

# TTBK1 Antibody

Catalog # ASC10846

## Product Information

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<b>Application</b>	WB, IF, E, IHC-P
<b>Primary Accession</b>	<a href="#">Q5TCY1</a>
<b>Other Accession</b>	<a href="#">Q5TCY1</a> , <a href="#">97203020</a>
<b>Reactivity</b>	Human, Mouse
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG
<b>Calculated MW</b>	145 KDa
<b>Concentration (mg/ml)</b>	1 mg/mL
<b>Conjugate</b>	Unconjugated
<b>Application Notes</b>	TTBK1 antibody can be used for detection of TTBK1 by Western blot at 1 $\mu$ g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 $\mu$ g/mL. For immunofluorescence start at 20 $\mu$ g/mL.

## Additional Information

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<b>Gene ID</b>	84630
<b>Other Names</b>	Tau-tubulin kinase 1, 2.7.11.1, Brain-derived tau kinase, TTBK1, BDTK, KIAA1855
<b>Target/Specificity</b>	TTBK1; Multiple isoforms of TTBK1 are known to exist. This antibody is predicted to not cross-react with TTBK2.
<b>Reconstitution &amp; Storage</b>	TTBK1 antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
<b>Precautions</b>	TTBK1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

## Protein Information

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### Background

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TTBK1 Antibody: Tau tubulin kinase (TTBK1) belongs to the casein kinase 1 superfamily and is involved in the phosphorylation of specific serine/threonine residues in paired helical filaments of the tau protein. It is specifically expressed in the brain and induces tau aggregation in human neuronal cells in a dose-dependent manner. TTBK1 levels have been found to be upregulated in the brains of Alzheimer's disease (AD) patients, and mice expressing human TTBK1 protein showed significant age-dependent memory impairment. These mice displayed increased levels of the CDK5 activators p25 and p35, and reduced levels of the NMDA

receptor types 2B and 2D, suggesting that TTBK1 may play a role in memory dysfunction in AD patients.

## References

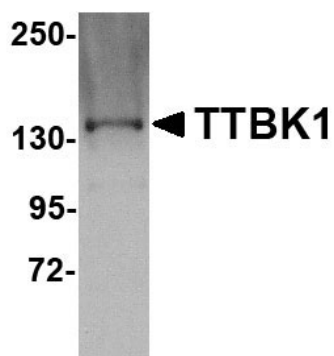
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Sato S, Cerny RL, Bueschner JL, et al. Tau-tubulin kinase 1 (TTBK1), a neuron-specific tau kinase candidate, is involved in tau phosphorylation and aggregation. *J. Neurochem.* 2006; 98:1573-84.

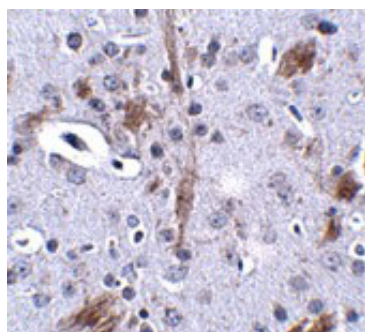
Sato S, Xu J, Okuyama S, et al. Spatial learning impairment, enhanced CDK5/p35 activity, and downregulation of NMDA receptor expression in transgenic mice expressing tau-tubulin kinase 1. *J. Neurosci.* 2008; 28:14511-21.

## Images

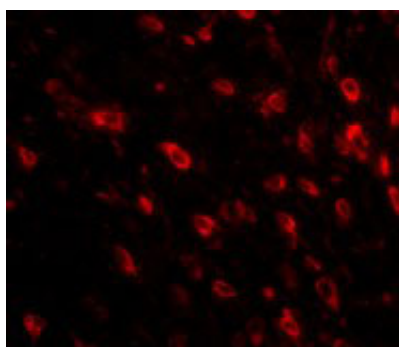
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Western blot analysis of TTBK1 in Jurkat lysate with TTBK1 antibody at 1  $\mu\text{g}/\text{mL}$ .



Immunohistochemistry of TTBK1 in mouse brain tissue with TTBK1 antibody at 2.5  $\mu\text{g}/\text{mL}$ .



Immunofluorescence of TTBK1 in Human Brain tissue with TTBK1 antibody at 20  $\mu\text{g}/\text{mL}$ .

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.