Monoclonal Anti-HNK-1/N-CAM (CD57), clone VC1.1 produced in mouse, ascites fluid

Catalog Number C0678

Product Description
Monoclonal Anti-HNK-1/N-CAM (CD57) (mouse IgM isotype) is derived from the VC1.1 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from immunized BALB/c mice. An unfixed homogenate of cat primary visual cortex (area 17) was used as the immunogen. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-HNK-1/N-CAM (CD57) localizes the 145 kDa and 170 kDa high molecular weight integral membrane forms of N-CAM (neural cell adhesion molecule) in an immunoblotting assay on rat brain extracts. The antibody also recognizes myelin associated glycoprotein in some species and a high molecular weight chondroitin sulfate proteoglycan. The product recognizes its epitope on rat, cat and human tissues or cells and in their respective extracts. VC1.1 is a monoclonal antibody probe that recognizes antigens associated with the surface of mammalian central nervous system neurons. In the visual cortex, for example, VC1.1 recognizes ~30% of the GABAergic neurons and therefore the antibody can be used to distinguish different subpopulations of GABAergic cells with their different morphologies and to define different types of inhibitory synaptic circuits. Applying immunocytochemical methods, VC1.1 showed staining properties that are identical with the monoclonal antibody HNK-1 generated against a membrane antigen from the cultured human T cell line HSB-2. Using pre- and post-embedding immunocytochemistry at light microscopic level, both antibodies selectively stained a subpopulation of GABAergic neurons containing the calcium binding protein parvalbumin in the adult rat parietal cortex.

N-CAM are expressed on all neuroepithelial cells from the time of neural induction in the early embryo. It is known that the sulfated carbohydrate HNK-1 epitope is carried by several surface molecules including a proportion of N-CAM isoforms.

Monoclonal Anti-HNK-1/N-CAM (CD57) may be used for the identification and localization of the HNK-1 antigen on human and animal tissues and cells using immunocytochemical and immunohistological staining, applying immunofluorescence or immunoelectron microscopy or immunoblotting.

Reagent
Supplied as ascites fluid with 15 mM sodium azide as a preservative.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
For continuous use, store at 2-8 °C for a maximum of one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile
Immunoblotting: a minimum antibody dilution of 1:4,000 is recommended using freshly prepared extract from rat brain.

Note: In order to obtain the best results in various techniques and preparations, it is recommended that each individual user determine their optimum working dilutions by titration.

References