Technical Data Sheet

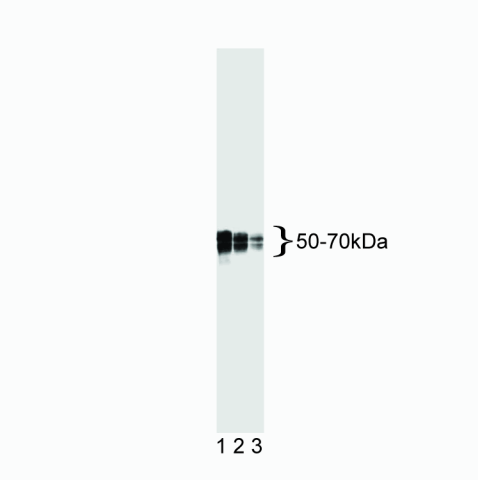
Purified Mouse Anti-Rat Tau

Product Information

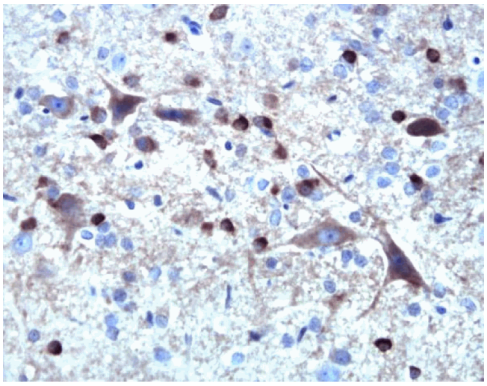
Material Number:	**556319**
Size:	0.1 mg
Concentration:	0.5 mg/ml
Clone:	TAU-5
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat
Target MW:	45-70 kDa
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

Tau proteins are microtuble-associated proteins (MAPs) that are thought to function by stabilizing microtubles. They comprise a family of multiple polypeptides that originate from one gene. Alternate splicing of Tau mRNA and differential phosphorylation contribute to the heterogeneity of Tau. Typically, Tau proteins migrate between ~ 45-70 kDa with isoelectric points ranging from 6.5-8.0. Tau expression is widespread in the brain and is found in most cell types within the mammalian central nervous system. Tau has a complex biochemical nature that is partly due to its many isoforms. The number and molecular weights of Tau forms changes during brain development. Additionally, the molecular wieghts and forms of Tau proteins at a given point of development vary between species. Antibodies directed against different epitopes have been used to distinguish between Tau forms. The monoclonal antibody TAU-5 recognizes a phosphorylation-independent epitope on Tau proteins. The reduced molecular weight of Tau proteins may range between 45 kDa to 95 kDa. The TAU-5 antibody reacts with a phosphorylation-independent epitope in the middle of tau. It recognizes both the phosphorylated and non-phosphorylated form of Tau. The antibody has been characterized in rat tissue.



Western blot analysis of Tau. *A rat cortex lysate was probed with the mouse anti-rat Tau antibody at concentrations of 3.0 µg/mL (lane 1), 1.0 µg/mL (lane 2), and 0.5 µg/mL (lane 3). Tau is identified as bands between ~ 50-70 kDa.*



Immunohistochemical staining of Tau. *A rat brain section was formalin-fixed and paraffin-embedded for staining with the mouse anti-rat Tau antibody. Investigators are encouraged to titrate between 10 µg/mL to 0.032 µg/mL.*

Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunohistochemistry	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. 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.
3. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

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Papasozomenos SC, Binder LI. Phosphorylation determines two distinct species of Tau in the central nervous system. *Cell Motil Cytoskeleton.* 1987; 8(3):210-226. (Biology)

Papasozomenos SC, Su Y. Rapid dephosphorylation of tau in heat-shocked fetal rat cerebral explants: prevention and hyperphosphorylation by inhibitors of protein phosphatases PP1 and PP2A. *J Neurochem.* 1995; 65(1):396-406.(Clone-specific: Immunohistochemistry, Western blot)

Riederer BM, Binder LI. Differential distribution of tau proteins in developing cat cerebellum. *Brain Res Bull.* 1994; 33(2):155-161.(Biology)

Watanabe N, Takio K, Hasegawa M, Arai T, Titani K, Ihara Y. Tau 2: a probe for a Ser conformation in the amino terminus of tau. *J Neurochem.* 1992; 58(3):960-966.(Biology)