



# APP Monoclonal Antibody

<b>Catalog No</b>	YP-Ab-12602
<b>Isotype</b>	IgG
<b>Reactivity</b>	Human
<b>Applications</b>	WB;IHC;IF;ELISA
<b>Gene Name</b>	APP
<b>Protein Name</b>	Amyloid beta A4 protein, Amyloid- $\beta$ , A $\beta$
<b>Immunogen</b>	Purified recombinant fragment of APP expressed in E. Coli.
<b>Specificity</b>	APP Monoclonal Antibody detects endogenous levels of APP protein.
<b>Formulation</b>	Ascitic fluid containing 0.03% sodium azide, 0.5% BSA, 50% glycerol.
<b>Source</b>	Monoclonal, Mouse
<b>Purification</b>	Affinity purification
<b>Dilution</b>	WB: 1/500 - 1/2000. IHC: 1/200 - 1/1000. ELISA: 1/10000.. IF 1:50-200
<b>Concentration</b>	1 mg/ml
<b>Purity</b>	≥90%
<b>Storage Stability</b>	-20°C/1 year
<b>Synonyms</b>	APP; A4; AD1; Amyloid beta A4 protein; ABPP; APPI; APP; Alzheimer disease amyloid protein; Cerebral vascular amyloid peptide; CVAP; PreA4; Protease nexin-II; PN-II
<b>Observed Band</b>	
<b>Cell Pathway</b>	Cell membrane ; Single-pass type I membrane protein . Membrane ; Single-pass type I membrane protein . Perikaryon . Cell projection, growth cone . Membrane, clathrin-coated pit . Early endosome . Cytoplasmic vesicle . Cell surface protein that rapidly becomes internalized via clathrin-coated pits. Only a minor proportion is present at the cell membrane; most of the protein is present in intracellular vesicles (PubMed:20580937). During maturation, the immature APP (N-glycosylated in the endoplasmic reticulum) moves to the Golgi complex where complete maturation occurs (O-glycosylated and sulfated). After alpha-secretase cleavage, soluble APP is released into the extracellular space and the C-terminal is internalized to endosomes and lysosomes. Some APP accumulates in secretory transport ves
<b>Tissue Specificity</b>	Expressed in the brain and in cerebrospinal fluid (at protein level) (PubMed:2649245). Expressed in all fetal tissues examined with highest levels in brain, kidney, heart and spleen. Weak expression in liver. In adult brain, highest expression found in the frontal lobe of the cortex and in the anterior perisylvian cortex-opercular gyri. Moderate expression in the cerebellar cortex, the posterior perisylvian cortex-opercular gyri and the temporal associated cortex. Weak expression found in the striate, extra-striate and motor cortices. Expressed in cerebrospinal fluid, and plasma. Isoform APP695 is the predominant form in



neuronal tissue, isoform APP751 and isoform APP770 are widely expressed in non-neuronal cells. Isoform APP751 is the most abundant form in T-lymphocytes. Appican is expres

## Function

alternative products:Additional isoforms seem to exist. Experimental confirmation may be lacking for some isoforms,disease:Defects in APP are the cause of Alzheimer disease type 1 (AD1) [MIM:104300]. AD1 is a familial early-onset form of Alzheimer disease. It can be associated with cerebral amyloid angiopathy. Alzheimer disease is a neurodegenerative disorder characterized by progressive dementia, loss of cognitive abilities, and deposition of fibrillar amyloid proteins as intraneuronal neurofibrillary tangles, extracellular amyloid plaques and vascular amyloid deposits. The major constituent of these plaques is the neurotoxic amyloid-beta-APP 40-42 peptide (s), derived proteolytically from the transmembrane precursor protein APP by sequential secretase processing. The cytotoxic C-terminal fragments (CTFs) and the caspase-cleaved products such as C31 derived from APP, are also implicated

## Background

This gene encodes a cell surface receptor and transmembrane precursor protein that is cleaved by secretases to form a number of peptides. Some of these peptides are secreted and can bind to the acetyltransferase complex APBB1/TIP60 to promote transcriptional activation, while others form the protein basis of the amyloid plaques found in the brains of patients with Alzheimer disease. In addition, two of the peptides are antimicrobial peptides, having been shown to have bacteriocidal and antifungal activities. Mutations in this gene have been implicated in autosomal dominant Alzheimer disease and cerebroarterial amyloidosis (cerebral amyloid angiopathy). Multiple transcript variants encoding several different isoforms have been found for this gene. [provided by RefSeq, Aug 2014],

## matters needing attention

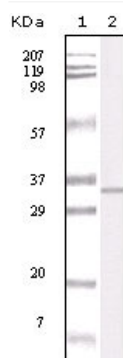
Avoid repeated freezing and thawing!

## Usage suggestions

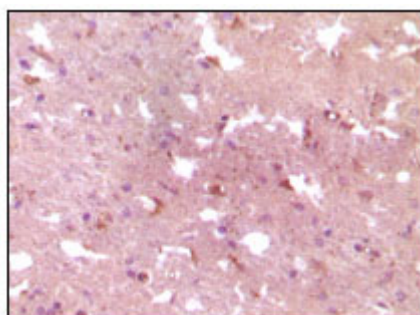
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



## Products Images



Western Blot analysis using APP Monoclonal Antibody against truncated APP recombinant protein.



Immunohistochemistry analysis of paraffin-embedded human Alzheimer brain tissue, showing cytoplasmic localization with DAB staining using APP Monoclonal Antibody.