

Amyloid beta A4 protein Polyclonal Antibody

Catalog No: #42478

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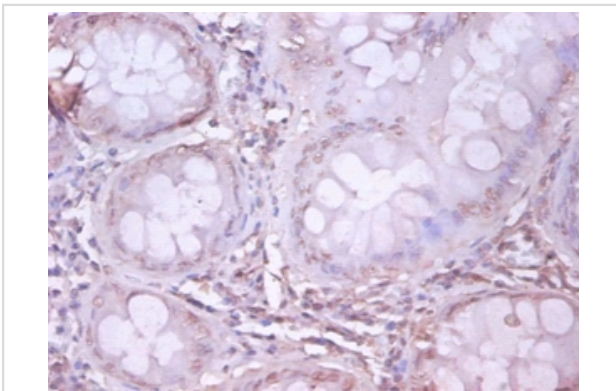
Description

Product Name	Amyloid beta A4 protein Polyclonal Antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Caprylic Acid Ammonium Sulfate Precipitation purified
Applications	IHC
Species Reactivity	Hu
Specificity	The antibody detects endogenous level of total Amyloid beta A4 protein polyclonal antibody.
Immunogen Type	protein
Immunogen Description	Recombinant human Amyloid beta A4 protein
Target Name	Amyloid beta A4 protein
Other Names	ABPP APPI APP Alzheimer disease amyloid protein Cerebral vascular amyloid peptide CVAP PreA4 Protease nexin-II PN-II
Accession No.	Swiss-Prot#: P05067
Uniprot	P05067
GeneID	351;
Formulation	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, PH 7.4
Storage	Store at -20°C

Application Details

Immunohistochemistry: 1:20 - 1:200

Images



Immunohistochemical analysis of paraffin-embedded human colorectal carcinoma using #42478 at dilution of 1:100 .

Background

Functions as a cell surface receptor and performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Involved in cell mobility and transcription regulation through protein-protein interactions. Can promote transcription activation through binding to APBB1-KAT5 and inhibits Notch signaling through interaction with Numb. Couples to apoptosis-inducing pathways such as those mediated by G(O) and JIP. Inhibits G(o) alpha ATPase activity By similarity. Acts as a kinesin I membrane receptor, mediating the axonal transport of

beta-secretase and presenilin 1. Involved in copper homeostasis/oxidative stress through copper ion reduction. In vitro, copper-metallated APP induces neuronal death directly or is potentiated through Cu²⁺-mediated low-density lipoprotein oxidation. Can regulate neurite outgrowth through binding to components of the extracellular matrix such as heparin and collagen I and IV. The splice isoforms that contain the BPTI domain possess protease inhibitor activity. Induces a AGER-dependent pathway that involves activation of p38 MAPK, resulting in internalization of amyloid-beta peptide and leading to mitochondrial dysfunction in cultured cortical neurons. Ref.36 Ref.63 Ref.65 Ref.88 Ref.89 Beta-amyloid peptides are lipophilic metal chelators with metal-reducing activity. Bind transient metals such as copper, zinc and iron. In vitro, can reduce Cu²⁺ and Fe³⁺ to Cu⁺ and Fe²⁺, respectively. Beta-amyloid 42 is a more effective reductant than beta-amyloid 40. Beta-amyloid peptides bind to lipoproteins and apolipoproteins E and J in the CSF and to HDL particles in plasma, inhibiting metal-catalyzed oxidation of lipoproteins. Beta-APP42 may activate mononuclear phagocytes in the brain and elicit inflammatory responses. Promotes both tau aggregation and TPK II-mediated phosphorylation. Interaction with overexpressed HADH2 leads to oxidative stress and neurotoxicity. Ref.36 Ref.63 Ref.65 Ref.88 Ref.89 Appicans elicit adhesion of neural cells to the extracellular matrix and may regulate neurite outgrowth in the brain By similarity. Ref.36 Ref.63 Ref.65 Ref.88 Ref.89 The gamma-CTF peptides as well as the caspase-cleaved peptides, including C31, are potent enhancers of neuronal apoptosis. Ref.36 Ref.63 Ref.65 Ref.88 Ref.89 N-APP binds TNFRSF21 triggering caspase activation and degeneration of both neuronal cell bodies (via caspase-3) and axons (via caspase-6). Ref.36 Ref.63 Ref.65 Ref.88 Ref.89

References

[1] "The precursor of Alzheimer's disease amyloid A4 protein resembles a cell-surface receptor."Kang J., Lemaire H.-G., Unterbeck A., Salbaum J.M., Masters C.L., Grzeschik K.-H., Multhaup G., Beyreuther K., Mueller-Hill B.Nature 325:733-736(1987) [PubMed:

Note: This product is for in vitro research use only