

Active Recombinant Human APP/Protease Nexin II, CF

Cat. No. APP-54H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	A DNA sequence encoding the human CD33 signal peptide and the ectodomain of the recombinant human A Disintegrin and Metalloprotease domain 10 (rhADAM10, amino residues 18 - 672) (Rosendahl, et al., 1997, J. Biol. Chem. 272:24588 - 24593) was expressed with a C-terminal 10X His tag in an insect cell line, Sf21.
Species	Human
Source	Sf21 Cells
ProteinLength	18-672 a.a.
Description	ADAM10 (also known as Kuzbanian, mammalian disintegrin metalloprotease, myelin-associated metalloproteinase) is a member of the ADAM family that contains a disintegrin and metalloprotease-like domain. Like other membrane-anchored ADAMs, ADAM10 consists of the following domains, pro with a cysteine switch and furin cleavage sequence, catalytic with the zinc-binding site and Met-turn expected for reprolysins, disintegrin-like, cystein-rich, EGF-like, transmembrane, and cytoplasmic. ADAM10 is highly conserved, with 97% amino acid identity between mouse, rat, cattle and human and 45% identity between mouse and the active enzyme processes notch, notch ligand delta, and amyloid protein precursor at the alpha site, playing an important role in neurogenesis.
Bio-activity	Measured by its ability to cleave a fluorescent peptide substrate, (7-methoxycoumarin-4-yl) acetyl-Pro-Leu-Ala-Gln-Ala-Val-(3-[2, 4-dinitrophenyl]-L-2, 3-diaminopropionyl

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	I)-Arg-Ser-Ser-Ser-Arg -NH ₂ . Cleavage of ES003 can be measured using excitation and emission wavelengths of 320 nm and 405 nm, respectively.
Molecular Mass	The purified secreted rmADAM10 exists as the mature and active form with the N-terminal sequence of T214TSAEKNTCQ. The 469 amino acid residue rhADAM10 has a predicted molecular mass of approximately 52 kDa. By SDS-PAGE, the apparent molecular mass is appr
Endotoxin	< 2.0 eu per 1 µg of the enzyme as determined by the lal
Purity	>90%, as determined by SDS-PAGE and visualized by silver stain
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.

GENE INFORMATION

Gene Name	APP amyloid beta (A4) precursor protein [Homo sapiens]
Official Symbol	APP
Synonyms	APP; amyloid beta (A4) precursor protein; AD1, Alzheimer disease; amyloid beta A4 protein; peptidase nexin II; preA4; protease nexin-II; peptidase nexin-II; beta-amyloid peptide; alzheimer disease amyloid protein; cerebral vascular amyloid peptide; AAA; AD1; PN2; ABPP; APPI; CVAP; ABETA; PN-II; CTFgamma;
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	Activated TLR4 signalling, organism-specific biosystem; Advanced glycosylation endproduct receptor signaling, organism-specific biosystem; Alzheimers disease, organism-specific biosystem; Alzheimers disease, conserved biosystem; Amyloids, organism-specific biosystem; Caspase cascade in apoptosis, organism-specific biosystem; Class A/1 (Rhodopsin-like receptors), organism-specific biosystem;
Function	DNA binding; PTB domain binding; acetylcholine receptor binding; heparin binding; identical protein binding; peptidase activator activity; peptidase inhibitor activity; protein binding; receptor binding; serine-type endopeptidase inhibitor activity; transition metal ion binding;

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