Datasheet for ABIN3120112

Arc Protein (AA 1-396) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	Arc
Protein Characteristics:	AA 1-396
Origin:	Mouse
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Arc protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Brand:	AliCE®
Sequence:	MELDHMTTGG LHAYPAPRGG PAAKPNVILQ IGKCRAEMLE HVRRTHRHLL TEVSKQVERE LKGLHRSVGK LENNLDGYVP TGDSQRWKKS IKACLCRCQE TIANLERWVK REMHVWREVF YRLERWADRL ESMGGKYPVG SEPARHTVSV GVGGPEPYCQ EADGYDYTVS PYAITPPPAA GELPEQESVE AQQYQSWGPG EDGQPSPGVD TQIFEDPREF LSHLEEYLRQ VGGSEEYWLS QIQNHMNGPA KKWWEFKQGS VKNWVEFKKE FLQYSEGTLS REAIQRELEL PQKQGEPLDQ FLWRKRDLYQ TLYVDAEEEE IIQYVVGTLQ PKLKRFLRHP LPKTLEQLIQ RGMEVQDGLE QAAEPSGTPL PTEDETEALT PALTSESVAS DRTQPE **Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits:

Product Details

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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 try to ensure that you receive soluble protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	Arc

Target Details

Alternative Name:	Arc (Arc Products)
Background:	Activity-regulated cytoskeleton-associated protein (mArc) (Activity-regulated gene 3.1 protein) (ARC/ARG3.1) (Arg3.1),FUNCTION: Master regulator of synaptic plasticity that self-assembles into virion-like capsids that encapsulate RNAs and mediate intercellular RNA transfer in the nervous system (By similarity). ARC protein is released from neurons in extracellular vesicles that mediate the transfer of ARC mRNA into new target cells, where ARC mRNA can undergo activity-dependent translation (By similarity). ARC capsids are endocytosed and are able to transfer ARC mRNA into the cytoplasm of neurons (By similarity). Acts as a key regulator of synaptic plasticity: required for protein synthesis-dependent forms of long-term potentiation (LTP) and depression (LTD) and for the formation of long-term memory (PubMed:29264923, PubMed:24094104, PubMed:31151856). Regulates synaptic plasticity by promoting endocytosis of AMPA receptors (AMPARs) in response to synaptic activity: this endocytic pathway maintains levels of surface AMPARs in response to chronic changes in neuronal activity through synaptic scaling, thereby contributing to neuronal homeostasis (PubMed:17088213, PubMed:20211139, PubMed:20228806). Acts as a postsynaptic mediator of activity-dependent synapse elimination in the developing cerebellum by mediating elimination of surplus climbing fiber synapses (PubMed:23791196). Accumulates at weaker synapses, probably to prevent their undesired enhancement (By similarity). This suggests that ARC-containing virion-like capsids may be required to eliminate synaptic material (By similarity). Required to transduce experience into long-lasting changes in visual cortex plasticity and for long-term memory (PubMed:17088210, PubMed:20228806). Involved in postsynaptic trafficking and processing of amyloid-beta A4 (APP) via interaction with PSEN1 (PubMed:22036569). In addition to its role in synapses, also involved in the regulation of the immune system: specifically expressed in skin-migratory dendritic cells and regulates fast dendritic cell migration, thereby regulating T-cell activation (PubMed:28783680). {ECO:0000250|UniProtKB:Q63053, ECO:0000269|PubMed:17088210, ECO:0000269|PubMed:17088213, ECO:0000269|PubMed:20211139, ECO:0000269|PubMed:20228806, ECO:0000269|PubMed:22036569, ECO:0000269|PubMed:24094104, ECO:0000269|PubMed:28783680, ECO:0000269|PubMed:29264923, ECO:0000269|PubMed:31151856}.
Molecular Weight:	45.3 kDa
UniProt:	Q9WV31

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 guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months