

Datasheet for ABIN7194239 **APP Protein (Fc Tag)**



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Overview

Quantity:	50 µg
Target:	APP
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This APP protein is labelled with Fc Tag.

Product Details

Purpose:	Recombinant Human APP/Protease nexin-II Protein (Fc Tag)(Active)
Sequence:	Met 1-Leu 669
Characteristics:	A DNA sequence encoding the human APP-751 isoform (NP_958816.1) (Met 1-Leu 669) was expressed with the C-terminal fused Fc region of human IgG1.
Purity:	> 95 % as determined by reducing SDS-PAGE.
Endotoxin Level:	< 1.0 EU per µg as determined by the LAL method.
Biological Activity Comment:	Measured by its ability to inhibit trypsin cleavage of a fluorogenic peptide substrate, Mca-RPKPVE-Nval-WRK(Dnp)-NH ₂ , (R&D Systems, Catalog # ES002). The IC ₅₀ value is < 1.2 nM.

Target Details

Target:	APP
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Target Details

Alternative Name: [APP/Protease nexin-II \(APP Products\)](#)

Background: Amyloid precursor protein (APP) is a type I transmembrane protein expressed in many tissues and concentrated in the synapses of neurons, and is suggested as a regulator of synapse formation and neural plasticity. APP can be processed by two different proteolytic pathways. In one pathway, APP is cleaved by β - and γ -secretase to produce the amyloid- β -protein (A β , Abeta, beta-amyloid) which is the principal component of the amyloid plaques, the major pathological hallmark of Alzheimer's disease (AD), while in the other pathway, α -secretase is involved in the cleavage of APP whose product exerts anti-amyloidogenic effect and prevention of the A β peptide formation. The aberrant accumulation of aggregated beta-amyloid peptides (Abeta) as plaques is a hallmark of AD neuropathology and reduction of Abeta has become a leading direction of emerging experimental therapies for the disease. Besides this pathological function of Abeta, recently published data reveal that Abeta also has an essential physiological role in lipid homeostasis. Cholesterol increases Abeta production, and conversely Abeta production causes a decrease in cholesterol synthesis. Abeta may be part of a mechanism controlling synaptic activity, acting as a positive regulator presynaptically and a negative regulator postsynaptically. The pathological accumulation of oligomeric Abeta assemblies depresses excitatory transmission at the synaptic level, but also triggers aberrant patterns of neuronal circuit activity and epileptiform discharges at the network level. Abeta-induced dysfunction of inhibitory interneurons likely increases synchrony among excitatory principal cells and contributes to the destabilization of neuronal networks. There is evidence that beta-amyloid can impair blood vessel function. Vascular beta-amyloid deposition, also known as cerebral amyloid angiopathy, is associated with vascular dysfunction in animal and human studies. Alzheimer disease is associated with morphological changes in capillary networks, and soluble beta-amyloid produces abnormal vascular responses to physiological and pharmacological stimuli.

Synonym: AAA;ABETA;ABPP;AD1;APPI;CTFgamma;CVAP;PN-II;PN2

Molecular Weight: 101 kDa

NCBI Accession: [NP_958816](#)

Pathways: [Caspase Cascade in Apoptosis](#), [EGFR Signaling Pathway](#), [Transition Metal Ion Homeostasis](#), [Skeletal Muscle Fiber Development](#), [Toll-Like Receptors Cascades](#), [Feeding Behaviour](#)

Application Details

Restrictions: For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Please refer to the printed manual for detailed information.
Buffer:	Lyophilized from sterile PBS, pH 7.4
Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.