activity and intracellular signal transduction.

DUSP6 serves as a critical feedback regulator within signaling networks that control cellular proliferation, differentiation, migration, and survival. Following activation of growth factor signaling pathways, DUSP6 expression is frequently induced as part of a regulatory mechanism that limits ERK signaling intensity and duration. This negative feedback function helps maintain signaling homeostasis and ensures appropriate cellular responses to developmental, environmental, and physiologic stimuli.

As a MAPK signaling regulator, DUSP6 occupies an important position within pathways that govern tissue development, cellular adaptation, and maintenance of normal biologic function. By controlling ERK pathway activity, DUSP6 helps coordinate signaling events that influence cell fate decisions, gene expression programs, and responses to extracellular growth factors. Analysis of DUSP6 expression can therefore provide valuable insight into mechanisms that regulate signal transduction and cellular communication.

DUSP6 has become an important target in developmental biology because MAPK signaling plays central roles in embryogenesis, organ formation, and tissue patterning. The protein is also widely studied in investigations of regeneration, stem cell biology, cancer-associated signaling, and cellular differentiation. Because ERK activity must be precisely regulated to support normal physiology, proteins that function as MAPK pathway regulators remain critical subjects of biomedical research.

Beyond developmental processes, DUSP6 contributes to signaling networks that influence tissue homeostasis, stress responses, and adaptation to changing environmental conditions. Regulation of MAPK pathway activity affects numerous biologic processes, making DUSP6 relevant to research focused on signal transduction, cellular growth control, and mechanisms that govern normal and disease-associated cellular behavior.

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 signaling mechanisms. DUSP6 antibody tools help researchers characterize the molecular pathways that control signal transduction and the regulatory systems that maintain balanced MAPK pathway activity.

Researchers studying MAPK signaling, ERK pathway regulation, growth factor responses, and intracellular signaling networks may also be interested in our broader Signal Transduction Antibody collection.

Application Notes

Optimal dilution of the DUSP6 Antibody / MAPK Signaling Regulator Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-T381) was used as the immunogen for the DUSP6 antibody.

Storage

After reconstitution, the DUSP6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Other strong options DUSP6 Antibody / ERK Pathway Regulator Antibody Very accurate. Slightly narrower. DUSP6 Antibody / Signal Transduction Phosphatase Antibody Accurate. Less distinctive. DUSP6 Antibody / Growth Factor Signaling Regulator Antibody Good developmental angle. Slightly indirect. My ranking DUSP6 Antibody / MAPK Signaling Regulator Antibody âœ DUSP6 Antibody / ERK Pathway Regulator Antibody DUSP6 Antibody / Growth Factor Signaling Regulator Antibody DUSP6 Antibody / Signal Transduction Phosphatase Antibody This follows the same style as your successful anchors: FOXA1 â†' Developmental Transcription Factor c-Jun â†' Transcriptional Regulation Protein LCK â†' T-Cell Signaling Kinase LPL â†' Lipid Metabolism Enzyme RPL8 â†' Protein Synthesis Protein For DUSP6, the central theme researchers care about is regulation of MAPK/ERK signaling, making MAPK Signaling Regulator Antibody the

strongest broad differentiator.

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