



Qty: 200 µg/400 µl

Mouse anti-Neurofilament

-68 kD (NF-L)

Catalog No. 13-0400

Lot No. See product label

Mouse anti-Neurofilament-68 kD(NF-L)

FORM

Liquid. Purified antibody (from ascites fluid) in PBS containing 0.1% sodium azide (NaN₃) at a concentration of 0.5 mg/ml.

CLONE: DA2

ISOTYPE: IgG₁, kappa

SPECIFICITY

This antibody reacts with the 68 kD polypeptides of human neurofilament and may exhibit cross reactivity with those of other higher vertebrates. It specifically recognizes a phosphate-independent epitope on NF-L.

APPLICATION

Neurofilament proteins (NFPs) are a macromolecular complex comprised of 3 polypeptides designated as NF-L, NF-M and NF-H. NFPs are found in the perikarya, particularly in neuronal axons throughout the central and peripheral nervous system. Since NFPs are major structural proteins and biochemically quite stable, antibodies to NFPs are useful probes in studies of neuronal expression, morphology, connectivity and pathology. The presence or absence of NFP in a variety of nervous system or neuroendocrine tumors can provide useful information about the original cell type of the tumor. In addition, the normal NFP staining pattern is altered in a variety of human diseases including Alzheimer's disease, diffuse cortical Lewy body disease, Parkinson's disease and amyotrophic lateral sclerosis (Lou Gehrig' disease). Alterations in the NFP expression pattern are also seen in most toxin-induced, sporadic and hereditary axonopathies occurring in humans and animals.

USAGE

Immunohistochemistry*:	1-5 µg/ml
Immunoblotting:	0.1-0.5 µg/ml
ELISA:	0.1-0.5 µg/ml
Immunoprecipitation:	2-5 µg
Paraffin-embedded^(2,3,4)	

*This antibody is suitable for immunohistochemical staining of alcohol and paraformaldehyde-fixed paraffin-embedded or frozen tissue sections, ELISA, and immunoblot.

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Do not repeated freeze and thaw.

BACKGROUND

Neurofilaments are intermediate (10-12nm) filaments located specifically in neurons. There are three classes of neurofilaments: NF-L (68 kDa), NF-M (160 kDa). And NF-H (200 kDa). The neurofilaments are long helical proteins which polymerize to form a rigid cytoskeleton in the neuron. This polymerized network is composed of all three filaments, and the stoichiometry of association varies during development. Neurofilaments are posttranslationally modified both by phosphorylation and glycosylation. Like other intermediate filament proteins, phosphorylation likely mediates neurofilament function remains unclear.

(cont'd)

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REFERENCES

1. Shaw G & Chau V : *Proc. Natl Acad Sci USA* 85,2854 (1988).
2. Edson KJ et al: *J. Neurosci Res* 30,105 (1991).
3. Trojanowski JQ *J Hist Cytochem* 35,999 (1987).
- 4 Shaw, G: In Burgoyne, RD(ed): *The Neuronal Cytoskeleton*, NY , Alan R. Liss Inc., pp 185-214 (1991).
5. Schmidt et al: *Lab Invest*, 56 282-294 (1987).
6. Tanaka, J. & Sobue, K.: *J Neuroscience* 14(3): 1038-1052 (1994).

RELATED PRODUCTS

Product	Clone/PAD	Cat. No.
Ms x Neurofilament-160/200 kD (NF-M+H)	RMdO-20	13-1300
Ms x Neurofilament (NF-L+H)	ZCN37	18-0041
Ms x Neurofilament-160 kD (NF-M)	RMO-270	13-0700
Ms x Neurofilament-200 kD (NF-H)	RMO-24	13-1000
Ms x Neurofilament-L+M+H (PAN)	RMO-24	18-0171
Ms x Neurofilament-160 kD (NF-M)	RMO-44	13-0500
Ms x Neurofilament-160 kD (NF-M)	RMO-281	13-0800

Product	Conjugate	Cat. No.
Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
	FITC	81-6511
	TRITC	81-6514
	Cy™3	81-6515
	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
	Biotin	81-6540

Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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