

DCC (H-205): sc-11437

BACKGROUND

DCC (deleted in colorectal cancer) was first identified as a candidate tumor suppressor gene based on its absence or reduced expression in the majority of colorectal cancers. Loss of DCC expression was subsequently observed in cancers of the breast, endometrium, brain, pancreas and prostate, as well as in leukemias, neuroblastomas and male germ cell cancers. DCC is a 1447 amino acid transmembrane protein with highest expression in developing brain and neural tube and is suspected to play a role in mediating directional migration in the developing nervous system. Netrin-1, a chemoattractant for commissural axons in the spinal cord, has been identified as a ligand for DCC.

REFERENCES

1. Vogelstein, B., et al. 1989. Allelotype of colorectal carcinomas. *Science* 244: 207-211.
2. Fearon, E.R., et al. 1990. Identification of a chromosome 18q gene that is altered in colorectal cancers. *Science* 247: 49-56.
3. Hedrick, L., et al. 1994. The DCC gene product in cellular differentiation and colorectal tumorigenesis. *Genes Dev.* 8: 1174-1183.
4. Reale, M.A., et al. 1994. Expression and alternative splicing of the deleted in colorectal cancer (DCC) gene in normal and malignant tissues. *Cancer Res.* 54: 4493-4501.
5. Cooper, H.M., et al. 1995. Cloning of the mouse homologue of the deleted in colorectal cancer gene (mDCC) and its expression in the developing mouse embryo. *Oncogene* 11: 2243-2254.
6. Keino-Masu, K., et al. 1996. Deleted in colorectal cancer (DCC) encodes a netrin receptor. *Cell* 87: 175-185.
7. Inokuchi, K., et al. 1996. DCC protein expression in hematopoietic cell populations and its relation to leukemogenesis. *J. Clin. Invest.* 97: 852-857.
8. Reyes-Mugica, M., et al. 1997. Loss of DCC expression and glioma progression. *Cancer Res.* 57: 382-386.

CHROMOSOMAL LOCATION

Genetic locus: DCC (human) mapping to 18q21.2; Dcc (mouse) mapping to 18 E2.

SOURCE

DCC (H-205) is a rabbit polyclonal antibody raised against amino acids 1159-1363 mapping near the C-terminus of DCC (deleted in colorectal cancer) of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

DCC (H-205) is recommended for detection of DCC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DCC siRNA (h): sc-35183, DCC siRNA (m): sc-35184, DCC shRNA Plasmid (h): sc-35183-SH, DCC shRNA Plasmid (m): sc-35184-SH, DCC shRNA (h) Lentiviral Particles: sc-35183-V and DCC shRNA (m) Lentiviral Particles: sc-35184-V.

Molecular Weight of DCC: 190 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409, U-87 MG cell lysate: sc-2411 or SW480 cell lysate: sc-2219.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Albright, C.D., et al. 2005. Maternal dietary choline availability alters the balance of Netrin-1 and DCC neuronal migration proteins in fetal mouse brain hippocampus. *Brain Res. Dev. Brain Res.* 159: 149-154.
2. Jassen, A.K., et al. 2006. Receptor regulation of gene expression of axon guidance molecules: implications for adaptation. *Mol. Pharmacol.* 70: 71-77.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.