

Active Recombinant Human Amyloid Beta (A4) Precursor Protein, His-tagged

Cat. No. APP-526H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human amyloid precursor protein was expressed with a C-terminal 6-His tag in <i>NSO cells</i> , 120 kDa (677aa).
Species	Human
Source	Mammalian Cells
Description	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 (A β), 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.
Format	Lyophilized from a 0.2 μ filtered solution in PBS.
Purity	> 90%, as determined by SDS-PAGE and visualized by silver stain.
Endotoxin Levels	< 1.0 EU per 1 μ g of the enzyme as determined by the LAL method.
Reconstitution	It is recommended that water be used to reconstitute the enzyme at 2 mg/mL.
Activity	Measured by its ability to inhibit trypsin hydrolysis of a peptide substrate, (7-methoxyc

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oumarin-4-yl)Acetyl-Arg-Pro-Lys-Pro-Val-Glu-Nval-Trp-Arg-(3-[2,4- dinitro [phenyl]-L-2,3-diaminopropionyl)-NH₂. The cleavage can be measured using excitation and emission wavelengths at 320 nm and 405 nm, respectively. To measure IC₅₀ value, incubate rhAPP (0 - 10 nM, 0 - 1.2 μg/mL) with trypsin at 1.6 nM (40 ng/mL) in TCNB (50 mM Tris, 10 mM CaCl₂, 0.15 M NaCl, 0.05% Brij 35, pH 7.5) at room temperature for 30 min. Measure the residual trypsin activity with 10 μM of ES002 in TCNB at room temperature. The value of IC₅₀, measured with 10 μM ES002 and 2 ng trypsin in 100 μL of TCNB is <1.2 nM.

Storage

Lyophilized samples are stable for up to six months at -20°C to -70°C. Upon reconstitution, this cytokine, in the presence of a carrier protein, can be stored under sterile conditions at 2 - 8°C for one month or at -20°C to -70°C in a manual defrost freezer for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.

GENE INFORMATION

Gene Name

APP amyloid beta (A4) precursor protein [Homo sapiens]

Synonyms

APP; amyloid beta (A4) precursor protein; AAA; AD1; PN2; ABPP; APPI; CVAP; ABETA; CTFgamma; amyloid beta A4 protein; protease nexin-II; OTTHUMP00000096096; peptidase nexin-II; beta-amyloid peptide; cerebral vascular amyloid peptide; C99; Beta-amyloid protein 42; Beta-APP42; Beta-amyloid protein 40; Beta-APP40; C83; P3(42); C80; P3(40); Gamma-secretase C-terminal fragment 59; Gamma-CTF(57); AID(57); Gamma-CTF(57); AICD-50; AID(50); C31; Soluble APP-beta; N-APP; S-APP-alpha; S-APP-beta

Gene ID

351

mRNA Refseq

NM_000484

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Protein Refseq	NP_000475
MIM	104760
UniProt ID	P05067
Chromosome Location	21q21.2
Pathway	Alzheimer"s disease; Hemostasis
Function	DNA binding; acetylcholine receptor binding; copper ion binding; heparin binding; identical protein binding; iron ion binding; metal ion binding peptidase activator activity; peptidase inhibitor activity; serine-type endopeptidase inhibitor activity; zinc ion binding
PDB rendering based on 1aap.	