Active Recombinant Full Length Human deoxycytidine kinase Protein, R104M, D133A, His tagged

Cat. No. DCK-05HFL **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length (aa 1-260) wild-type Human Deoxycytidine kinase (dCK) purified by nickel-sepharose chromatography.
Species	Human
Source	E.coli
ProteinLength	1-260 aa
Description	Deoxycytidine kinase (DCK) is required for the phosphorylation of several deoxyribonucleosides and their nucleoside analogs. Deficiency of DCK is associated with resistance to antiviral and anticancer chemotherapeutic agents. Conversely, increased deoxycytidine kinase activity is associated with increased activation of these compounds to cytotoxic nucleoside triphosphate derivatives. DCK is clinically important because of its relationship to drug resistance and sensitivity.
Tag	N-His
Molecular Mass	~31 kDa
AA Sequence	MATPPKRSCPSFSASSEGTRIKKISIEGNIAAGKSTFVNILKQLCEDWEVVPEPVARW CNVQSTQDEFEELTMSQKNGGNVLQMMYEKPERWSFTFQTYACLSRIRAQLASLN GKLKDAEKPVLFFERSVYSDRYIFASNLYESECMNETEWTIYQDWHDWMNNQFGQ SLELDGIIYLQATPETCLHRIYLRGRNEEQGIPLEYLEKLHYKHESWLLHRTLKTNFDY

Tel: 1-631-559-9269 1-516-512-3133
Email: info@creative-biomart.com Fax: 1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

	LQEVPILTLDVNEDFKDKYESLVEKVKE
Bio-activity	6 IU/mg protein; kcat= 0.05/sec with dC as substrate; One unit of WT human dCK converts 1.0 µmole of dC and ATP to dCMP and ADP per minute at pH 7.5 at 37 centigrade, as measured by a coupled enzyme system with 200 µM dC and 1 mM ATP.
Purity	> 99% (SDS-PAGE)
Storage	At -80 centigrade.
Storage Buffer	25 mM Hepes pH7.5, 200 mM NaCitrate, 10% glycerol, 5 mM DTT, 1 mM EDTA
Concentration	4.6 mg/mL
Shipping	Dry ice.
Reference	1. Sabini E, Ort S, Monnerjahn C, Konrad M, Lavie A. Structure of human dCK suggests strategies to improve anticancer and antiviral therapy. Nat Struct Biol. 2003 Jul;10(7):513-9.Sabini E, Hazra S, Konrad M, Lavie A. 2. Nonenantioselectivity property of human deoxycytidine kinase explained by structures of the enzyme in complex with L- and D-nucleosides. J Med Chem. 2007 Jun 28;50(13):3004-14. Epub 2007 May 27.

GENE INFORMATION

Gene Name	DCK deoxycytidine kinase [Homo sapiens (human)]
Official Symbol	DCK
Synonyms	DCK; deoxycytidine kinase; deoxycytidine kinase; deoxyadenosine kinase;

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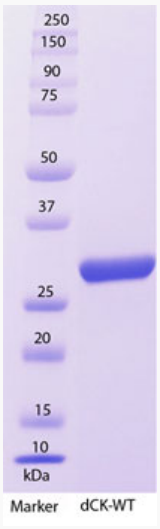
	deoxyguanosine kinase; deoxynucleoside kinase; EC 2.7.1.113; EC 2.7.1.74; EC 2.7.1.76
Gene ID	1633
mRNA Refseq	NM_000788
Protein Refseq	NP_000779
MIM	125450
UniProt ID	P27707
SDS-PAGE	

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