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# Tau Monoclonal Antibody (HT7)

**Catalog Number** **MN1000**

**Product data sheet**

| Details | |
|---|---|
| **Size** | 100 ug |
| **Host/Isotope** | Mouse / IgG1, kappa |
| **Class** | Monoclonal |
| **Type** | Antibody |
| **Clone** | HT7 |
| **Immunogen** | Purified human Tau, epitope human Tau between residue 159 and 163 (numbering according to human Tau40), corresponding to the amino acid sequence PPGQK. |
| **Conjugate** | Unconjugated |
| **Form** | Liquid |
| **Concentration** | 0.2 mg/ml |
| **Purification** | Protein A |
| **Storage buffer** | PBS |
| **Contains** | no preservative |
| **Storage Conditions** | -20° C, Avoid Freeze/Thaw Cycles |

| Species Reactivity | |
|---|---|
| **Tested species reactivity** | Bovine, Human |
| **Published species reactivity** | Rat, Non-human primate, Human, Mouse, Not Applicable |

| Tested Applications | Dilution * |
|---|---|
| **ELISA (ELISA)** | Assay Dependent |
| **Immunocytochemistry (ICC)** | 1:500-1:2000 |
| **Immunofluorescence (IF)** | 1:500-1:2000 |
| **Immunohistochemistry (Paraffin) (IHC (P))** | 1:500-1:2000 |
| **Western Blot (WB)** | Assay Dependent |

| Published Applications | |
|---|---|
| **Immunohistochemistry (Paraffin) (IHC (P))** | See 3 publications below |
| **Immunocytochemistry (ICC)** | See 5 publications below |
| **Western Blot (WB)** | See 55 publications below |
| **Neutralization (Neu)** | See 1 publications below |
| **Miscellaneous PubMed (MISC)** | See 1 publications below |
| **Immunohistochemistry (IHC)** | See 23 publications below |
| **Immunohistochemistry - Free Floating (IHC (Free))** | See 1 publications below |
| **Immunoprecipitation (IP)** | See 2 publications below |
| **ELISA (ELISA)** | See 6 publications below |

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

## Product specific information

MN1000 targets Tau in ELISA, IF, ICC, IHC (P), and WB applications and shows reactivity with Bovine, and Human samples.

The MN1000 immunogen is purified human Tau, epitope human Tau between residue 159 and 163 (numbering according to human Tau40), corresponding to the amino acid sequence PPGQK.

MN1000 detects Tau which has a predicted molecular weight of approximately 79 kDa.

## Background/Target Information

Paired helical filament (PHF) is a major component of the neurofibrillary tangles involved in the pathology of Alzheimer and quote;s disease. PHFs are composed of the microtubule-associated protein tau in a hyper-phosphorylated state (ref1). Tau protein is produced by a single gene expressed predominantly in neurons. The Tau gene undergoes complex alternative splicing, yielding six different isoforms of tau in the adult brain. Following translation, the tau protein can be further modified by phosphorylation at several different sites

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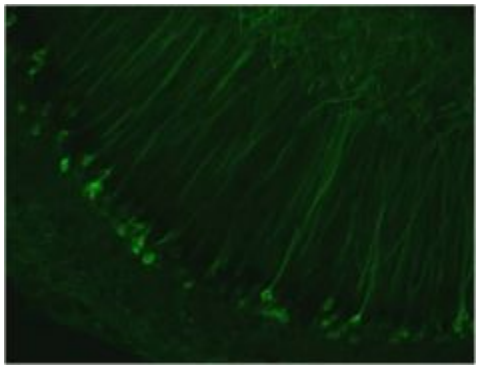
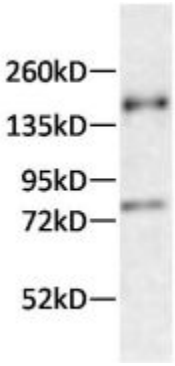
## Product Images For Tau Monoclonal Antibody (HT7)



**Tau Antibody (MN1000) in IF**

Immunohistochemistry was performed on paraformaldehyde-fixed free-floating hippocampus tissue sections from transgenic (3xTg-AD) mice that express human Tau. Tissues were blocked in 5% normal horse serum and 0.4% Triton X-100 for 60 minutes at room temperature and probed with a Tau monoclonal antibody (Product # MN1000) at a dilution of 1:1000 at 4°C overnight. Tissues were washed extensively with PBS. Detection was performed using a fluorophore-conjugated anti-mouse IgG secondary antibody at a dilution of 1:1000. Tissues were visualized by fluorescence microscopy. Data courtesy of the Innovators Program.




