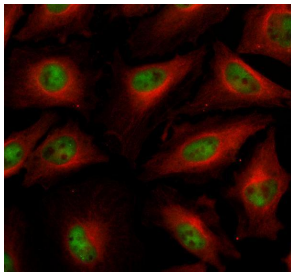
DUSP23 Antibody / Dual specificity protein phosphatase 23 Antibody (FY13621)

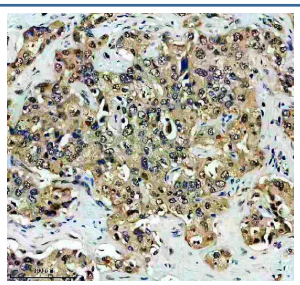
Catalog No.	Formulation	Size
FY13621	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

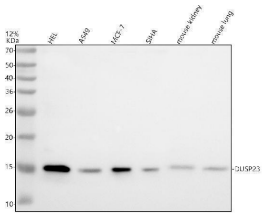
Species Reactivity	Human, Mouse
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q9BVJ7
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Immunoprecipitation: 2ug per 500ug of lysate ELISA: 0.1-0.5 ug/ml
Limitations	The DUSP23 Antibody / Dual specificity protein phosphatase 23 Antibody is available for research use only.



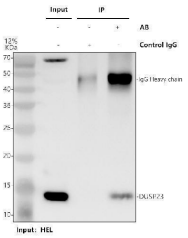
DUSP23 Antibody by IF in HeLa cells. Immunofluorescence analysis using Dual specificity protein phosphatase 23 Antibody shows predominantly nuclear green fluorescence in HeLa cells, with red alpha-tubulin staining highlighting the cytoskeleton. Cells were incubated with primary antibodies overnight at 4oC, followed by fluorophore-conjugated secondary antibodies. The distribution is consistent with reported nucleoplasmic localization of DUSP23.



DUSP23 Antibody by IHC in human liver carcinoma. Immunohistochemistry of paraffin-embedded human liver carcinoma using Dual specificity protein phosphatase 23 Antibody reveals brown DAB-positive staining in tumor cells with hematoxylin-counterstained nuclei. Antigen retrieval was performed in EDTA buffer, pH 8.0. Sections were incubated with 2 ug/mL primary antibody overnight at 4oC before peroxidase-based visualization.



DUSP23 Antibody by WB in human cell lines and mouse tissues. Western blot analysis using Dual specificity protein phosphatase 23 Antibody detects a band consistent with the expected approximately 17 kDa protein in human HEL (lane 1), A549 (lane 2), MCF-7 (lane 3), and SiHa (lane 4) whole-cell lysates, and mouse kidney (lane 5) and lung (lane 6) tissue lysates. Reduced samples containing 30 ug total protein per lane were resolved by 12% SDS-PAGE and transferred to nitrocellulose. Membranes were blocked with 5% nonfat milk and incubated with 0.5 ug/mL primary antibody overnight at 4oC. Detection used HRP-conjugated secondary antibody and chemiluminescence.



DUSP23 Antibody by IP in HEL cells. Immunoprecipitation of DUSP23 from human HEL whole-cell lysate was evaluated by immunoblotting with Dual specificity protein phosphatase 23 Antibody. Lane 1 shows input lysate (30 ug), lane 2 shows the rabbit control IgG immunoprecipitate, and lane 3 shows material precipitated using 2 ug of target antibody from 500 ug lysate. A band near the expected 17 kDa position is visible in input and the specific immunoprecipitate. The approximately 50 kDa band in the immunoprecipitation lanes corresponds to immunoglobulin heavy chain.

Description

DUSP23 Antibody / Dual specificity protein phosphatase 23 Antibody recognizes DUSP23, also called VHZ, a compact member of the dual-specificity phosphatase family. Reversible protein phosphorylation regulates signaling, localization, and protein-protein interactions throughout the cell. Kinases add phosphate groups to selected amino acid residues, while phosphatases remove them. Dual-specificity phosphatases can act on phosphotyrosine and, depending on the enzyme and substrate, phosphoserine or phosphothreonine. DUSP23 belongs to the smaller phosphatases whose structures are dominated by the catalytic domain rather than extensive accessory regions.

The DUSP23 active site contains the conserved cysteine-based motif characteristic of protein tyrosine phosphatases. Catalysis involves attack on the phosphate group by the active-site cysteine, formation of a transient phosphorylated enzyme intermediate, and hydrolysis that restores the catalytic site. Although this chemistry is shared by many phosphatases, substrate recognition depends on additional structural and cellular features. A small catalytic domain does not imply that DUSP23 acts indiscriminately on every phosphorylated protein it encounters.

The DUSP23 Antibody recognizes a phosphatase with a particularly compact architecture, making the question of how it selects physiological substrates especially interesting. Experimental studies have linked DUSP23 to processes involving cell proliferation, migration, and adhesion-associated signaling. Some reports describe increased DUSP23 expression in particular tumor settings and changes in cellular behavior following experimental manipulation of its abundance. These findings have stimulated interest in its possible contribution to cancer-associated signaling networks. However, altered expression and effects observed after overexpression or depletion do not by themselves establish which endogenous proteins are directly dephosphorylated by DUSP23.

Substrate identification is therefore a central unresolved issue. Distinguishing direct catalytic targets from secondary consequences of altered signaling requires attention to enzyme localization, substrate accessibility, and the effects of catalytically inactive variants. It is also important to separate the biochemical capacity to remove a phosphate group from evidence that the reaction occurs under physiological conditions. A clearer map of DUSP23 substrates would explain how this unusually small phosphatase achieves signaling selectivity and why changes in its activity have different consequences across cellular contexts.

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

Application Notes

The recommended approach is to establish the optimal working dilution of the DUSP23 Antibody / Dual specificity protein phosphatase 23 Antibody through preliminary testing.

Immunogen

The DUSP23 Antibody was generated using e. coli-derived human DUSP23 recombinant protein (amino acids S41-K150).

Storage

The DUSP23 Antibody is stable for up to one month at 4oC after reconstitution. For longer-term storage, aliquot and store at -20oC for up to six months. Do not repeatedly freeze and thaw.

Alternate Names

DUSP23 antibody, Dual specificity protein phosphatase 23 antibody, dual specificity phosphatase 23 antibody, DUSP25 antibody, LDP 3 antibody, LDP3 antibody, MOSP antibody, RP11 190A12.1 antibody, VH1 like phosphatase Z antibody, VHZ antibody

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