Technical Data Sheet

Purified Mouse Anti-Rat Nogo-A

Product Information

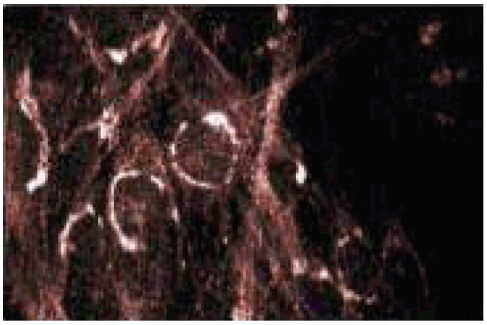
Material Number:	**612238**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	17/Nogo-A
Immunogen:	Rat Nogo-A aa. 424-627
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat
Target MW:	220 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

During neural development, many axons must travel long distances before reaching their dendritic targets and establishing synapses. After injury, these axonal connections can only regenerate in the peripheral nervous system, but not in the central nervous system (CNS). This difference in axon regeneration is thought to involve various inhibitory molecules found in the myelin of axons in the CNS. Nogo was identified in assays that examined fractions from myelin extracts for the antigen of monoclonal antibody IN-1, an antibody that allows modest axon regeneration after spinal cord injury. Nogo is expressed as three different proteins, Nogo-A, -B, and -C, which are members of the Reticulon family of ER anchoring proteins. Nogo-A is the full length protein, while Nogo-B contains 172 amino acids of the N-terminus and 188 amino acids of the C-terminus of Nogo-A, and Nogo-C contains only the 188 amino acid C-terminus of Nogo-A. These splice variants are all found in optic nerve, spinal cord, and cerebral cortex, but differ in expression in other neuronal and non-neuronal tissues. Thus, Nogo-A is a myelin-associated protein that may have roles in the ER, as well as during axon regeneration.

This antibody is routinely tested by western blot analysis. Other applications were tested at BD Biosciences Pharmingen during antibody development only or reported in the literature.

Western blot analysis of Nogo-A on a rat cerebellum lysate. *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the anti- Nogo-A antibody.*



Immunofluorescence staining of a CREF (cloned rat embryo fibroblast) lysate.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Suggested Companion Products

Catalog Number	Name	Size	Clone
611464	Rat Cerebellum Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Igs	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Igs	0.5 mg	Polyclonal

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.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chen MS, Huber AB, van der Haar ME, et al. Nogo-A is a myelin-associated neurite outgrowth inhibitor and an antigen for monoclonal antibody IN-1. *Nature.* 2000; 403(6768):434-439.(Biology)

GrandPre T, Nakamura F, Vartanian T, Strittmatter SM. Identification of the Nogo inhibitor of axon regeneration as a Reticulon protein. *Nature.* 2000; 403(6768):439-444.(Biology)

Tessier-Lavigne M, Goodman CS. Perspectives: neurobiology. Regeneration in the Nogo zone. *Science.* 2000; 287(5454):813-814.(Biology)