**Tau Antibody (MN1000) in WB**

Western blot analysis of human Tau was performed by loading 15ug of sarkosyl-soluble cortex lysate from transgenic (3xTg-AD) mice that express human Tau per well onto an SDS-PAGE gel. Proteins were transferred to a PVDF membrane and blocked with 5% milk + 0.5% BSA in PBST buffer for 1 hour at room temperature. The membrane was probed with a Tau monoclonal antibody (Product # MN1000) at a dilution of 1:1000 at 4°C overnight, washed in PBST, and probed with an HRP-conjugated anti-mouse IgG secondary antibody at a dilution of 1:60, 000. Detection was performed using a chemiluminescent substrate. Data courtesy of the Innovators Program.



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## PubMed References For Tau Monoclonal Antibody (HT7)

### 3 Immunohistochemistry (Paraffin) References

| Species / Dilution | Summary |
|---|---|
| Not Applicable / Not Cited | MN1000 was used in immunohistochemistry - paraffin section to characterize nuclear indentations that are tau-positive in P301S tauopathy mice<br><br>Brain pathology (Zurich, Switzerland) (May 2017; 27: 314)<br>**"Tau-positive nuclear indentations in P301S tauopathy mice."**<br>Author(s):Fernández-Nogales M,Santos-Galindo M,Merchán-Rubira J,Hoozemans JJM,Rábano A,Ferrer I,Avila J,Hernández F,Lucas JJ<br>PubMed Article URL:http://dx.doi.org/10.1111/bpa.12407 |
| Not Applicable / 1:100 | MN1000 was used in immunohistochemistry - paraffin section to study alteration of MAP2 splicing in Huntington's disease<br><br>Brain pathology (Zurich, Switzerland) (Mar 2017; 27: 181)<br>**"MAP2 Splicing is Altered in Huntington's Disease."**<br>Author(s):Cabrera JR,Lucas JJ<br>PubMed Article URL:http://dx.doi.org/10.1111/bpa.12387 |
| Not Applicable / 1:500 | MN1000 was used in immunohistochemistry - paraffin section to elucidate a mouse model of frontotemporal dementia by decreased social exploration, impulsivity, and executive dysfunction<br><br>Neurobiology of learning and memory (Apr 2016; 130: 34)<br>**"Impulsivity, decreased social exploration, and executive dysfunction in a mouse model of frontotemporal dementia."**<br><br>Author(s):Van der Jeugd A,Vermaercke B,Halliday GM,Staufenbiel M,Götz J<br>PubMed Article URL:http://dx.doi.org/10.1016/j.nlm.2016.01.007 |

### 5 Immunocytochemistry References

| Species / Dilution | Summary |
|---|---|
| Human / Not Cited | MN1000 was used in immunocytochemistry and western blot to investigate how TRIM21 neutralizes tau seeds<br><br>Proceedings of the National Academy of Sciences of the United States of America (Jan 2017; 114: 574)<br>**"Cytosolic Fc receptor TRIM21 inhibits seeded tau aggregation."**<br>Author(s):McEwan WA,Falcon B,Vaysburd M,Clift D,Oblak AL,Ghetti B,Goedert M,James LC<br>PubMed Article URL:http://dx.doi.org/10.1073/pnas.1607215114 |
| Not Applicable / 1:500 | MN1000 was used in immunocytochemistry to characterize live neurons cultured from adult P301S tau mice by use of the fluorescent pentameric oligothiophene pFTAA that identifies filamentous tau<br><br>Frontiers in neuroscience (Jun 2015; 9: null)<br>**"The fluorescent pentameric oligothiophene pFTAA identifies filamentous tau in live neurons cultured from adult P301S tau mice."**<br>Author(s):Brelstaff J,Ossola B,Neher JJ,Klingstedt T,Nilsson KP,Goedert M,Spillantini MG,Tolkovsky AM<br>PubMed Article URL:http://dx.doi.org/10.3389/fnins.2015.00184 |
| Human / 1:1000 | MN1000 was used in immunocytochemistry and western blot to test if CHIP ameliorates the pathological changes associated with tau aggregation.<br><br>Journal of Alzheimer's disease : JAD (Feb 2015; 44: 937)<br>**"Carboxy terminus heat shock protein 70 interacting protein reduces tau-associated degenerative changes."**<br>Author(s):Saidi LJ,Polydoro M,Kay KR,Sanchez L,Mandelkow EM,Hyman BT,Spires-Jones TL<br>PubMed Article URL:http://dx.doi.org/10.3233/JAD-142094 |
| Not Applicable / 1:500 | MN1000 was used in immunocytochemistry and western blot to determine seeding potencies of recombinant and native Tau aggregates due to conformation<br><br>The Journal of biological chemistry (Jan 2015; 290: 1049)<br>**"Conformation determines the seeding potencies of native and recombinant Tau aggregates."**<br>Author(s):Falcon B,Cavallini A,Angers R,Glover S,Murray TK,Barnham L,Jackson S,O'Neill MJ,Isaacs AM,Hutton ML,Szekeres PG,Goedert M,Bose S<br>PubMed Article URL:http://dx.doi.org/10.1074/jbc.M114.589309 |



