Mouse DCC Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF844

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse DCC in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant mouse DCC Phe32-Asn1097 Accession # P70211
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

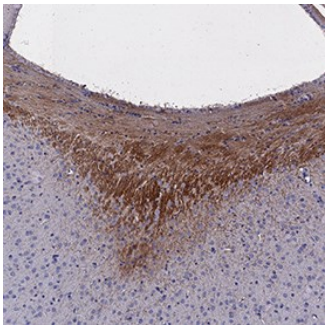
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse DCC Fc Chimera (Catalog # 844-DC)
Immunohistochemistry	5-25 µg/mL	Immersion fixed paraffin-embedded sections of Mouse Embryo Developing Brain.
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.3-1.5 µg/mL of this antibody will block 50% of the binding of 50 ng/mL of Recombinant Chicken Netrin-2 (Catalog # 127-N2) to immobilized Recombinant Mouse DCC Fc Chimera (Catalog # 844-DC) coated at 2 µg/mL (100 µL/well). At 10 µg/mL, this antibody will block >90% of the binding.	

DATA

Immunohistochemistry



Detection of DCC in Mouse Embryo Developing Brain. DCC was detected in immersion fixed paraffin-embedded sections of Mouse Embryo Developing Brain using Goat Anti-Mouse DCC Antigen Affinity-purified Polyclonal Antibody (Catalog # AF844) at 15 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Goat IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC004). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using VisUCyte Antigen Retrieval Reagent-Basic (Catalog # VCTS021). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm in neuronal processes. View our protocol for IHC Staining with VisUCyte HRP Polymer Detection Reagents.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

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BACKGROUND

Deleted in colorectal cancer (DCC) was originally identified as a putative tumor suppressor gene that is lost in more than 70% of colorectal cancers. This gene has also been found to be deleted in several different kinds of cancers. *DCC* encodes a type I transmembrane glycoprotein that belongs to the immunoglobulin (Ig) superfamily. The extracellular domain is composed of four Ig-like domains and six fibronectin type III repeats. Two forms of the protein (the long and the short isoforms) are produced from the same gene by the use of alternative initiation sites. A third isoform that is produced by alternative splicing is expressed only in the embryo. The extracellular domain of mouse DCC shares 97% and 99% amino acid sequence identity with the human and rat DCC extracellular domains, respectively. In adults, DCC is highly expressed in the brain but is also expressed at very low levels in multiple tissues. In the embryo, high levels of expression are detected in the brain and neural tube. DCC has been shown to be a receptor for the netrins that are important for axon guidance. DCC has also been shown to induce apoptosis in the absence of ligand binding and to block apoptosis when engaged by netrin-1. DCC has been shown to be a caspase substrate. The pro-apoptotic effects of DCC were found to be dependent on the proteolytic cleavage of the unoccupied receptor by caspase. It is likely that DCC functions as a tumor-suppressor gene by inducing apoptosis in cells that are not exposed to netrins.

References:

1. Fearon, E.R. *et al.* (1990) Science **247**:49.
2. Keino-Masu, K. *et al.* (1996) Cell **87**:175.
3. Mehlen, P. *et al.* (1998) Nature **395**:801.
4. Culotti, J.G. and D.C. Merz (1998) Current Opinion in Cell Biology **10**:609.

PRODUCT SPECIFIC NOTICES

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U.S. Patent # 5,939,271, 6,277,585, and other U.S. and international patents pending.

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USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449