Technical Data Sheet

Purified Mouse Anti-Human DCC

Product Information

Material Number:	**554223**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	G97-449
Immunogen:	Recombinant Human DCC
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	175-190 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

One of the most common regions of allelic loss in colorectal tumors is chromosome 18, which is lost in more than 70% of carcinomas, and in almost 50% of late adenomas. This region of loss has been mapped to chromosome 18q and a gene called Deleted in Colorectal Cancer (DCC). DCC encodes an ~185 kDa glycoprotein with significant homology to the neural cell adhesion molecule and other related cell surface glycoproteins. The predicted amino acid sequence of DCC cDNA consists of a 1448 amino acid (aa) long transmembrane phosphoprotein. The extracellular domain consists of 1098 amino acids and has 42% sequence homology to cell adhesion proteins of the neural cell adhesion molecule (N-CAM) family. DCC mRNA is found to be expressed in normal colonic mucosa, but its expression is reduced or absent in the majority of colorectal carcinomas. The loss of heterozygosity and subsequent alteration of DCC expression has also been observed in tumors of non-colorectal origin. Clone G97-449 recognizes human DCC. A truncated recombinant protein containing the intracellular domain of the human DCC was used as immunogen.

Western blot analysis of human DCC on human nueroblastoma cells. *Lysate from IMR-32 (ATCC CCL-127) cells were probed with Purified Mouse Anti-Human DCC (Cat. No. 554223) which recognizes DCC as a band of ~185 kDa.*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunohistochemistry-formalin (antigen retrieval required)	Reported

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Recommended Assay Procedure:

Applications include western blot analysis (0.5 - 2.0 µg/ml). IMR-32 (ATCC CCL-127) cells are suggested as a positive control. The antibody has also been published for immunohistochemistry of formalin-fixed, paraffin-embedded tissue sections. By western blot, DCC-specific antibodies typically identify protein species with molecular weights of approximately 175-190 kDa. Doublets in this range have been reported in brain. Several smaller immunoreactive species, representing degradation products, cross-reactive species, or DCC forms arising from alternative splicing of DCC mRNA or *in vivo* processing of the DCC protein may also be identified.

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Fearon ER, Cho KR, Nigro JM. Identification of a chromosome 18q gene that is altered in colorectal cancers. *Science.* 1990; 247(4938):49-56. (Biology)

Fearon ER, Hamilton SR, Vogelstein B. Clonal analysis of human colorectal tumors. *Science.* 1987; 238(4824):193-197. (Biology)

Reale MA, Hu G, Zafar AI, Getzenberg RH, Levine SM, Fearon ER. Expression and alternative splicing of the deleted in colorectal cancer (DCC) gene in normal and malignant tissues. *Cancer Res.* 1994; 54(16):4493-4501. (Biology: Immunoprecipitation, Western blot)

Shibata D, Reale MA, Lavin P. The DCC protein and prognosis in colorectal cancer. *N Engl J Med.* 1996; 335(23):1727-1732. (Clone-specific: Immunohistochemistry)

Vogelstein B, Fearon ER, Hamilton SR. Genetic alterations during colorectal-tumor development. *N Engl J Med.* 1988; 319(9):525-532. (Biology)

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