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| | MN1000 was used in immunocytochemistry and immunohistochemistry to study the effects of a pathogenic tau fragment on hippocampal neurogenesis, behaviour and learning |
| Mouse / 1:300 | Neurobiology of aging (Nov 2013; 34: 2551)<br>**"Impact of N-tau on adult hippocampal neurogenesis, anxiety, and memory."**<br>Author(s):Pristerà A,Saraulli D,Farioli-Vecchioli S,Strimpakos G,Costanzi M,di Certo MG,Cannas S,Ciotti MT,Tirone F,Mattei E,Cestari V,Canu N<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neurobiolaging.2013.05.010 |

## 55 Western Blot References

| Species / Dilution | Summary |
|---|---|
| | MN1000 was used in western blot to study the Alzheimer's disease brain for a decrease in HNK-1 carrier glycoproteins |
| Not Applicable / Not Cited | Molecular neurobiology (Jan 2017; 54: 188)<br>**"HNK-1 Carrier Glycoproteins Are Decreased in the Alzheimer's Disease Brain."**<br>Author(s):García-Ayllón MS,Botella-López A,Cuchillo-Ibañez I,Rábano A,Andreasen N,Blennow K,Ávila J,Sáez-Valero J<br>PubMed Article URL:http://dx.doi.org/10.1007/s12035-015-9644-x |
| | MN1000 was used in western blot characterize an Alzheimer's disease model that utilizes Octodon degus |
| Rat / 1:1000 | Acta neuropathologica communications (Aug 2016; 4: null)<br>**"Revisiting rodent models: Octodon degus as Alzheimer's disease model?"**<br>Author(s):Steffen J,Krohn M,Paarmann K,Schwitlick C,Brüning T,Marreiros R,Müller-Schiffmann A,Korth C,Braun K,Pahnke J<br>PubMed Article URL:http://dx.doi.org/10.1186/s40478-016-0363-y |
| | MN1000 was used in western blot identify and characterize a DYRK1A inhibitor |
| Human / 1:1000 | Disease models and mechanisms (Aug 2016; 9: 839)<br>**"A chemical with proven clinical safety rescues Down-syndrome-related phenotypes in through DYRK1A inhibition."**<br>Author(s):Kim H,Lee KS,Kim AK,Choi M,Choi K,Kang M,Chi SW,Lee MS,Lee JS,Lee SY,Song WJ,Yu K,Cho S<br>PubMed Article URL:http://dx.doi.org/10.1242/dmm.025668 |
| | MN1000 was used in western blot to study a novel therapeutic strategy for Alzheimer's disease via Pim1 inhibition |
| Not Applicable / 1:3000 | Molecular neurodegeneration (Jul 2016; 11: null)<br>**"Pim1 inhibition as a novel therapeutic strategy for Alzheimer's disease."**<br>Author(s):Velazquez R,Shaw DM,Caccamo A,Oddo S<br>PubMed Article URL:http://dx.doi.org/10.1186/s13024-016-0118-z |
| | MN1000 was used in western blot to investigate the axon initial segment in neurological disorders |
| Human / Not Cited | Molecular neurodegeneration (Jun 2016; 11: null)<br>**"Acetylated tau destabilizes the cytoskeleton in the axon initial segment and is mislocalized to the somatodendritic compartment."**<br>Author(s):Sohn PD,Tracy TE,Son HI,Zhou Y,Leite RE,Miller BL,Seeley WW,Grinberg LT,Gan L<br>PubMed Article URL:http://dx.doi.org/10.1186/s13024-016-0109-0 |
| | MN1000 was used in western blot to assess induction of synaptic impairment and memory deficit by calcieurin-mediated inactivation of nuclear CaMKIV/CREB signaling due to tau accumulation |
| Not Applicable / 1:1000 | Proceedings of the National Academy of Sciences of the United States of America (Jun 2016; 113: E3773)<br>**"Tau accumulation induces synaptic impairment and memory deficit by calcineurin-mediated inactivation of nuclear CaMKIV/CREB signaling."**<br>Author(s):Yin Y,Gao D,Wang Y,Wang ZH,Wang X,Ye J,Wu D,Fang L,Pi G,Yang Y,Wang XC,Lu C,Ye K,Wang JZ<br>PubMed Article URL:http://dx.doi.org/10.1073/pnas.1604519113 |
| | MN1000 was used in western blot to assess induction of degradation of nicotinic acetylcholine receptor alpha4 via activating calpain-2 due to accumulation of human full-length tau |
| Not Applicable / 1:1000 | Scientific reports (Jun 2016; 6: null)<br>**"Accumulation of human full-length tau induces degradation of nicotinic acetylcholine receptor 4 via activating calpain-2."**<br>Author(s):Yin Y,Wang Y,Gao D,Ye J,Wang X,Fang L,Wu D,Pi G,Lu C,Zhou XW,Yang Y,Wang JZ<br>PubMed Article URL:http://dx.doi.org/10.1038/srep27283 |



