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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



Mouse anti NCAM / CD56

Catalogue number: **MUB1301P**

Clone	123C3
Isotype	IgG1
Product Type	Primary Antibodies
Units	0.1 mg
Host	Mouse
Species reactivity	Human Zebrafish
Application	Immunoblotting Immunocytochemistry Immunohistochemistry (frozen) Immunohistochemistry (paraffin)

Distributors

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Background

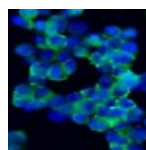
NCAM, as a member of the immunoglobulin superfamily of adhesion molecules is characterized by several immunoglobulin (Ig)-like domains. The extracellular part of NCAM consists of five of these Ig domains and two fibronectin type III homology regions. NCAM is encoded by a single copy gene composed of 26 exons. However, at least 20-30 distinct isoforms can be generated by alternative splicing and by posttranslational modifications, such as sialylation. During sialylation, polysialic acid (PSA) carbohydrates are attached to the extracellular part of NCAM. Through its extracellular region, NCAM mediates homophilic interactions. In addition, NCAM can also undergo heterophilic interactions by binding extracellular matrix components, such as laminin, or other cell adhesion molecules, such as integrins.

Source

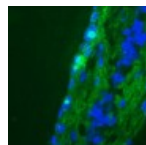
123C3 is a Mouse monoclonal IgG1 antibody derived by fusion of Mouse myeloma cells with spleen cells from a Mouse immunized with the a membrane preparation of a small cell lung carcinoma specimen.

Product

1_MUB1301 Figure 1
Immunostaining of the neural cell adhesion molecule (NCAM) in small cell lung cancer cell line NCI-H82



2_MUB1301-9d
Figure 2
Immunofluorescence staining of a 9 days old zebrafish embryo



Each vial contains 100 µl 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

Applications

123C3 is suitable for immunoblotting, immunocytochemistry and immunohistochemistry on frozen and paraffin-embedded tissues. Optimal antibody dilution should be determined by titration; recommended range is 1:100 – 1:200 for immunohistochemistry with avidin-biotinylated Horseradish peroxidase complex (ABC) as detection reagent, and 1:100 – 1:1000 for immunoblotting applications.

Specificity

123C3 was defined as a cluster I antibody during the First International Workshop on Small Cell Lung Cancer (SCLC) Antibodies. 123C3 recognizes an epitope in the NCAM exons 11-13 which is dependent on an intact conformation of the first fibronectin type-III homologous domain encoded by these exons. 123C3 stains NCAM which is present in small cell lung cancer and lung carcinoids. It also reacts with a number of non-small cell lung carcinomas and neuroendocrine and neuronal derived tissues. In addition, 123C3 is internalized after binding to its antigen on SCLC cell lines, making it an excellent reagent for tumor imaging in xenograft models.

Storage

Store at 4°C, or in small aliquots at -20°C.

References

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2. Mooi, W. J., Wagenaar, S. S., Schol, D., and Hilgers, J. (1988). Monoclonal antibody 123C3 in lung tumour classification. *Immunohistology of 358 resected lung tumours*, *Mol Cell Probes* 2, 31-7.
3. Moolenaar, C. E., Muller, E. J., Schol, D. J., Figdor, C. G., Bock, E., Bitter-Suermann, D., and Michalides, R. J. (1990). Expression of neural cell adhesion molecule-related sialoglycoprotein in small cell lung cancer and neuroblastoma cell lines H69 and CHP-212, *Cancer Res* 50, 1102-6.
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expression, neuroendocrine differentiation and prognosis in lung carcinoma, *Eur J Cancer* 27, 431-5.

5. Gerardy-Schahn, R., and Eckhardt, M. (1994). Hot spots of antigenicity in the neural cell adhesion molecule NCAM, *Int J Cancer Suppl* 8, 38-42.

6. Kwa, H. B., Verhoeven, A. H., Storm, J., van Zandwijk, N., Mooi, W. J., and Hilkens, J. (1995). Radioimmunotherapy of small-cell lung cancer xenografts using ¹³¹I-labelled anti-NCAM monoclonal antibody 123C3, *Cancer Immunol Immunother* 41, 169-74.

7. Kwa, H. B., Verheijen, M. G., Litvinov, S. V., Dijkman, J. H., Mooi, W. J., and Van Krieken, J. H. (1996). Prognostic factors in resected non-small cell lung cancer: an immunohistochemical study of 39 cases, *Lung Cancer* 16, 35-45.

Caution

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals. This product contains sodium azide. To prevent formation of toxic vapors, do not mix with strong acidic solutions. To prevent formation of potentially explosive metallic azides in metal plumbing, always wash into drain with copious quantities of water. This datasheet is as accurate as reasonably achievable, but Nordic-MUbio accepts no liability for any inaccuracies or omissions in this information.