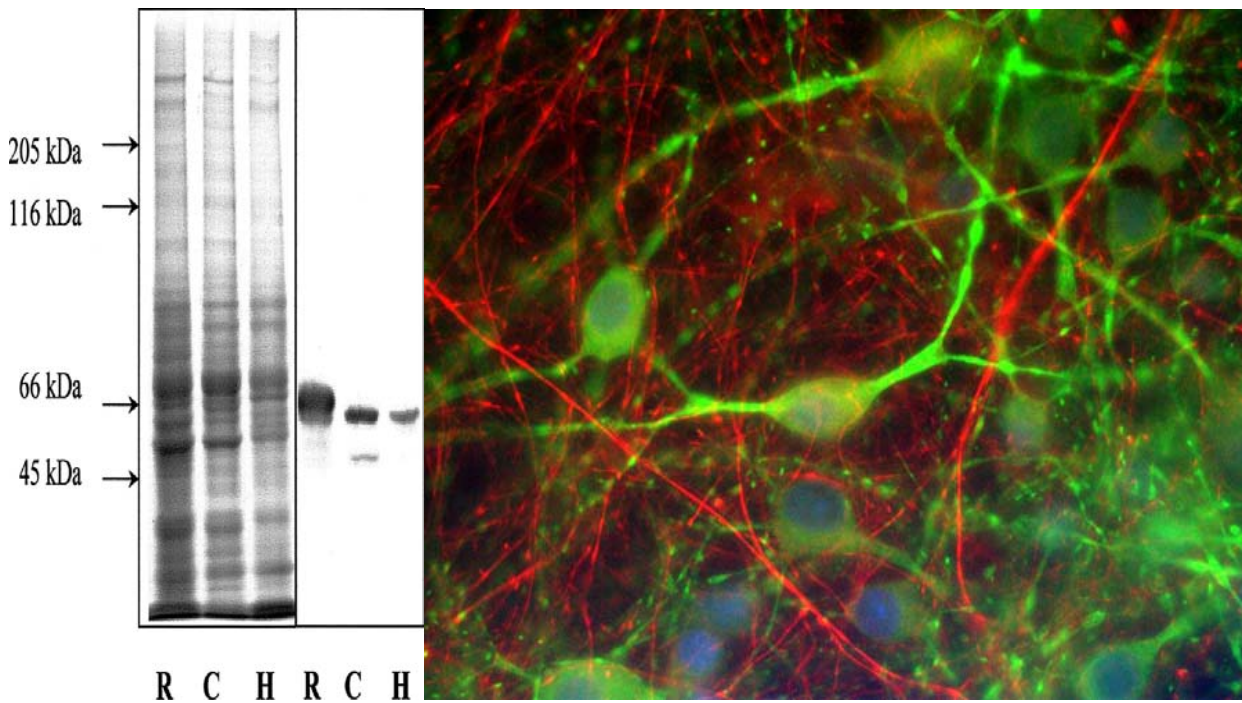


**Catalogue# MCA-1D2: Alpha-Internexin/NF66 Monoclonal Antibody 1D2**

**The Immunogen:** Alpha-internexin is a ~66 kDa Class IV intermediate filament subunit expressed very early in neuronal development. It is related to but distinct from the better known neurofilament triplet proteins, NF-L, NF-M and NF-H, having similar protein sequence motifs and a similar intron organization. Many classes of mature neurons contain alpha-internexin in addition to NF-L, NF-M and NF-H. In some mature neurons alpha-internexin is the only neurofilament subunit expressed. Antibodies to alpha-internexin are therefore unique probes to study and classify neuronal types and follow their processes in sections and in tissue culture. In addition the very early developmental expression of alpha-internexin means its presence is an early and convenient diagnostic feature of neuronal progenitors cells and other cell committed to the neuronal lineage. The use of antibodies to this protein in the study of brain tumors has not been examined to date, but is likely to be of interest.



**Left:** Left three lanes show Coomassie brilliant blue stained extracts of rat brain stem, cat cerebral cortex and human cerebral cortex (R, C and H respectively). Right three lanes are corresponding blots reacted with MCA-1D2. MCA-1D2 stains a band of about 66kDa in all three preparations. **Right:** Mixed cultures of rat CNS cells stained with MCA-1D2 (red) and EnCor's chicken antibody to Microtubule associated protein 2 (MAP2- green, using antibody [CPCA-MAP2](#)). The  $\alpha$ -internexin is localized primarily in neuronal axons in these cultures, while the perikarya and dendrites of neurons stain strongly for MAP2.

**Antibody characteristics:** MCA-1D2 was raised against purified recombinant rat alpha-internexin expressed in and purified from *E. coli*. MCA 1D2 reacts with human alpha-internexin and with this protein in all mammalian species tested to date. Clean and specific on immunoblots. Can be used on formalin-fixed cells in tissue culture, cryostat sections, and Western blotting. The epitope recognized by the 1D2 clone is in the C-terminal non-helical extension of the protein and is unusually resistant to aldehyde fixation, so that this antibody is ideal for studies of paraffin embedded formalin fixed histological sections. In most respects this antibody is quite comparable to MCA-2E3, also available from EnCor. Antibody is supplied as purified IgG at a concentration of 1.5mg/ml. Antibody preparation contains 10mM sodium azide preservative (Link to <http://www.encorbio.com/MSDS/azide.htm> for Material Safety Data Sheet).

**Suggestions for use:** For immunofluorescence try dilutions of 1:1,000, for immunohistochemistry with ABC or other enzymatic amplification procedures try 1:5,000. For western blots try 1:10,000 dilutions.

**Limitations:** This product is for research use only and is not approved for use in humans or in clinical diagnosis.

**References:**

1. Evans J, Summers C, Moore J, Huentelman MJ, Deng J, Gelband CH, Shaw G. Characterization of mitotic neurons derived from adult rat hypothalamus and brain stem. [J. Neurophysiol. 87:1076-85 2002.](#)

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