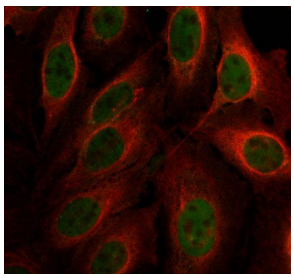
DUSP18 Antibody / Dual specificity protein phosphatase 18 Antibody (FY13640)

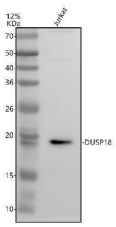
Catalog No.	Formulation	Size
FY13640	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q8NEJ0
Applications	Western blot: 0.5-1ug/ml Immunofluorescence: 5ug/ml ELISA: 0.1-0.5 ug/ml
Limitations	Intended solely for research purposes, this DUSP18 Antibody / Dual specificity protein phosphatase 18 Antibody is not for clinical use.



DUSP18 Antibody by IF in U2OS cells. Immunofluorescence analysis using Dual specificity protein phosphatase 18 Antibody reveals green nuclear-enriched fluorescence in U2OS cells, with red alpha-tubulin staining outlining the cytoskeleton. Cells underwent enzyme antigen retrieval and were incubated with 5 ug/mL primary antibody overnight at 4oC, followed by fluorophore-conjugated secondary antibodies. The figure documents nuclear-enriched staining but does not establish a mechanism for the observed distribution.



DUSP18 Antibody by WB in Jurkat cells. Western blot analysis using Dual specificity protein phosphatase 18 Antibody detects a prominent band consistent with the expected molecular weight of approximately 21 kDa in human Jurkat whole-cell lysate (lane 1). Reduced lysate containing 30 ug total protein was resolved by 12% SDS-PAGE and transferred to nitrocellulose. The membrane was blocked with 5% nonfat milk and incubated with 0.5 ug/mL primary antibody overnight at 4oC, followed by an HRP-conjugated secondary antibody and chemiluminescent detection.

Description

DUSP18 Antibody / Dual specificity protein phosphatase 18 Antibody recognizes a member of the atypical dual-specificity phosphatase family. DUSP18 contains a conserved cysteine-dependent phosphatase catalytic motif, placing it among enzymes capable of removing phosphate groups from suitable substrates. Unlike classical MAPK phosphatases with prominent kinase-binding regulatory regions, atypical dual-specificity phosphatases are often relatively compact and may act on a broader or less well-defined range of molecular targets.

Reversible phosphorylation is a fundamental mechanism for controlling protein interactions, enzyme activity, and signal transmission. The catalytic cysteine of protein tyrosine phosphatase-like enzymes participates in phosphate removal through a transient covalent intermediate. Although this chemistry is well established for the enzyme family, it does not automatically reveal the physiological substrates of DUSP18. Determining substrate specificity requires evidence that a candidate protein is encountered and dephosphorylated under biologically relevant conditions.

DUSP18 has been investigated in connection with cellular signaling and mitochondrial-associated processes, but its precise physiological roles remain less firmly established than those of extensively characterized phosphatases. Localization, substrate accessibility, and interactions with other proteins can strongly influence phosphatase function. For a small enzyme lacking elaborate regulatory domains, these contextual factors may be especially important in determining when and where catalysis occurs.

The broader dual-specificity phosphatase family illustrates how a shared active-site architecture can support markedly different biological functions. Some members regulate MAPK pathways, whereas others act on proteins or nonprotein substrates in specialized compartments. Accordingly, assigning DUSP18 a particular signaling pathway solely from its family designation would overstate current knowledge. NSJ Bioreagents offers this DUSP18 Antibody to support investigation of the protein's cellular distribution and its potential contributions to phosphorylation-dependent regulation. More complete identification of endogenous substrates and regulatory partners is needed to connect DUSP18's catalytic capacity with specific physiological outcomes.

Explore related research targets in our Signal Transduction Antibodies for Cell Signaling and Regulatory Pathway Research collection.

Application Notes

Working dilutions of the DUSP18 Antibody / Dual specificity protein phosphatase 18 Antibody may require optimization according to the experimental protocol.

Immunogen

The DUSP18 Antibody was generated using e. coli-derived human DUSP18 recombinant protein (amino acids M1-Q97).

Storage

Following reconstitution, the DUSP18 Antibody can be kept at 4oC for one month. Aliquot for extended storage at -20oC for up to six months, avoiding repeated freezing and thawing.

Alternate Names

DUSP18 antibody, Dual specificity protein phosphatase 18 antibody, dual specificity phosphatase 18 antibody, LMWDSP20 antibody, Low molecular weight dual specificity phosphatase 20 antibody, LMW-DSP20 antibody

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