Technical Data Sheet

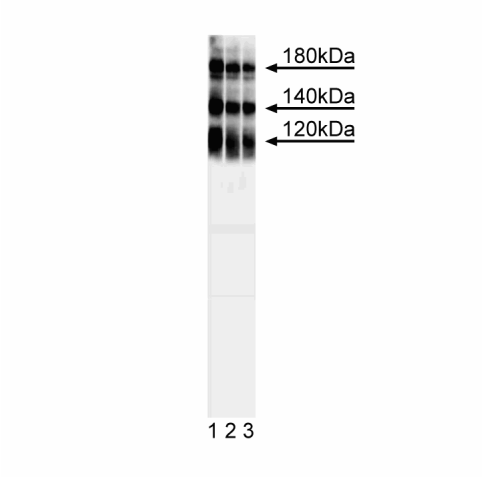
Purified Mouse Anti-Adult and Embryonic CD56

Product Information

Material Number:	**556324**
Alternate Name:	N-CAM
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	N-CAM 13
Immunogen:	Mouse membrane fractions
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Mouse Reported: Rat
Target MW:	120 kDa, 140 kDa, 180 kDa
Storage Buffer:	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

Description

Cell adhesion molecules are present of the surface of most cells (CAMs). Neural CAMs play a key role in the development of the embryonic nervous system. Expression of neural CAMs provides neurons with a means of attaching to and interacting with other cells and the extracellular matrix. The cell surface adhesion molecule N-CAM is important in mediating initial axon outgrowth and cell migration during development. In the mature nervous system, N-CAM is important in regulating cell interactions. Additionally, the expression of several CAMs, including N-CAM, is altered following injury to the peripheral nervous system. Alternative splicing of N-CAM mRNA results in several N-CAM isoforms. The three major isoforms are referred to as 180 kDa, 140 kDa, and 120 kDa. The functional significance of the different isoforms of N-CAM remains to be to be fully elucidated. Individual isoforms undergo various post-translational modifications, including the addition of polysialylic acid residues to embryonic forms. The highly polysialylated forms of N-CAM present in embryos and neonates are lost during maturation and replaced by less polysialylic acid-laden mature forms of N-CAM. BD Biosciences Pharmingen offers N-CAM antibodies recognizing the major isoforms of adult and embryonic NCAM (Clone N-CAM 13, Cat. No. 556324), a subset of adult and embryonic N-CAM (clone 12F11, Cat. No. 556323), and exclusively embryonic N-CAM (clone 12F8, Cat. No. 556325). The antibody recognizes the three major isoforms of mouse and rat N-CAM (120 kDa, 140 kDa, and 180 kDa); it does not cross-react with chicken N-CAM. The antibody reacts with an extracellular epitope of N-CAM. Mouse membrane fractions were used as immunogen.



Western blot analysis of N-CAM. *Lysates from mouse brain cells were probed with anti-pan N-CAM (clone N-CAM 13, Cat. No. 556324) at concentrations of 2.0 (lane 1), l.0 (lane 2), and 0.5 µg/ml (lane 3). The three major isoforms of N-CAM are identified at 120 kDA, 140 kDa, and 180 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-frozen	Tested During Development

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**

Recommended Assay Procedure:

Applications include western blot analysis (1-2 µg/ml), and immunohistochemistry of frozen tissue sections (titrate between 0.5-5.0 µg/ml) and of tissue-cultured neurons. In western blot analysis, N-CAM 13 recognizes N-CAM as broad bands ranging from 90 kDa to more than 200 kDa, depending on forms present. Mouse or rat brain is suggested as a positive control. In addition to brain, NCAM may react with some non-neuronal cells. However, it does not appear to recognize mouse NK cells. For additional protocol information please refer to http://www.bdbiosciences.com/support/resources/cell_biology/index.jsp

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. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. 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.

References

Chuang W, Lagenaur CF. Central nervous system antigen P84 can serve as a substrate for neurite outgrowth. *Dev Biol.* 1990; 137(2):219-232. (Biology)

Chung WW, Lagenaur CF, Yan Y, and Lund JS. Developmental expression of neural cell adhesion molecules in the mouse neocortex and olfactory bulb. *J Comp Neurol.* 1991; 314:290-305. (Biology)

Hankin MH, Lagenaur CF. Cell adhesion molecules in the early developing mouse retina: retinal neurons show preferential outgrowth in vitro on L1 but not N-CAM. *J Neurobiol.* 1994; 25(5):472-487. (Biology)

Miller PD, Chung WW, Lagenaur CF, and DeKosky ST. Regional distribution of neural cell adhesion molecule (N-CAM) and L1 in human and rodent hippocampus. *J Comp Neurol.* 1993; 327:341-349. (Biology)

Miller PD, Styren SD, Lagenaur CF, DeKosky ST. Embryonic neural cell adhesion molecule (N-CAM) is elevated in the denervated rat dentate gyrus. *J Neurosci.* 1994; 14(7):4217-4225. (Biology)

Walsh FS, Doherty P. Factors regulating the expression and function of calcium-independent cell adhesion molecules. *Curr Opin Cell Biol.* 1993; 5(5):791-796. (Biology)

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
877.232.8995	800.979.9408	32.53.720.550	0120.8555.90	65.6861.0633	55.11.5185.9995

For country contact information, visit **bdbiosciences.com/contact**