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| | MN1000 was used in western blot to study the inner circular smooth muscle of the developing mouse intestine transcriptome: evidence that the hedgehog target gene, cJun, regulates visceral smooth muscle genes |
| Not Applicable / 1:2000 | Developmental dynamics : an official publication of the American Association of Anatomists (May 2016; 245: 614)<br>**"Transcriptome of the inner circular smooth muscle of the developing mouse intestine: Evidence for regulation of visceral smooth muscle genes by the hedgehog target gene, cJun."**<br>Author(s):Gurdziel K,Vogt KR,Walton KD,Schneider GK,Gumucio DL<br>PubMed Article URL:http://dx.doi.org/10.1002/dvdy.24399 |
| | MN1000 was used in western blot to elucidate the exacerbation of human Tau neurotoxicity in vivo by acetylation mimic of lysine 280 |
| Not Applicable / 1:2000 | Scientific reports (Mar 2016; 6: null)<br>**"Acetylation mimic of lysine 280 exacerbates human Tau neurotoxicity in vivo."**<br>Author(s):Gorsky MK,Burnouf S,Dols J,Mandelkow E,Partridge L<br>PubMed Article URL:http://dx.doi.org/10.1038/srep22685 |
| | MN1000 was used in western blot to study amelioration of tau pathology and cognition in the offspring of triple transgenic AD mice by maternal dexamethasone exposure |
| Not Applicable / 1:200 | Molecular psychiatry (Mar 2016; 21: 403)<br>**"Maternal dexamethasone exposure ameliorates cognition and tau pathology in the offspring of triple transgenic AD mice."**<br>Author(s):Di Meco A,Joshi YB,Lauretti E,Praticò D<br>PubMed Article URL:http://dx.doi.org/10.1038/mp.2015.78 |
| | MN1000 was used in western blot to characterize tau pathology mouse models via obesity, diabetes, and leptin resistance |
| Not Applicable / 1:1000 | Neuroscience (Feb 2016; 315: 162)<br>**"Obesity, diabetes, and leptin resistance promote tau pathology in a mouse model of disease."**<br>Author(s):Platt TL,Beckett TL,Kohler K,Niedowicz DM,Murphy MP<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neuroscience.2015.12.011 |
| | MN1000 was used in western blot to assess the impairment in synaptic plasticity and learning due to amyloid-beta dimers in the absence of plaque pathology |
| Not Applicable / 1:1000 | Brain : a journal of neurology (Feb 2016; 139: 509)<br>**"Amyloid- dimers in the absence of plaque pathology impair learning and synaptic plasticity."**<br>Author(s):Müller-Schiffmann A,Herring A,Abdel-Hafiz L,Chepkova AN,Schäble S,Wedel D,Horn AH,Sticht H,de Souza Silva MA,Gottmann K,Sergeeva OA,Huston JP,Keyvani K,Korth C<br>PubMed Article URL:http://dx.doi.org/10.1093/brain/awv355 |
| | MN1000 was used in western blot to investigate Alzheimer's Disease in a mouse model where ribosomal protein S6 kinase is decreased |
| Not Applicable / 1:3000 | The Journal of neuroscience : the official journal of the Society for Neuroscience (Oct 2015; 35: 14042)<br>**"Reducing Ribosomal Protein S6 Kinase 1 Expression Improves Spatial Memory and Synaptic Plasticity in a Mouse Model of Alzheimer's Disease."**<br>Author(s):Caccamo A,Branca C,Talboom JS,Shaw DM,Turner D,Ma L,Messina A,Huang Z,Wu J,Oddo S<br>PubMed Article URL:http://dx.doi.org/10.1523/JNEUROSCI.2781-15.2015 |
| | MN1000 was used in western blot to use rTg4510 mice to elucidate pathogenesis of tau-induced disease. |
| Human / Not Cited | Molecular neurodegeneration (Mar 2015; 10: null)<br>**"Analysis of tau post-translational modifications in rTg4510 mice, a model of tau pathology."**<br>Author(s):Song L,Lu SX,Ouyang X,Melchor J,Lee J,Terracina G,Wang X,Hyde L,Hess JF,Parker EM,Zhang L<br>PubMed Article URL:http://dx.doi.org/10.1186/s13024-015-0011-1 |
| | MN1000 was used in western blot to investigate the cerebral delivery of small interfering RNAs targeting human tau |
| Mouse / 1:1000 | Current gene therapy (Feb 2015; 14: 343)<br>**"Tau silencing by siRNA in the P301S mouse model of tauopathy."**<br>Author(s):Xu H,Rösler TW,Carlsson T,de Andrade A,Fiala O,Hollerhage M,Oertel WH,Goedert M,Aigner A,Höglinger GU<br>PubMed Article URL:http://dx.doi.org/null |
| | MN1000 was used in immunocytochemistry and western blot to test if CHIP ameliorates the pathological changes associated with tau aggregation. |
| Human / 1:5000 | Journal of Alzheimer's disease : JAD (Feb 2015; 44: 937)<br>**"Carboxy terminus heat shock protein 70 interacting protein reduces tau-associated degenerative changes."**<br>Author(s):Saidi LJ,Polydoro M,Kay KR,Sanchez L,Mandelkow EM,Hyman BT,Spires-Jones TL<br>PubMed Article URL:http://dx.doi.org/10.3233/JAD-142094 |



