

## APP Monoclonal Antibody

<b>Catalog No :</b>	YM0042
<b>Reactivity :</b>	Human
<b>Applications :</b>	WB;IHC;IF;ELISA
<b>Target :</b>	Amyloid- $\beta$
<b>Fields :</b>	>>Serotonergic synapse;>>Alzheimer disease;>>Pathways of neurodegeneration - multiple diseases
<b>Gene Name :</b>	APP
<b>Protein Name :</b>	Amyloid beta A4 protein, Amyloid- $\beta$ , A $\beta$
<b>Human Gene Id :</b>	351
<b>Human Swiss Prot No :</b>	P05067
<b>Mouse Swiss Prot No :</b>	P12023
<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>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
<b>Source :</b>	Monoclonal, Mouse
<b>Dilution :</b>	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. ELISA: 1:10000.. IF 1:50-200
<b>Purification :</b>	Affinity purification
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Do not lower than -25°C)
<b>Molecularweight :</b>	87kD

**Cell Pathway :** Alzheimer's disease;

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**P References :**

1. Yuzhi Chen, Wenyun Liu, Donna L, et al. J. Cell Biol., Oct 2003; 163: 27.
2. Robert Spoelgen, Christine A. F. von Arnim, et al. J. Neurosci., Jan 2006; 26: 418 - 428.

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**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],

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**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

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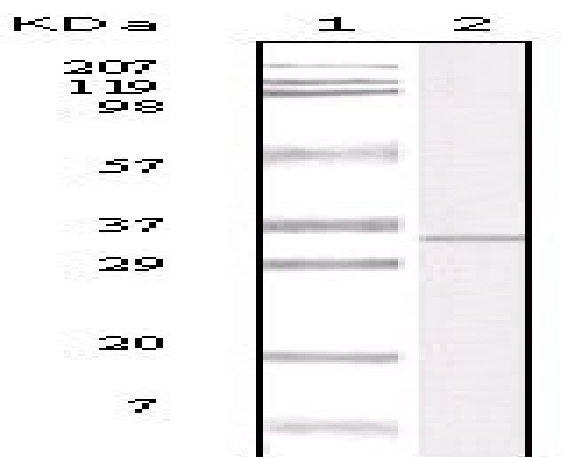
**Subcellular Location :** Cell membrane ; Single-pass type I membrane protein . Membrane ; Single-pass type I membrane protein . Perikaryon . Cell projection, growth cone . Membrane, clathrin-coated pit . Early endosome . Cytoplasmic vesicle . Cell surface protein that rapidly becomes internalized via 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

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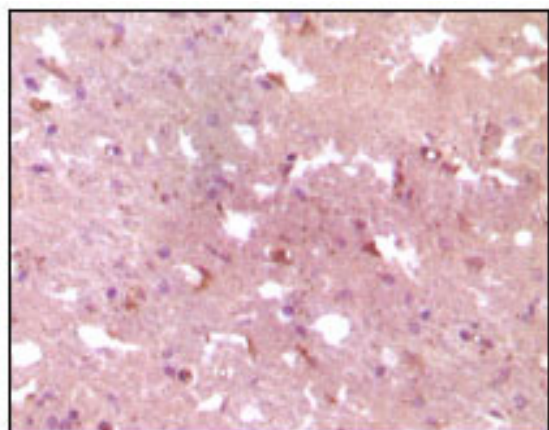
**Expression :** Expressed in the brain and in cerebrospinal fluid (at protein level) (PubMed:2649245). Expressed in all fetal tissues examined with highest levels in brain, kidney, heart and spleen. Weak expression in liver. In adult brain, highest expression found in the frontal lobe of the cortex 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

## 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.