antibodies

Datasheet for ABIN3132897 APP Protein (AA 691-770) (rho-1D4 tag)



Overview

Image

Uverview	
Quantity:	1 mg
Target:	APP
Protein Characteristics:	AA 691-770
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This APP protein is labelled with rho-1D4 tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)
Product Details	
Sequence:	FAEDVGSNKG AIIGLMVGGV VIATVIVITL VMLKKKQYTS IHHGVVEVDA AVTPEERHLS
	KMQQNGYENP TYKFFEQMQN
	Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a
	special request, please contact us.
Characteristics:	 Made in Germany - from design to production - by highly experienced protein experts. Mouse App Protein (raised in Insect Cells) purified by multi-step, protein-specific process to
	ensure crystallization grade.
	State-of-the-art algorithm used for plasmid design (Gene synthesis).
	This protein is a made to order protein and will be made for the first time for your order. Our
	experts in the lab will ensure that you receive a correctly folded protein.
	The big advantage of ordering our made-to-order proteins in comparison to ordering custom

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Product Details	
	cannot be expressed or purified.
	In the unlikely event that the protein cannot be expressed or purified we do not charge anything
	(other companies might charge you for any performed steps in the expression process for
	custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression
	experiments or purification optimization).
	When you order this made-to-order protein you will only pay upon receival of the correctly
	folded protein. With no financial risk on your end you can rest assured that our experienced
	protein experts will do everything to make sure that you receive the protein you ordered.
	The concentration of our recombinant proteins is measured using the absorbance at 280nm.
	The protein's absorbance will be measured in several dilutions and is measured against its
	specific reference buffer.
	The concentration of the protein is calculated using its specific absorption coefficient. We use
	the Expasy's protparam tool to determine the absorption coefficient of each protein.
Purification:	Three step purification of membrane proteins expressed in baculovirus infected SF9 insect
	cells:
	1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with
	different detergents (detergent screen). Samples are analyzed by Western blot.
	2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate
	fractions are analyzed by Western blot.
	3. Protein containing fractions of the best purification are subjected to second purification step
	through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and
	Western blot.
Purity:	>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Sterility:	0.22 µm filtered
Endotoxin Level:	Protein is endotoxin-free.
Grade:	Crystallography grade
Target Details	
Target:	APP
Alternative Name:	App (APP Products)

Background:	Functions as a cell surface receptor and performs physiological functions on the surface of
	neurons relevant to neurite growth, neuronal adhesion and axonogenesis. Involved in cell
	mobility and transcription regulation through protein-protein interactions. Can promote

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transcription activation through binding to APBB1-KAT5 and inhibit Notch signaling through
interaction with Numb. Couples to apoptosis-inducing pathways such as those mediated by
G(O) and JIP. Inhibits G(o) alpha ATPase activity (By similarity). Acts as a kinesin I membrane
receptor, mediating the axonal transport of beta-secretase and presenilin 1. May be involved in
copper homeostasis/oxidative stress through copper ion reduction. Can regulate neurite
outgrowth through binding to components of the extracellular matrix such as heparin and
collagen I and IV (By similarity). The splice isoforms that contain the BPTI domain possess
protease inhibitor activity. Induces a AGER-dependent pathway that involves activation of p38
MAPK, resulting in internalization of amyloid-beta peptide and leading to mitochondrial
dysfunction in cultured cortical neurons (By similarity). Provides Cu(2+) ions for GPC1 which
are required for release of nitric oxide (NO) and subsequent degradation of the heparan sulfate
chains on GPC1. {ECO:0000250, ECO:0000269 PubMed:15677459}., Beta-amyloid peptides are
lipophilic metal chelators with metal-reducing activity. Binds transient metals such as copper,
zinc and iron. Rat and mouse beta-amyloid peptides bind only weakly transient metals and have
little reducing activity due to substitutions of transient metal chelating residues. Beta-APP42
may activate mononuclear phagocytes in the brain and elicit inflammatory responses.
Promotes both tau aggregation and TPK II-mediated phosphorylation. Also binds GPC1 in lipid
rafts (By similarity). {ECO:0000250}., The gamma-CTF peptides as well as the caspase-cleaved
peptides, including C31, are potent enhancers of neuronal apoptosis.
{ECO:0000269 PubMed:15677459}., N-APP binds TNFRSF21 triggering caspase activation and
degeneration of both neuronal cell bodies (via caspase-3) and axons (via caspase-6).
{ECO:0000250}.
10.0 kDa Including tag

Molecular Weight:	10.0 kDa Including tag.
UniProt:	P12023
Pathways:	Caspase Cascade in Apoptosis, EGFR Signaling Pathway, Transition Metal Ion Homeostasis, Skeletal Muscle Fiber Development, Toll-Like Receptors Cascades, Feeding Behaviour
Application Details	
Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee though.
Comment:	Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible

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Application Details	
	options with you in detail to assure that you receive your protein of interest.
Restrictions:	For Research Use only
Handling	
Format:	Liquid
Buffer:	100 mM NaCL, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

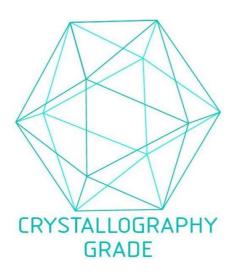


Image 1. "Crystallography Grade" protein due to multi-step, protein-specific purification process