Human APP ELISA Kit

Catalog No: #EK5262

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Description

Product Name	Human APP ELISA Kit
Specificity	Human
Crossing Reactivity	There is no detectable cross-reactivity with other relevant proteins.
Immunogen Type	NSO,L18-L688
Other Names	Amyloid beta A4 protein; ABPP; APPI; APP; Alzheimer disease amyloid protein; Cerebral vascular amyloid peptide; CVAP; PreA4; Protease nexin-II; PN-II; N-APP; Soluble APP-alpha; S-APP-alpha; Soluble APP-beta; S-APP-beta; C99; Beta-amyloid protein 42; Beta-APP42; Beta-amyloid protein 40; Beta-APP40; C83; P3(42); P3(40); C80; Gamma-secretase C-terminal fragment 59; Amyloid intracellular domain 59; AICD-59; AID(59); Gamma-CTF(59); Gamma-secretase C-terminal fragment 57; Amyloid intracellular domain 57; AICD-57; AID(57); Gamma-CTF(57); Gamma-secretase C-terminal fragment 50; Amyloid intracellular domain 50; AICD-50; AID(50); Gamma-CTF(50); C31; APP; A4, AD1;
Accession No.	P05067
Uniprot	P05067
GeneID	351;
Cell Localization	Membrane; Cell surface proteinthat rapidly becomes internalized via clathrin-coated pits. Duringmaturation, the immature APP (N-glycosylated in the endoplasmicreticulum) moves to the Golgi complex where complete maturationoccurs (O-glycosylated and sulfated). After alpha-secretasecleavage, soluble APP is released into the extracellular space andthe C-terminal is internalized to endosomes and lysosomes. SomeAPP accumulates in secretory transport vesicles leaving the lateGolgi compartment and returns to the cell surface. Gamma-CTF(59)peptide is located to both the cytoplasm and nuclei of neurons. Itcan be translocated to the nucleus through association with APBB1(Fe65). Beta-APP42 associates with FRPL1 at the cell surface andthe complex is then rapidly internalized. APP sorts to thebasolateral surface in epithelial cells. During neuronaldifferentiation, the Thr-743 phosphorylated form is located mainlyin growth cones, moderately in neurites and sparingly in the cellbody. Casein kinase phosphorylation can occur either at the cellsurface or within a post-Golgi compartment. Associates with GPC1in perinuclear compartments. Colocalizes with SORL1 in a vesicularpattern in cytoplasm and perinuclear regions.

Application Details

sensitivity:100pg mlDetect Range:312pg ml-20 000pg mlsample_type:cell culture supernates cell lysates tissue homogenates serum and plasma (heparin EDTA).capture_antibody:monoclonal antibody from mousedetection_antibody:polyclonal antibody from goatgene_name:APPprotein_name:Amyloid beta A4 proteingene_full_name:Amyloid beta A4 proteintissue_specificity: Expressed in all fetal tissues examined withhighest levels in brain kidney heart and spleen. Weak expressionin liver. In adult brain highest expression found in the frontallobe of the cortex and in the anterior perisylvian cortex-opercular gyri. Moderate expression in the cerebellar cortex theposterior perisylvian cortex-opercular gyri and the temporalassociated cortex. Weak expression found in the striate extra-striate and motor cortices. Expressed in cerebrospinal fluid andplasma. 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 expressed in astrocytes..sequence_similarities:Belongs to the APP family. tmb_incubation:15-20minresearch_category:cell biology|apoptosis|intracellular|associated proteins|neuroscience|neurology process|neural signal transduction|adapters|cytoplasmic|protein trafficking|organelle proteins|neurogenesis|developmental biology|organogenesis|nervous system development

Product Description

Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human APP

Background

protein_function: Functions as a cell surface receptor and performsphysiological functions on the surface of neurons relevant toneurite growth, neuronal adhesion and axonogenesis. Involved incell mobility and transcription regulation through protein-proteininteractions. Can promote transcription activation through bindingto APBB1-KAT5 and inhibits Notch signaling through interactionwith Numb. Couples to apoptosis-inducing pathways such as thosemediated by G(O) and JIP. Inhibits G(o) alpha ATPase activity (Bysimilarity). Acts as a kinesin I membrane receptor, mediating theaxonal transport of beta-secretase and presenilin 1. Involved incopper homeostasis,oxidative stress through copper ion reduction.In vitro, copper-metallated APP induces neuronal death directly oris potentiated through Cu(2+)-mediated low-density lipoproteinoxidation. Can regulate neurite outgrowth through binding tocomponents of the extracellular matrix such as heparin andcollagen I and IV. The splice isoforms that contain the BPTIdomain possess protease inhibitor activity. Induces a AGER-dependent pathway that involves activation of p38 MAPK, resultingin internalization of amyloid-beta peptide and leading tomitochondrial dysfunction in cultured cortical neurons. ProvidesCu(2+) ions for GPC1 which are required for release of nitricoxide (NO) and subsequent degradation of the heparan sulfatechains on GPC1..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, neural plasticity and iron export. APP is best known and most commonly studied as the precursor molecule whose proteolysis generates beta amyloid(Abeta), 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. APP undergoes posttranslational proteolytic processing by alpha-, beta-, and gamma-secretases. Alpha-secretase generates soluble amyloid protein, while beta- and gamma-secretases generate APP components with amyloidogenic features. These 2 processing pathways are mutually exclusive.

Note: This product is for in vitro research use only