Anti-DCC
produced in goat, affinity isolated antibody

Catalog Number D3441

Synonym: Anti-Deleted in Colorectal Carcinoma

Product Description
Anti-DCC is produced in goat using as immunogen purified recombinant mouse DCC, extracellular domain, expressed in insect Sf21 cells. Affinity isolated antibody is obtained from goat Anti-DCC antiserum by immuno-specific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the peptide.

Anti-DCC recognizes mouse DCC by immunoblotting and receptor-ligand interaction.

Deleted in colorectal cancer (DCC, chromosome 18q21) was originally identified as a putative tumor suppressor gene that is lost in more than 70% of colorectal cancers. The gene has also been deleted in several other types of cancer.2-4 The DCC protein is a type I transmembrane glycoprotein that belongs to the immunoglobulin (Ig) superfamily.2,5 The extracellular domain is composed of four Ig-like domains and six fibronectin type III repeats. Native DCC is found in three isoforms. Two forms, a long and a short isoform, are produced from the same gene but have different initiation sites. The third isoform, produced by alternative splicing, is expressed only in embryonic tissue. Mouse DCC extracellular domain shares 97% and 99% homology with 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 normal tissues.2-5-6 In the embryo, high levels of expression are detected in the brain and neural tube.

DCC functions as a receptor or a component of a receptor for netrins and mediates the effects of netrins on commissural axons. Nettins are chemoattractants responsible for the guidance of commissural axons at the midline and of motor axons to their target muscles. DCC induces apoptosis in the absence of ligand binding, blocks apoptosis when engaged by netrin-1, and also acts as a caspase substrate.3,6-7

Reagent
Supplied lyophilized from a 0.2 µm filtered solution in phosphate buffered saline (PBS) containing 5% trehalose.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
To one vial of lyophilized powder, add 1 mL of 0.2 µm filtered phosphate buffered saline to produce a 0.1 mg/mL stock solution of antibody.

Storage/Stability
Prior to reconstitution, store at −20 °C. Reconstituted product may be stored at 2-8 °C for up to one month. For prolonged storage, freeze in working aliquots at −20 °C. Avoid repeated freezing and thawing. Do not store in a frost-free freezer.

Product Profile
Blockade of receptor-ligand interaction in functional ELISA assay:
10-20 µg/mL of the antibody will block 50% of the binding of recombinant chicken netrin-2 (50 ng/mL) to immobilized recombinant mouse DCC/Fc chimera (100 µL of a 2 µg/mL solution was coated in each well) in a functional ELISA.

Immunoblotting: a working antibody concentration of 0.1-0.2 µg/mL is recommended. The detection limit for recombinant mouse DCC is approx. 2 ng/lane under non-reducing and reducing conditions.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working dilutions by titration.
Endotoxin level is < 0.1 EU per 1 µg of the antibody as determined by the LAL (Limulus amebocyte lysate) method.

References

KAA,PHC 02/11-1