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DUSP7 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8450a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q16829
Other Accession	Q91Z46, NP_001938
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB5816
Calculated MW	44957
Antigen Region	96-127

Additional Information

Gene ID	1849
Other Names	Dual specificity protein phosphatase 7, Dual specificity protein phosphatase PYST2, DUSP7, PYST2
Target/Specificity	This DUSP7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 96-127 amino acids from the N-terminal region of human DUSP7.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	DUSP7 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DUSP7 (HGNC:3073)
Function	Dual specificity protein phosphatase (PubMed: 9788880). Shows high activity towards MAPK1/ERK2 (PubMed:9788880). Also has lower activity towards

MAPK14 and MAPK8 (PubMed:9788880). In arrested oocytes, plays a role in meiotic resumption (By similarity). Promotes nuclear envelope breakdown and activation of the CDK1/Cyclin-B complex in oocytes, probably by dephosphorylating and inactivating the conventional protein kinase C (cPKC) isozyme PRKCB (By similarity). May also inactivate PRKCA and/or PRKCG (By similarity). Also important in oocytes for normal chromosome alignment on the metaphase plate and progression to anaphase, where it might regulate activity of the spindle-assembly checkpoint (SAC) complex (By similarity).

Cellular Location Cytoplasm.

Tissue Location Strongly expressed in liver (PubMed:8670865). Expressed at significantly higher levels in malignant hematopoietic cells than in corresponding non-malignant cells (PubMed:14576828)

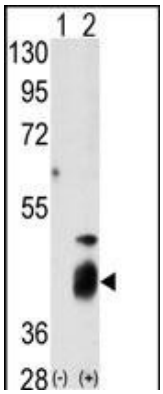
Background

DUSP7 is a member of the dual specificity protein phosphatase subfamily. These phosphatases inactivate their target kinases by dephosphorylating both the phosphoserine/threonine and phosphotyrosine residues. They negatively regulate members of the mitogen-activated protein (MAP)kinase superfamily (MAPK/ERK, SAPK/JNK, p38), which are associated with cellular proliferation and differentiation. Different members of the family of dual specificity phosphatases show distinct substrate specificities for various MAP kinases, different tissue distribution and subcellular localization, and different modes of inducibility of their expression by extracellular stimuli.

References

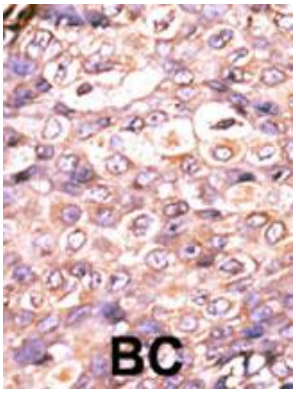
Immunol. Lett. 92 (1-2), 149-156 (2004)
Oncogene 22 (48), 7649-7660 (2003)
Meth. Enzymol. 366, 103-113 (2003)
J. Cell. Sci. 111 (PT 22), 3389-3399 (1998)
EMBO J. 15 (14), 3621-3632 (1996)

Images



Western blot analysis of DUSP7 (arrow) using DUSP7 Antibody (N-term) (RB05816). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the DUSP7 gene (Lane 2) (Origene Technologies).

Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Citations

- Structure-Activity Relationship of SPOP Inhibitors against Kidney Cancer