

Recombinant Human DCX, His-tagged

Cat. No. DCX-26890TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length protein, corresponding to amino acids 1-365 of Human Doublecortin with N terminal His tag, 47kDa.
Species	Human
Source	E.coli
ProteinLength	1-365 a.a.
Description	This gene encodes a member of the doublecortin family. The protein encoded by this gene is a cytoplasmic protein and contains two doublecortin domains, which bind microtubules. In the developing cortex, cortical neurons must migrate over long distances to reach the site of their final differentiation. The encoded protein appears to direct neuronal migration by regulating the organization and stability of microtubules. In addition, the encoded protein interacts with LIS1, the regulatory gamma subunit of platelet activating factor acetylhydrolase, and this interaction is important to proper microtubule function in the developing cortex. Mutations in this gene cause abnormal migration of neurons during development and disrupt the layering of the cortex, leading to epilepsy, mental retardation, subcortical band heterotopia ("double cortex" syndrome) in females and lissencephaly ("smooth brain" syndrome) in males. Multiple transcript variants encoding different isoforms have been found for this gene.
Conjugation	HIS

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Tissue specificity	Highly expressed in neuronal cells of fetal brain (in the majority of cells of the cortical plate, intermediate zone and ventricular zone), but not expressed in other fetal tissues. In the adult, highly expressed in the brain frontal lobe, but very low ex
Form	Lyophilised:Reconstitute with 83 µl distilled water.
Storage buffer	Preservative: NoneConstituents: 0.5% Trehalose, 6M Urea, 100mM Sodium phosphate, 10mM Sodium chloride, pH 4.5
Storage	Shipped at 4°C. Upon delivery aliquot and store at -80oC. Avoid freeze / thaw cycles.
Sequences of amino acids	MELDFGHFDERDKTSRNMGRSRMNGLPSPTHSAHCSFYRT RTLQALSNEKKAKKV RFYRNGDRYFKGIVYAVSSDRFR SFDALLADLTRSLSDNINLPQGVRYIYTIDGSRKI GSM DELEEGESYVCSSDNFFKKVEYTKNVNPNWSVNVKTSANM KAPQSLASSNS AQARENKDFVRPKLVITIIRSGVKPRKA VRVLLNKKTAHSFEQVLTDITEAIKLETGVV KKLYTLD GKQVTCLHDFFGDDDVFIACGPEKFRYAQDDFSLDENECRVMKGNPSA TAGPKASPTPQKTSAKSPGPMRRSKSPADS GNDQDANGTSSSQLSTPKSKQSPIS TPTSPGSLRKHKD LYLPLSLDDSDSLGDSM
Sequence Similarities	Contains 2 doublecortin domains.
Full Length	Full L.

GENE INFORMATION

Gene Name	DCX doublecortin [Homo sapiens]
Official Symbol	DCX
Synonyms	DCX; doublecortin; doublecortex; lissencephaly, X linked (doublecortin); neuronal

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	migration protein doublecortin; DBCN; DC; doublecortex; LISX; SCLH; XLIS;
Gene ID	1641
mRNA Refseq	NM_000555
Protein Refseq	NP_000546
MIM	300121
Uniprot ID	O43602
Chromosome Location	Xq22.3-q23
Pathway	Axon guidance, organism-specific biosystem; Developmental Biology, organism-specific biosystem; L1CAM interactions, organism-specific biosystem; Lissencephaly gene (LIS1) in neuronal migration and development, organism-specific biosystem; Neurofascin interactions, organism-specific biosystem;
Function	microtubule binding; protein kinase binding;