anti-Amyloid Precursor Protein (APP N-terminus) antibody, rabbit serum (AN2)

74-106 100 ul

The **Alzheimer amyloid precursor protein (APP)** is an integral membrane protein expressed in many tissues and concentrated in the synapses of neurons. Its primary function is not known, though it has been implicated as a regulator of synapse formation and neural plasticity. **APP** is best known and most commonly studied as the precursor molecule whose proteolysis generates amyloid beta (Aβ), a 39- to 42-amino acid peptide whose amyloid fibrillar form is the primary component of amyloid plaques found in the brains of Alzheimer's disease patients. Isoform **APP**695 lacking the protease inhibitor domain is the predominant form in neuronal tissues.

Applications:

1. Western blotting (dilution: 1/3,000-1/500) 2. Immunocytochemistry (dilution: 1/1,000-1/500)

Other applications have not been tested.

Immunogen: Synthetic peptide corresponding to the N-terminus (aa 18-38) of human APP

Specificity: Specific to human, mouse and rat APP

Form: Antiserum added with 0.05% sodium azide

Storage: Shipped at 4℃ or -20℃, and upon arrival, aliquot and store at -20℃.

Data Link: Swiss-Prot, human P05067 , mouse P12023

References: **This antibody has been used in ref.3 and 4.**

1. Kang HG *et al.* (1987) "The precursor of Alzheimer's disease amyloid A4 protein resembles a cell-surface receptor." *Nature* **325**: 33-736 PMID: 2881207
2. Selkoe DJ (1994) "Normal and abnormal biology of the beta-amyloid precursor protein." *Annu. Rev. Neurosci.* **17:** 489-517 PMID: 8210185
3. Nishimura I *et al.* (2002) "Cell death induced by a caspase-cleaved transmembrane fragment of the Alzheimer amyloid precursor protein." *Cell Death Differ.* **9**: 199-208 PMID: 11840170 . WB, IC (human)
4. Nishimura I *et al.* (2003) "Upregulation and antiapoptotic role of endogenous Alzheimer amyloid precursor protein in dorsal root ganglion neurons." Exp Cell Res. 2003 Jun 10;286(2):241-51. PMID: 12749853 . IC (mouse)

Related products: #74-104 anti-APP (C-terminal) antibody, #74-108 anti-APP (C-terminal of the caspase 3- cleaved APP) antibody, #74-110 anti-APP Δ 31 (specific to C-terminal APP Δ 31) antibody

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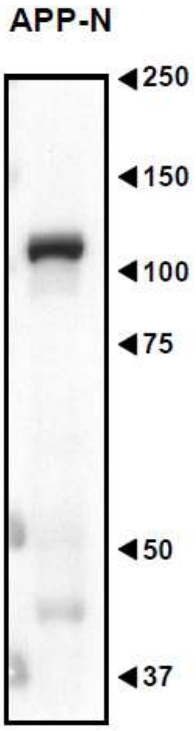

Fig.1.Western blot analysis of Amyloid Precursor Protein in the crude extract of mouse embryo with anti-APP N-teminua antibody (AN2).

The extract (10 μg protein)) was prepared from cerebral cortex of E 16.5 mouse embryo. The anti-Amyloid Precursor Protein (N-terminus) antibody (AN2) was used at 1/500 dilution. Molecular mass of mouse APP is 87 kDa. The numbers are positions of marker proteins shown in kDa.

APP undergoes various post-translational modification such as N- and O-glycosylation, proteolytic cleavage and phosphorylation.

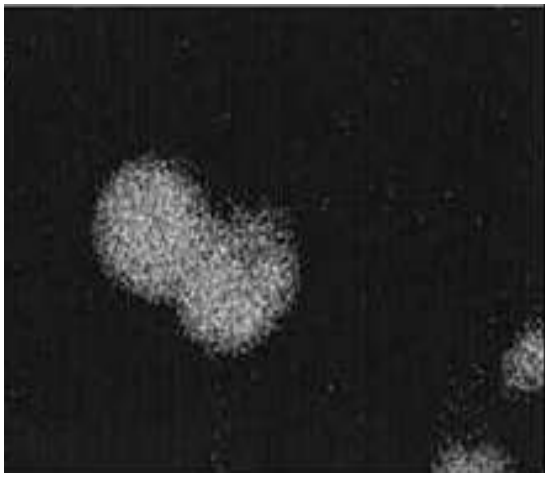

Fig.2 Immunocytochemistry for APP.

Mouse dorsal root ganglion cells were treated with this antibody at 1/500 dilution to examine neuronal APP expression