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| Mouse / 1:200 | MN1000 was used in immunohistochemistry - paraffin section and western blot to characterize the behavioral, biochemical, and neuropathologic effects of 8ISO in the triple transgenic mouse model of Alzheimer's disease<br><br>Neurobiology of aging (Feb 2015; 36: 812)<br>**"Modulation of AD neuropathology and memory impairments by the isoprostane F2 is mediated by the thromboxane receptor."**<br>Author(s):Lauretti E,Di Meco A,Chu J,Praticò D<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neurobiolaging.2014.10.005 |
| Human / Not Cited | MN1000 was used in western blot to assess the effect of aging on brain lipoxin A4 levels using non-transgenic and 3xTg-AD mice.<br><br>Journal of Alzheimer's disease : JAD (Dec 2014; 43: 893)<br>**"Restoration of lipoxin A4 signaling reduces Alzheimer's disease-like pathology in the 3xTg-AD mouse model."**<br>Author(s):Dunn HC,Ager RR,Baglietto-Vargas D,Cheng D,Kitazawa M,Cribbs DH,Medeiros R<br>PubMed Article URL:http://dx.doi.org/10.3233/JAD-141335 |
| Mouse / 1:1000 | MN1000 was used in western blot to determine whether there is a pathogenic interaction of the environmental toxin piericidin A from streptomyces spp. and the P301S mutation<br><br>PloS one (Dec 2014; 9: null)<br>**"Piericidin A aggravates Tau pathology in P301S transgenic mice."**<br>Author(s):Höllerhage M,Deck R,De Andrade A,Respondek G,Xu H,Rösler TW,Salama M,Carlsson T,Yamada ES,Gad El Hak SA,Goedert M,Oertel WH,Höglinger GU<br>PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0113557 |
| Mouse / Not Cited | MN1000 was used in western blot to investigate the interactions between Abeta1-42 and Abeta1-40<br><br>Molecular neurodegeneration (Nov 2014; 9: null)<br>**"Tau pathogenesis is promoted by A1-42 but not A1-40."**<br>Author(s):Hu X,Li X,Zhao M,Gottesdiener A,Luo W,Paul S<br>PubMed Article URL:http://dx.doi.org/10.1186/1750-1326-9-52 |
| Mouse / 1:200 | MN1000 was used in western blot to study the deleterious effects of sleep deprivation on memory and Tau pathology in a murine Alzheimer's disease model<br><br>Neurobiology of aging (Aug 2014; 35: 1813)<br>**"Sleep deprivation impairs memory, tau metabolism, and synaptic integrity of a mouse model of Alzheimer's disease with plaques and tangles."**<br>Author(s):Di Meco A,Joshi YB,Praticò D<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neurobiolaging.2014.02.011 |
| Human / Not Cited | MN1000 was used in western blot to study the relationship of an Alzheimer's disease-linked SNP in the CLU gene and Tau<br><br>PloS one (Jul 2014; 9: null)<br>**"Intracellular clusterin interacts with brain isoforms of the bridging integrator 1 and with the microtubule-associated protein Tau in Alzheimer's disease."**<br>Author(s):Zhou Y,Hayashi I,Wong J,Tugusheva K,Renger JJ,Zerbinatti C<br>PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0103187 |
| Human / Not Cited | MN1000 was used in western blot to study the lack of involvementof GSK3-alpha/beta in the elevated tau phosphorylation observed in Tau.P30L hypothermic mice<br><br>The European journal of neuroscience (Jul 2014; 40: 2442)<br>**"Terminal hypothermic Tau.P301L mice have increased Tau phosphorylation independently of glycogen synthase kinase 3/."**<br>Author(s):Maurin H,Lechat B,Borghgraef P,Devijver H,Jaworski T,Van Leuven F<br>PubMed Article URL:http://dx.doi.org/10.1111/ejn.12595 |
| Mouse / 1:1000 | MN1000 was used in western blot to study the role of mTOR hyperactivation in the mechanism by which a high-sucrose diet promotes beta-amyloid pathology in Alzheimer's disease<br><br>Neurobiology of aging (Jun 2014; 35: 1233)<br>**"Mammalian target of rapamycin hyperactivity mediates the detrimental effects of a high sucrose diet on Alzheimer's disease pathology."**<br>Author(s):Orr ME,Salinas A,Buffenstein R,Oddo S<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neurobiolaging.2013.12.006 |



