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DCK Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7087B

Product Information

Application	IHC-P, IF, WB, IP, E
Primary Accession	P27707
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	30519
Antigen Region	171-200

Additional Information

Gene ID	1633
Other Names	Deoxycytidine kinase, dCK, DCK
Target/Specificity	This DCK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 171-200 amino acids from the C-terminal region of human DCK.
Dilution	IHC-P~~1:100~500 IF~~1:10~50 WB~~1:1000 IP~~1:500~1000 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	DCK Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DCK
Function	Phosphorylates the deoxyribonucleosides deoxycytidine, deoxyguanosine and deoxyadenosine (PubMed:12808445, PubMed:18377927, PubMed:19159229, PubMed:1996353, PubMed:20614893, PubMed:20637175). Has broad substrate specificity, and does not display

selectivity based on the chirality of the substrate. It is also an essential enzyme for the phosphorylation of numerous nucleoside analogs widely employed as antiviral and chemotherapeutic agents (PubMed:12808445).

Cellular Location Nucleus.

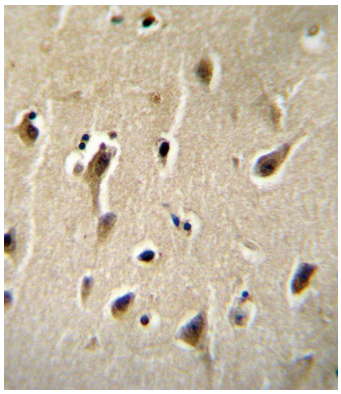
Background

Deoxycytidine kinase is responsible for the phosphorylation of several deoxyribonucleosides and their analogs. Deficiency of this enzyme activity is associated with resistance to antiviral and anticancer chemotherapeutic agents, whereas increased enzyme activity is associated with increased activation of these compounds to cytotoxic nucleoside triphosphate derivatives. It is the rate limiting enzyme in the activation of many important anticancer and retroviral drugs and its activity is often decreased in cells that are resistant to cytosine arabinoside.

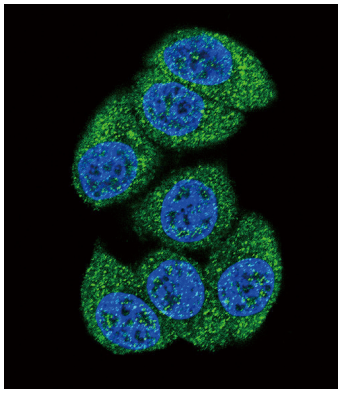
References

Chottiner, E. G., et al. Proc. Nat. Acad. Sci. 88: 1531-1535 (1991).

Images

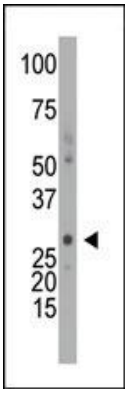


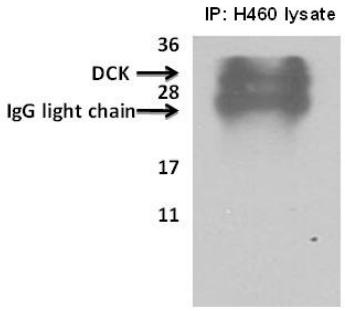
DCK Antibody (C-term) (Cat. #AP7087B)immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of DCK Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Confocal immunofluorescent analysis of DCK Antibody (C-term)(Cat#AP7087b) with Hela cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green).DAPI was used to stain the cell nuclear (blue).

The anti-DCK Pab (Cat. #AP7087b) is used in Western blot to detect DCK in mouse intestine tissue lysate.





Deoxycytidine kinase(DCK) immunoprecipitated from H460cells with 7.5ug (microgram) of the dCK antibody (AP7087b) using the Pierce classic mammalian IP kit (#45217) reagent as described as manufacturer instructions (lane 1, 3) and Current Protocols in Cell Biology, 1998, 7.2.1-7.2.21. Proteins separated on a 12% SDS gel, transferred to a PVDF membrane and probed with 1:700 dilution of DCK antibody (AP7087b). Bands were detected using enhanced chemiluminescence (SuperSignal West Pico Chemiluminescent Substrate Kit). No specific reagents were employed to remove IgG from immunoprecipitated sample. Data courtesy of Dr. Stacy Shord, University of Illinois, Chicago.

Citations

- Population-specific genetic variants important in susceptibility to cytarabine arabinoside cytotoxicity.
- Pharmacogenetics of deoxycytidine kinase: identification and characterization of novel genetic variants.
- Clofarabine exerts antileukemic activity against cytarabine-resistant B-cell precursor acute lymphoblastic leukemia with low deoxycytidine kinase expression.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.