

## Mouse monoclonal antibody to Nestin [4D11] (317-630)

Catalogue No.:	M-1385-100
Description:	Nestin is a member of the class IV intermediate filament protein family which is expressed in neuronal stem cells. The molecular weight of human Nestin as determined by SDS-PAGE mobility is about 240kDa. However the real molecular weight is considerably less than this, at 177kDa, the disparity being likely due to the highly charged region of the C-terminal segment. Nestin is relatively poorly conserved in protein sequence across species boundaries, so that the mouse and human proteins have an overall identity of only 62%. As a result antibodies to the human protein often fail to recognize the rodent homologue and vice versa. However this antibody stains both rodent and human Nestin. Antibodies to Nestin are widely used to identify neural stem cells.
Batch No.:	See product label
Unit size:	100 µl
Antigen:	Partial segment (region 317-630 aa) of human Nestin expressed in E.coli
Antigen Location:	317-630
Antibody Type:	Monoclonal
Isotype:	lgG
Clone:	4D11
Other Names:	Nestin; NES;
Accession:	P48681 NEST_HUMAN;
Produced in:	Mouse
Purity:	Ascites fluid
Applications:	Western Blotting (WB) and Immunocytochemistry (IC). Suggested dilution for WB is 1:1,000-5,000 and 1:250-500 for IC. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	This antibody is specific for the 240 kDa Nestin protein by WB on developing rat brain (P18)
	homogenate. A much weaker band at approx. 90 kDa may also be seen. This is suggested to
	be a breakdown product of the 240 kDa band.
Antibody Against:	Nestin
Cross-reactivity:	Human, Rodent
Form:	Lyophilised from ascites fluid.
Appearance:	White powder
Reconstitution:	Reconstitute in sterile distilled water. Centrifuge to remove any insoluble material.
Storage:	After reconstitution of lyophilised antibody, aliquot and store at -20°C for a higher stability. Avoid freeze-thaw cycles.
Expiry Date:	12 months after purchase

FOR RESEARCH USE ONLY



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Mixed cultures of neonatal rat neurons and glia stained with Mouse monoclonal antibody to Nestin [4D11] M-1385-100 (red), Chicken polyclonal antibody to vimentin C-1409-50 (green) and DNA (DAPI stain, blue). Astrocytes and neuronal stem cells stain strongly and specifically in a clearly filamentous fashion with the Nestin antibody. The filamentous staining pattern is as expected as both Nestin and Vimentin are components of 10nm filaments. Note that some cells contain Nestin, but do not stain strongly for Vimentin and so appear red. Others contain Vimentin and not Nestin and so appear green- these are likely to be fibroblastic or endothelial cells. Some cells express both proteins and so appear yellowish. The presence of Nestin indicates that the cells are developing astrocytes, neuroblasts or undifferentiated neural stem cells.

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