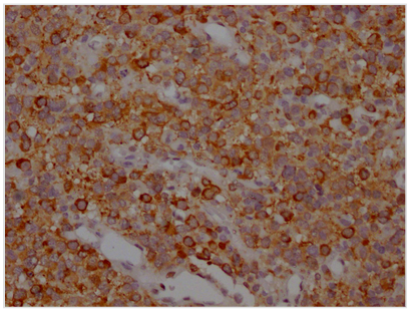
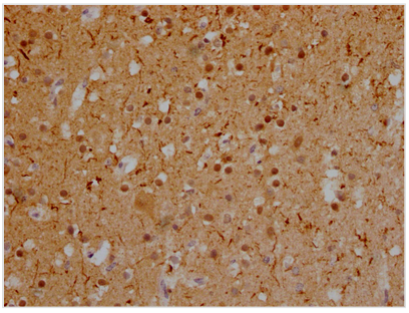
MAPT Recombinant Monoclonal Antibody

Product Code	CSB-RA246354A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P10636
Immunogen	A synthesized peptide derived from human Tau
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Promotes microtubule assembly and stability, and might be involved in the establishment and maintenance of neuronal polarity. The C-terminus binds axonal microtubules while the N-terminus binds neural plasma membrane components, suggesting that tau functions as a linker protein between both. Axonal polarity is predetermined by TAU/MAPT localization (in the neuronal cell) in the domain of the cell body defined by the centrosome. The short isoforms allow plasticity of the cytoskeleton whereas the longer isoforms may preferentially play a role in its stabilization.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Neuroscience; Signal transduction
Gene Names	MAPT
Clone No.	4A1

Image



IHC image of CSB-RA246354A0HU diluted at 1:100 and staining in paraffin-embedded human glioma cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA246354A0HU diluted at 1:100 and staining in paraffin-embedded human brain tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The MAPT recombinant monoclonal antibody was developed using protein and DNA recombinant technology. Initially, mice were injected with a synthetic peptide from human MAPT, and after a specific duration, spleen cells were aseptically extracted. The total RNA of the spleen cells was isolated, and the cDNA was synthesized from RNA reverse transcription, which served as the PCR template to amplify the MAPT antibody gene. The resulting MAPT antibody gene was then integrated into a vector, which was transfected into host cells and cultured. Subsequently, the MAPT recombinant monoclonal antibody was purified from the cell culture supernatant through affinity chromatography and extensively validated. This antibody can be used for ELISA and IHC experiments to detect the human MAPT protein.

The MAPT protein is primarily involved in stabilizing microtubules in neuronal cells. MAPT binds to microtubules and promotes their assembly and stability by crosslinking and bundling them together. It also helps to regulate the dynamics of microtubules by promoting their growth and preventing their disassembly. MAPT is involved in signaling pathways that control cell survival, growth, and differentiation. Mutations in the MAPT gene or alterations in MAPT protein expression have been associated with several neurodegenerative disorders, including Alzheimer's disease, Parkinson's disease, and frontotemporal dementia.