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| | MN1000 was used in western blot to study the effects of transgenically expressing a constitutively active Y531F Fyn mutant on murine life-span, activity and protein phosphorylation |
| Human / 1:2000 | Frontiers in molecular neuroscience (May 2014; 7: null)<br>**"Premature lethality, hyperactivity, and aberrant phosphorylation in transgenic mice expressing a constitutively active form of Fyn."**<br>Author(s):Xia D,Götz J<br>PubMed Article URL:http://dx.doi.org/10.3389/fnmol.2014.00040 |
| | MN1000 was used in western blot to study the role of exagerated Ca(2+) signaling mediated by InsP3 receptor1 in the pathogenesis of mutant presenilin-linked Alzheimer's disease |
| Mouse / 1:500 | The Journal of neuroscience : the official journal of the Society for Neuroscience (May 2014; 34: 6910)<br>**"Suppression of InsP3 receptor-mediated Ca2+ signaling alleviates mutant presenilin-linked familial Alzheimer's disease pathogenesis."**<br>Author(s):Shilling D,Müller M,Takano H,Mak DO,Abel T,Coulter DA,Foskett JK<br>PubMed Article URL:http://dx.doi.org/10.1523/JNEUROSCI.5441-13.2014 |
| | MN1000 was used in western blot to study the increased tau phosphorylation following treatment with a mitochondrial complex I inhibitor in a tau transgenic mouse model |
| Mouse / 1:1000 | Experimental neurology (Mar 2014; 253: 113)<br>**"Annonacin, a natural lipophilic mitochondrial complex I inhibitor, increases phosphorylation of tau in the brain of FTDP-17 transgenic mice."**<br>Author(s):Yamada ES,Respondek G,Müssner S,de Andrade A,Höllerhage M,Depienne C,Rastetter A,Tarze A,Friguet B,Salama M,Champy P,Oertel WH,Höglinger GU<br>PubMed Article URL:http://dx.doi.org/10.1016/j.expneurol.2013.12.017 |
| | MN1000 was used in western blot to study the effect of endogenous murine tau on cognition and neurofibrillary tangles in a murine Alzheimer's disease model transgenically expressing human tau |
| Human / 1:5000 | Neurobiology of disease (Feb 2014; 62: 407)<br>**"Endogenous murine tau promotes neurofibrillary tangles in 3xTg-AD mice without affecting cognition."**<br>Author(s):Baglietto-Vargas D,Kitazawa M,Le EJ,Estrada-Hernandez T,Rodriguez-Ortiz CJ,Medeiros R,Green KN,LaFerla FM<br>PubMed Article URL:http://dx.doi.org/10.1016/j.nbd.2013.10.019 |
| | MN1000 was used in western blot to study a site-specific rabbit monoclonal antibody that recognozes serine 400 O-GlcNAcylated tau |
| Human / 1:50,000 | FEBS letters (Nov 2013; 587: 3722)<br>**"Generation and characterization of a rabbit monoclonal antibody site-specific for tau O-GlcNAcylated at serine 400."**<br>Author(s):Cameron A,Giacomozzi B,Joyce J,Gray A,Graham D,Ousson S,Neny M,Beher D,Carlson G,O'Moore J,Shearman M,Hering H<br>PubMed Article URL:http://dx.doi.org/10.1016/j.febslet.2013.09.042 |
| | MN1000 was used in western blot to study the reduced alpha- and beta-cleavage of APP and reduced phosporylated tau accumulation in transgenic mice treated with mifepristone |
| Mouse / 1:5000 | Biological psychiatry (Sep 2013; 74: 357)<br>**"Mifepristone alters amyloid precursor protein processing to preclude amyloid beta and also reduces tau pathology."**<br>Author(s):Baglietto-Vargas D,Medeiros R,Martinez-Coria H,LaFerla FM,Green KN<br>PubMed Article URL:http://dx.doi.org/10.1016/j.biopsych.2012.12.003 |
| | MN1000 was used in western blot to study the beneficial effects on tau pathology in a murine transgenic tauopathy model of the virally-mediated overexpression of soluble fractalkine |
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| Species / Dilution | Summary |
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| Human / 1:200 | The American journal of pathology (Sep 2010; 177: 1422)<br>**"Early oligodendrocyte/myelin pathology in Alzheimer's disease mice constitutes a novel therapeutic target."**<br>Author(s):Desai MK,Mastrangelo MA,Ryan DA,Sudol KL,Narrow WC,Bowers WJ<br>PubMed Article URL:http://dx.doi.org/10.2353/ajpath.2010.100087 |
| | MN1000 was used in immunohistochemistry to analyze the cholinergic pathology in a tauopathy model |
| Human / 1:400 | Brain research (Aug 2010; 1347: 111)<br>**"Analysis of the cholinergic pathology in the P301L tau transgenic pR5 model of tauopathy."**<br>Author(s):Köhler C,Bista P,Götz J,Schröder H<br>PubMed Article URL:http://dx.doi.org/10.1016/j.brainres.2010.05.076 |

