

Amyloid Precursor Protein, Human, Recombinant (hFc)

General Information

Synonyms:	Amyloid Precursor; Amyloid Precursor Protein 695; APP695
Protein Construction:	Leu18-Lys612
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P05067-4
Molecular Weight:	120-145 KDa (reducing condition)
AA Sequence:	Leu18-Lys612

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 5% Trehalose, pH7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Amyloid precursor protein (APP) is a type I membrane protein with several isoforms due to alternative splicing, performs physiological functions on the surface of neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Of the three major splice isoforms of APP (APP695, APP751, and APP770) APP695 is the predominant neuronal form from which Amyloid beta peptide and transcriptionally-active cleaved intracellular domain of APP (AICD) are preferentially generated by selective processing through the amyloidogenic pathway.

A DRUG SCREENING EXPERT

Human APP695 consists of a 17 amino acid (aa) signal sequence, a 607 aa extracellular domain (ECD), a 24 aa transmembrane domain, and a 47 aa cytoplasmic domain. Within the ECD, human APP695 shares 97% aa sequence identity with mouse and rat APP695. Amyloid beta is a major molecule implicated in pathogenesis of Alzheimer's disease (AD) and related dementias. AICD regulates expression by direct promoter binding of multiple genes, including APP itself, the beta-secretase, BACE-1 and the Amyloid beta-degrading enzyme, Neprilysin. As such, APP695 plays an important role in brain development, learning and memory, synaptic plasticity, and neurodegeneration including AD.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481