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UCK Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8129a

Product Information

Application	WB, IHC-P, E
Primary Accession	P30085
Other Accession	Q4KM73, Q29561, Q9DBP5, Q2KIW9
Reactivity	Human, Mouse
Predicted	Bovine, Pig, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	22222
Antigen Region	18-48

Additional Information

Gene ID	51727
Other Names	UMP-CMP kinase {ECO:0000255|HAMAP-Rule:MF_03172}, 27414 {ECO:0000255|HAMAP-Rule:MF_03172}, Deoxycytidylate kinase {ECO:0000255|HAMAP-Rule:MF_03172}, CK {ECO:0000255|HAMAP-Rule:MF_03172}, dCMP kinase {ECO:0000255|HAMAP-Rule:MF_03172}, Nucleoside-diphosphate kinase {ECO:0000255|HAMAP-Rule:MF_03172}, 2746 {ECO:0000255|HAMAP-Rule:MF_03172}, Uridine monophosphate/cytidine monophosphate kinase {ECO:0000255|HAMAP-Rule:MF_03172}, UMP/CMP kinase {ECO:0000255|HAMAP-Rule:MF_03172}, UMP/CMPK {ECO:0000255|HAMAP-Rule:MF_03172}, CMPK1 {ECO:0000255|HAMAP-Rule:MF_03172}
Target/Specificity	This UCK antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 18-48 amino acids from the N-terminal region of human UCK.
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	UCK Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CMPK1 {ECO:0000255|HAMAP-Rule:MF_03172}
Function	Catalyzes the phosphorylation of pyrimidine nucleoside monophosphates at the expense of ATP. Plays an important role in de novo pyrimidine nucleotide biosynthesis. Has preference for UMP and CMP as phosphate acceptors. Also displays broad nucleoside diphosphate kinase activity.
Cellular Location	Nucleus {ECO:0000255|HAMAP-Rule:MF_03172, ECO:0000269|PubMed:10462544, ECO:0000269|PubMed:11912132}. Cytoplasm {ECO:0000255|HAMAP-Rule:MF_03172, ECO:0000269|PubMed:10462544, ECO:0000269|PubMed:11912132}. Note=Predominantly cytoplasmic, less than 15% nuclear.
Tissue Location	Ubiquitously expressed.

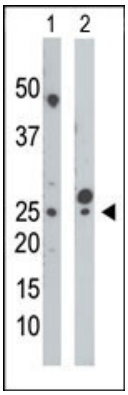
Background

UCK1 (Uridine-cytidine kinase 1) phosphorylates uridine and cytidine to uridine monophosphate and cytidine monophosphate. This enzyme does not phosphorylate deoxyribonucleosides or purine ribonucleosides. Of note, UCK1 is able to use either ATP or GTP as a phosphate donor. UCK1 also possesses the ability to phosphorylate a number of cytidine and uridine nucleoside analogs such as 6-azauridine, 5-fluorouridine, 4-thiouridine, 5-bromouridine, N(4)-acetylcytidine, N(4)-benzoylcytidine, 5-fluorocytidine, 2-thiocytidine, 5-methylcytidine, and N(4)-anisoylcytidine.

References

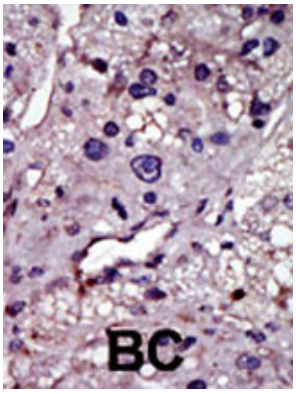
Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002).
Hu, R.M., et al., Proc. Natl. Acad. Sci. U.S.A. 97(17):9543-9548 (2000).
Hughes, G.J., et al., Electrophoresis 14(11):1216-1222 (1993).
Hochstrasser, D.F., et al., Electrophoresis 13(12):992-1001 (1992).

Images



The anti-UCK Pab (Cat. #AP8129a) is used in Western blot to detect UCK in mouse cerebellum tissue lysate (Lane 1) and HepG2 cell lysate (Lane 2).

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

- Synthesis and biologic study of IV-14, a new ribonucleoside radiotracer for tumor visualization.