**1 Immunohistochemistry - Free Floating References**



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| Species / Dilution | Summary |
|---|---|
| Not Applicable / Not Cited | MN1000 was used in immunohistochemistry - free floating to investigate the effects of tau acetylation at Lys174<br><br>Nature medicine (Oct 2015; 21: 1154)<br>**"Critical role of acetylation in tau-mediated neurodegeneration and cognitive deficits."**<br>Author(s):Min SW,Chen X,Tracy TE,Li Y,Zhou Y,Wang C,Shirakawa K,Minami SS,Defensor E,Mok SA,Sohn PD,Schilling B, Cong X,Ellerby L,Gibson BW,Johnson J,Krogan N,Shamloo M,Gestwicki J,Masliah E,Verdin E,Gan L<br>PubMed Article URL:http://dx.doi.org/10.1038/nm.3951 |

## 2 Immunoprecipitation References

| Species / Dilution | Summary |
|---|---|
| Mouse / Not Cited | MN1000 was used in immunoprecipitation to study the mechanism by which O-GlcNAcylation prevents pathological agregation of tau in a murine tauopathy model<br><br>Neuropharmacology (Apr 2014; 79: 307)<br>**"Increased O-GlcNAcylation reduces pathological tau without affecting its normal phosphorylation in a mouse model of tauopathy."**<br>Author(s):Graham DL,Gray AJ,Joyce JA,Yu D,O'Moore J,Carlson GA,Shearman MS,Dellovade TL,Hering H<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neuropharm.2013.11.025 |
| Human / Not Cited | MN1000 was used in immunoprecipitation to identify and characterize a novel class of GSK3 beta inhibitors<br><br>Bioorganic and medicinal chemistry letters (Mar 2011; 21: 1429)<br>**"6-amino-4-(pyrimidin-4-yl)pyridones: novel glycogen synthase kinase-3 inhibitors."**<br>Author(s):Coffman K,Brodney M,Cook J,Lanyon L,Pandit J,Sakya S,Schachter J,Tseng-Lovering E,Wessel M<br>PubMed Article URL:http://dx.doi.org/10.1016/j.bmcl.2011.01.017 |

