

Datasheet: MCA1321GA

Description:	MOUSE ANTI RAT NEUROFILAMENT 200kDa
Specificity:	NEUROFILAMENT H 200kDa
Other names:	NEUROFILAMENT HEAVY POLYPEPTIDE
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	RT97
Isotype:	IgG1
Quantity:	0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			■	
Immunohistology - Frozen	■			
Immunohistology - Paraffin	■			1/50 - 1/100
Immunohistology - Resin			■	
ELISA			■	
Immunoprecipitation			■	
Western Blotting			■	

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species

Rat

Species Cross Reactivity

Reacts with: Reptile, Human, Chicken, Pig, Mouse
N.B. Antibody reactivity and working conditions may vary between species.

Product Form

Purified IgG - liquid

Preparation

Purified IgG prepared by hydrophobic interaction chromatography from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide (NaN₃)

Approx. Protein Concentrations

IgG concentration 1.0 mg/ml

Immunogen

Triton X-100-insoluble rat brain protein

External Database Links

UniProt:

[P16884](#) NfH_RAT [Related reagents](#)

Entrez Gene:

[24587](#) Nefn [Related reagents](#)

Synonyms

Nfh

Specificity	<p>MCA1321GA recognises the 200kD neurofilament protein in a range of species. The antibody stains various tumours including pheochromocytoma, paraganglioma and ganglioneuroblastoma.</p> <p>It has also been demonstrated that the RT97 antibody recognises a phosphorylation dependent epitope on microtubule associated protein 1B (MAP1B) and on Tau in Western blots. Reactivity of the antibody with MAP1 and Tau is not seen under the conditions for immunohistochemistry.</p>
Immunohistology	This product does not require protein digestion pre-treatment of paraffin sections. This product does not require antigen retrieval using heat treatment prior to staining of paraffin sections.
Histology Positive Control Tissue	Brain or spinal cord
References	<ol style="list-style-type: none"> Weber, K. <i>et al.</i> (1983) Neurofilaments, a subclass of intermediate filaments: structure and expression. C.S.H. Symp. Quant. Biol. 48: 717-729. Anderton, B. H. <i>et al.</i> (1982) Monoclonal antibodies show that neurofibrillary tangles and neurofilaments share antigenic determinants. Nature 298: 84-86. Johnstone, M. <i>et al.</i> (1997) The neurofilament antibody RT97 recognises a developmentally regulated phosphorylation epitope on microtubule associated protein 1B. J. Anat. 191: 229-244. Tonge, D. A. <i>et al.</i> (1996) Expression of a developmentally regulated phosphorylated form of microtubule - associated protein B in sprouting and regenerating axons <i>in vitro</i>. Neuroscience. 73: 541 - 551. Sann, H. <i>et al.</i> (1995) RT97: a marker for capsaicin-insensitive sensory endings in the rat skin. Cell Tissue Res. 282: 155 - 161. Veeranna, <i>et al.</i> (2008) Neurofilament tail phosphorylation: identity of the RT-97 phosphoepitope and regulation in neurons by cross-talk among proline-directed kinases. J Neurochem. 2008 Oct;107(1): 35-49. Logan, A. <i>et al.</i> (2006) Neurotrophic factor synergy is required for neuronal survival and disinhibited axon regeneration after CNS injury. Brain. 129: 490-502. Lorber, B. <i>et al.</i> (2004) Stimulated regeneration of the crushed adult rat optic nerve correlates with attenuated expression of the protein tyrosine phosphatases RPTPalpha, STEP, and LAR. Mol Cell Neurosci. 27: 404-16. Reynolds, J. <i>et al.</i> (2005) Age-dependent changes in Fibroblast growth factor 2 (FGF-2) expression in mouse cerebellar neurons. J Cell Mol Med. 9: 398-406. Shin, D.H. <i>et al.</i> (2003) The correspondence between the labeling patterns of antibody RT97, neurofilaments, microtubule associated protein 1B and tau varies with cell types and development stages of chicken retina. Neurosci Lett. 342: 167-70. Connolly ,A.A. <i>et al.</i> (1987) A comparative study of a silver stain and monoclonal antibody reactions on Alzheimer's neurofibrillary tangles. J Neurol Neurosurg Psychiatry. 50: 1221-4. Doering, L.C. (1991) Transplantation of fetal CNS tissue into the peripheral nervous system: a model to study aberrant changes in the neuronal cytoskeleton. J Neural Transplant Plast. 2: 193-205. McCarthy, P.W. <i>et al.</i> (1992) RT97- and calcitonin gene-related peptide-like immunoreactivity in lumbar intervertebral discs and adjacent tissue from the rat. J Anat. 180: 15-24. Murphy, A. <i>et al.</i> (1993) Neurofilament expression in human T lymphocytes. Immunology. 79: 167-70. Yabe, J.T. <i>et al.</i> (2001) Neurofilaments consist of distinct populations that can be distinguished by C-terminal phosphorylation, bundling, and axonal transport rate in growing axonal neurites. J Neurosci. 21: 2195-205. Wang, S. <i>et al.</i> (2000) Progressive optic axon dystrophy and vacuslar changes in rd mice. Invest Ophthalmol Vis Sci. 41: 537-45. Kuwamura, M. <i>et al.</i> (2004) Cerebral ganglioneuroblastoma in a golden retriever dog. Vet Pathol. 41: 282-4.
Storage	<p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet Documentation #10040 available at: http://www.abdserotec.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight@800 , FITC , HRP
Goat Anti Mouse IgG (STAR77...)	HRP
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
HuCAL Anti Mouse IgG1 (HCA036...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Rabbit Anti Mouse IgG (STAR12...)	RPE
Sheep Anti Mouse IgG (H/L) (AAC10...)	Biotin , FITC
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight@800
Goat Anti Mouse IgG (STAR70...)	FITC

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