Phospho-Tau (Ser202, Thr205) Monoclonal Antibody (AT8)

Product Details	
Size	100 µg
Species	Human, Mouse, Rat
Published Species	Dog, Artificial Control, Rabbit, Rat, Fruit fly, Non-human primate, Hamster, Human, Mouse
Expression System	Mouse / IgG1
Class	Monoclonal
Type	Antibody
Clone	AT8
Conjugate	Unconjugated
Immunogen	Partially purified human PHF-Tau
Form	Liquid
Concentration	0.2 mg/mL
Purification	Protein A
Storage buffer	PBS
Contains	no preservative
Storage Conditions	-20° C, Avoid Freeze/Thaw Cycles
RRID	AB_223647

Applications	Tested Dilution	Publications
ELISA (ELISA)	Assay Dependent	6 Publications
Immunocytochemistry (ICC)	1:50-1:1000	24 Publications
Immunofluorescence (IF)	1:50-1:1000	19 Publications
Immunohistochemistry (Paraffin) (IHC (P))	Assay Dependent	32 Publications
Western Blot (WB)	1:250-1:2000	191 Publications
Flow Cytometry (Flow)	-	1 Publication
Immunohistochemistry (Frozen) (IHC (F))	-	7 Publications
Immunohistochemistry (IHC)	-	303 Publications
Immunohistochemistry - Free Floating (IHC (Free))	-	17 Publications
Miscellaneous PubMed (Misc)	-	23 Publications

Product Specific Information

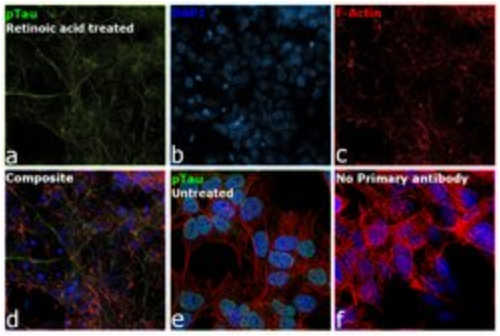
MN1020 targets PHF-tau (Ser202/Thr205)a in ELISA, IF, IHC(P), and WB applications and shows reactivity with Human samples.

The MN1020 immunogen is partially purified human PHF-Tau.

MN1020 detects PHF-tau (Ser202/Thr205)a which has a predicted molecular weight of approximately 79 kDa.

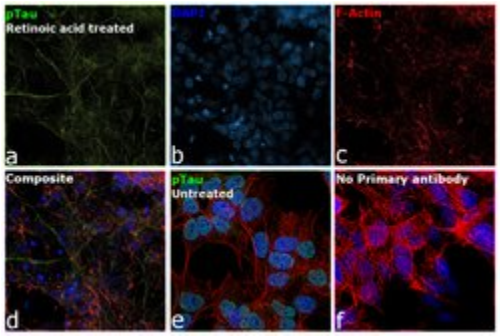
This product is a Low Endotoxin formulation.

Advanced Verification Data

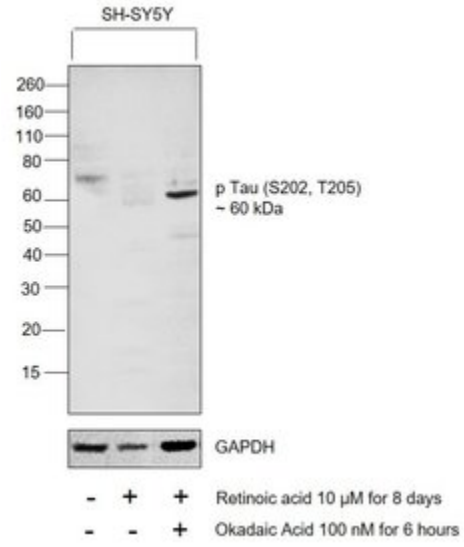


Phospho-Tau (Ser202, Thr205) Antibody (MN1020)
Detection of altered subcellular localization of the target protein by cell treatment demonstrates antibody specificity. Immunofluorescence analysis using Phospho-Tau (Ser202, Thr205) Monoclonal Antibody (AT8) (Product # MN1020), shows plasma membrane and cytoskeleton localization in SH-SY5Y cells treated with retinoic acid as compared to untreated SH-SY5Y cells which is reported to be low to negative for PhosphoTau expression. Cell treatment validation info.

