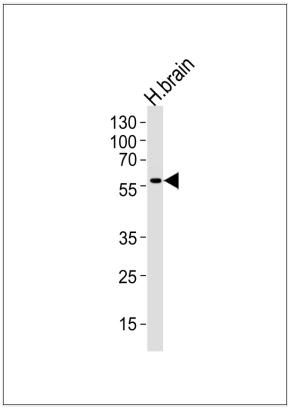
DCX Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DCX, Polyclonal Antibody
Full Product Name	DCX Antibody (S128)
Product Gene Name	anti-DCX antibody
Product Synonym Names	Neuronal migration protein doublecortin; Doublin; Lissencephalin-X; Lis-X; DCX; DBCN; LISX
Clonality	Polyclonal
Isotype	Rabbit Ig
Host	Rabbit
Species Reactivity	Human (Predicted Reactivity: Mouse, Rat)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Purity/Purification	Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Concentration	Vial Concentration: 0.5 (lot specific)
Specificity	This DCX antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 107-137 amino acids from human DCX.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Antibody/Peptide Pairs	DCX (S128) peptide (MBS9224811) is used for blocking the activity of DCX antibody (MBS9209705)
Molecular Weight	49318
Immunogen Sequence Positions	107-137
OMIM	300067
3D Structure	ModBase 3D Structure for O43602
Antigen Type	Synthetic Peptide
Antigen Source	HUMAN
Product Categories/Family for anti-DCX antibody	Neuroscience
Applications Tested/Suitable for anti-DCX antibody	ELISA (EIA), Immunohistochemistry (IHC), Western Blot (WB)
Application Notes for anti-DCX antibody	WB~~1:1000
Related Product Information for anti-DCX antibody	In the developing cortex, cortical neurons must migrate over long distances to reach the site of their final differentiation. DCX is a cytoplasmic protein which appears to direct neuronal migration by regulating the organization and stability of microtubules. It contains two doublecortin domains, which bind microtubules. In addition, this 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 the gene encoding DCX are a cause of X-linked lissencephaly.
Product References and Citations for anti-DCX antibody	Leger,P.L., Neurogenetics (2008) Zhang,Y., Biochem. Biophys. Res. Commun. 363 (3), 694-700 (2007)

Other Notes	Small volumes of anti-DCX antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for DCX purchase	MBS9209705 is an antibody targeting DCX. Also known as DCX Antibody (S128). Reactive in Human (Predicted Reactivity: Mouse, Rat). Host: Rabbit.



Western Blot (WB) of anti-DCX antibody
Western blot analysis of lysate from human brain tissue lysate, using Phospho-DCX-S128. ctrl. MBS9209705 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.



Immunohistochemistry (IHC) of anti-DCX antibody
Formalin-fixed and paraffin-embedded human skeletal muscle tissue reacted with DCX Antibody (S128) , which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DCX. It may not necessarily be applicable to this product.

NCBI GI #	30181246
NCBI GeneID	1641
NCBI Accession #	NP_000546.2
NCBI Related Accession #	NP_835364.1; NP_835365.1; NP_835366.1
UniProt Primary Accession #	O43602
UniProt Secondary Accession #	O43911; Q5JYZ5; A6NFY6; A9Z1V8; D3DUY8; D3DUY9; D3DUZ0
UniProt Related Accession #	O43602
GenBank Nucleotide #	NM_000555.3
NCBI Official Full Name	neuronal migration protein doublecortin isoform a
NCBI Official Synonym Full Names	doublecortin
NCBI Official Symbol	DCX
NCBI Official Synonym Symbols	DC; DBCN; LISX; SCLH; XLIS
UniProt Protein Name	Neuronal migration protein doublecortin
UniProt Synonym Protein Names	Doublin; Lissencephalin-X; Lis-X
Protein Family	Neuronal migration protein doublecortin
UniProt Gene Name	DCX
UniProt Synonym Gene Names	DBCN; LISX; Lis-X
UniProt Entry Name	DCX_HUMAN
NCBI Protein Information	neuronal migration protein doublecortin

NCBI Summary for DCX	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. [provided by RefSeq, Sep 2010]
UniProt Comments for DCX	Doublecortin: Microtubule-associated protein required for initial steps of neuronal dispersion and cortex lamination during cerebral cortex development. May act by competing with the putative neuronal protein kinase DCAMKL1 in binding to a target protein. May in that way participate in a signaling pathway that is crucial for neuronal interaction before and during migration, possibly as part of a calcium ion-dependent signal transduction pathway. May be part with LIS-1 of a overlapping, but distinct, signaling pathways that promote neuronal migration. Interacts with tubulin. 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 expression in other regions of brain, and not detected in heart, placenta, lung, liver, skeletal muscles, kidney and pancreas. 5 isoforms of the human protein are produced by alternative splicing. Protein type: Motility/polarity/chemotaxis; Cytoskeletal Chromosomal Location of Human Ortholog: Xq22.3-q23 Cellular Component: microtubule; neuron projection; microtubule associated complex; cytoskeleton; cytosol Molecular Function: protein binding; microtubule binding; protein kinase binding Biological Process: nervous system development; axon guidance; central nervous system development; axon extension; dendrite morphogenesis; neuron migration; central nervous system projection neuron axonogenesis; brain development Disease: Lissencephaly, X-linked, 1
Research Articles on DCX	**1.** DCX-positive cells occur in a wide range of hypothalamic nuclei in humans, mice and sheep.
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