## 6 ELISA References

| Species / Dilution | Summary |
|---|---|
| Mouse / 1:1000 | MN1000 was used in ELISA and immunohistochemistry to study the ability of an anti-oligomeric tau monoclonal antibody to specifically reduce oligomeric tau and improve memory and locomotion in a murine Alzheimer's disease model<br><br>The Journal of neuroscience : the official journal of the Society for Neuroscience (Mar 2014; 34: 4260)<br>**"Passive immunization with Tau oligomer monoclonal antibody reverses tauopathy phenotypes without affecting hyperphosphorylated neurofibrillary tangles."**<br>Author(s):Castillo-Carranza DL,Sengupta U,Guerrero-Muñoz MJ,Lasagna-Reeves CA,Gerson JE,Singh G,Estes DM,Barrett AD,Dineley KT,Jackson GR,Kayed R<br>PubMed Article URL:http://dx.doi.org/10.1523/JNEUROSCI.3192-13.2014 |
| Human / 2.5 ug/ml | MN1000 was used in ELISA to study the potential utility of CSF tau and phospho181 tau as Alzheimer's disease biomarkers<br><br>PloS one (Oct 2013; 8: null)<br>**"Characterization of novel CSF Tau and ptau biomarkers for Alzheimer's disease."**<br>Author(s):Meredith JE,Sankaranarayanan S,Guss V,Lanzetti AJ,Berisha F,Neely RJ,Slemmon JR,Portelius E,Zetterberg H, Blennow K,Soares H,Ahlijanian M,Albright CF<br>PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0076523 |
| Human / Not Cited | MN1000 was used in ELISA to investigate the characteristics of TTBK1 in the brain of AD patients<br><br>Brain pathology (Zurich, Switzerland) (Jul 2013; 23: 378)<br>**"Tau-tubulin kinase 1 expression, phosphorylation and co-localization with phospho-Ser422 tau in the Alzheimer's disease brain."**<br>Author(s):Lund H,Cowburn RF,Gustafsson E,Strömberg K,Svensson A,Dahllund L,Malinowsky D,Sunnemark D<br>PubMed Article URL:http://dx.doi.org/10.1111/bpa.12001 |
| Mouse / Not Cited | MN1000 was used in ELISA to study mechaisms underlying the therapeutic effects of epothilone D in a murine transgenic tau model and the significance for Alzheimer's disease<br><br>The Journal of neuroscience : the official journal of the Society for Neuroscience (Mar 2012; 32: 3601)<br>**"The microtubule-stabilizing agent, epothilone D, reduces axonal dysfunction, neurotoxicity, cognitive deficits, and Alzheimer-like pathology in an interventional study with aged tau transgenic mice."**<br>Author(s):Zhang B,Carroll J,Trojanowski JQ,Yao Y,Iba M,Potuzak JS,Hogan AM,Xie SX,Ballatore C,Smith AB,Lee VM, Brunden KR<br>PubMed Article URL:http://dx.doi.org/10.1523/JNEUROSCI.4922-11.2012 |



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|---|---|
| | MN1000 was used in ELISA to study the sAPPb decrease in Alzheimer disease cortex |
| Human / Not Cited | Journal of neuroscience research (Jun 2011; 89: 822)<br>**"Decrease in brain soluble amyloid precursor protein (sAPP) in Alzheimer's disease cortex."**<br>Author(s):Wu G,Sankaranarayanan S,Hsieh SH,Simon AJ,Savage MJ<br>PubMed Article URL:http://dx.doi.org/10.1002/jnr.22618 |
| | MN1000 was used in ELISA to develop a novel ELISA assay for quantification of tau in cerebrospinal fluid |
| Human / 2 ug/ml | Neuroscience letters (May 2007; 418: 186)<br>**"Tau in cerebrospinal fluid: a sensitive sandwich enzyme-linked immunosorbent assay using tyramide signal amplification."**<br>Author(s):Yamamori H,Khatoon S,Grundke-Iqbal I,Blennow K,Ewers M,Hampel H,Iqbal K<br>PubMed Article URL:http://dx.doi.org/10.1016/j.neulet.2007.03.022 |



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