Product Images For Phospho-Tau (Ser202, Thr205) Monoclonal Antibody (AT8)



Phospho-Tau (Ser202, Thr205) Antibody (MN1020) in ICC
Immunofluorescence analysis of Phospho-Tau (Ser202, Thr205) was performed using 70% confluent log phase SH-SY5Y Retinoic acid 100 nM, 8 days. The cells were fixed with 4% paraformaldehyde for 10 minutes, permeabilized with 0.1% Triton™ X-100 for 15 minutes, and blocked with 2% BSA for 45 minutes at room temperature. The cells were labeled with Phospho-Tau (Ser202, Thr205) Monoclonal Antibody (AT8) (Product # MN1020) at 1:100 in 0.1% BSA, incubated at 4 degree celsius overnight and then labeled with Donkey anti-Mouse IgG (H+L) Highly Cross-Adsorbed Secondary Antibody, Alexa Fluor Plus 488 (Product # A32766), (1:2000), for 45 minutes at room temperature (Panel a: Green). Nuclei (Panel b:Blue) were stained with ProLong™ Diamond Antifade Mountant with DAPI (Product # P36962). F-actin (Panel c: Red) was stained with Rhodamine Phalloidin (Product # R415, 1: 300). Panel d represents the merged image showing Plasma membrane and cytoskeleton localization. Panel e represents untreated cells showing faint signal Panel f represents control cells with no primary antibody to assess background. The images were captured at 60X magnification.



Phospho-Tau (Ser202, Thr205) Antibody (MN1020) in WB
Western blot was performed using Anti-Phospho-Tau (Ser202, Thr205) Monoclonal Antibody (AT8) (Product # MN1020) and a 60kDa band corresponding to Phospho-Tau (Ser202, Thr205) was observed across cell line tested and increased upon Retinoic acid and the successive Okadaic acid treatments. Whole cell extracts (30 µg lysate) of SH-SY5Y (Lane 1), SH-SY5Y treated with Retinoic acid (10 uM for 8 days) (Lane 2), SH-SY5Y differentiated with retinoic acid and treated with Okadaic acid (100 nM for 6 hours) (Lane 3) were electrophoresed using NuPAGE™ 10% Bis-Tris Protein Gel (Product # NP0301BOX). Resolved proteins were then transferred onto a Nitrocellulose membrane (Product # IB23001) by iBlot® 2 Dry Blotting System (Product # IB21001). The blot was probed with the primary antibody (1:1000) and detected by chemiluminescence with Goat anti-Mouse IgG (H+L) Superclonal™ Recombinant Secondary Antibody, HRP (Product # A28177, 1:5000 dilution) using the iBright FL 1000 (Product # A32752). Chemiluminescent detection was performed using SuperSignal™ West Dura Extended Duration Substrate (Product # 34076).

623 References

Immunohistochemistry (303)

Frontiers in neuroanatomy

Subregional Density of Neurons, Neurofibrillary Tangles and Amyloid Plaques in the Hippocampus of Patients With Alzheimer's Disease.

"MN1020 was used in Immunohistochemistry to examine the possible relationship of both A plaques and NFTs with neuronal loss in several hippocampal fields (DG, CA3, CA1, and subiculum) of 11 demented AD patients."

Authors: Furcila D,Domínguez-Álvaro M,DeFelipe J,Alonso-Nanclares L

Species
Human

Dilution
1:2000

Year
2020

Frontiers in aging neuroscience

In vivo Bioluminescence Imaging Used to Monitor Disease Activity and Therapeutic Response in a Mouse Model of Tauopathy.

"MN1020 was used in Immunohistochemistry to use serial bioluminescent images to define the onset and the time course of astrogliosis in mice."

Authors: Dunn-Meynell AA,Dowling P,Marchese M,Rodriguez E,Blumberg B,Choi YB,Gaindh D,Lu W

Species
Mouse

Dilution
Not Cited

Year
2020

View more IHC references on thermofisher.com

Western Blot (191)

Frontiers in cellular neuroscience

Upregulated Expression of MicroRNA-204-5p Leads to the Death of Dopaminergic Cells by Targeting DYRK1A-Mediated Apoptotic Signaling Cascade.

"MN1020 was used in Western Blotting to study the role of microRNA (miR-204-5p) in dopaminergic neurone death in Parkinson's disease."

Authors: Chiu CC,Yeh TH,Chen RS,Chen HC,Huang YZ,Weng YH,Cheng YC,Liu YC,Cheng AJ,Lu YC,Chen YJ,Lin YW,Hsu CC,Chen YL,Lu CS,Wang HL

Species
Not Applicable

Dilution
Not Cited

Year
2020

Frontiers in aging neuroscience

Pathological Tau From Alzheimer's Brain Induces Site-Specific Hyperphosphorylation and SDS- and Reducing Agent-Resistant Aggregation of Tau *in vivo*.

"MN1020 was used in Western Blotting to speculate that AD P-tau seeds hyperphosphorylated tau to form aggregates, which resist to the dephosphorylation by PP2A, resulting in hyperphosphorylation and pathology of tau."

Authors: Miao J,Shi R,Li L,Chen F,Zhou Y,Tung YC,Hu W,Gong CX,Iqbal K,Liu F

Species
Mouse

Dilution
Not Cited

Year
2020

View more WB references on thermofisher.com

More applications with references on thermofisher.com

IF (19) ICC (24) IHC (P) (32) Misc (23) IHC (F) (7) IHC (Free) (17) ELISA (6) Flow (1)