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Datasheet for ABIN3120818  
**RAB3A Protein (AA 1-220) (Strep Tag)**

### Overview

Quantity:	1 mg
Target:	RAB3A
Protein Characteristics:	AA 1-220
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RAB3A protein is labelled with Strep Tag.
Application:	ELISA, SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Sequence: MASATDSRYG QKESDQNFY YMFKILIGN SSVGKTSFLF RYADDSFTPA FVSTVGIDFK  
VKTIYRNDKR IKLQIWDTAG QERYRTITTA YYRGAMGFIL MYDITNEESF NAVQDWSTQI  
KTYSWDNAQV LLVGNKCDME DERVVSSERQ RQLADHLGFE FFEASAKDNI NVKQTFERLV  
DVICEKMSSES LDTADPAVTG AKQGPQLTDQ QAPPHQDCAC

**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:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

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Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): <ol style="list-style-type: none"><li>1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.</li><li>2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.</li></ol>
Purity:	≥ 80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)

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## Target Details

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Target: RAB3A

Alternative Name: Rab3a ([RAB3A Products](#))

Background: Ras-related protein Rab-3A,FUNCTION: Small GTP-binding protein that plays a central role in regulated exocytosis and secretion. Controls the recruitment, tethering and docking of secretory vesicles to the plasma membrane (PubMed:11598194). Upon stimulation, switches to its active GTP-bound form, cycles to vesicles and recruits effectors such as RIMS1, RIMS2, Rabphilin-3A/RPH3A, RPH3AL or SYTL4 to help the docking of vesicles onto the plasma membrane (By similarity). Upon GTP hydrolysis by GTPase-activating protein, dissociates from the vesicle membrane allowing the exocytosis to proceed (By similarity). Stimulates insulin secretion through interaction with RIMS2 isoform RIMS2 and RPH3AL effectors in pancreatic beta cells (PubMed:15159548, PubMed:20674857). Regulates calcium-dependent lysosome exocytosis and plasma membrane repair (PMR) via the interaction with 2 effectors, SYTL4 and myosin-9/MYH9 (By similarity). Acts as a positive regulator of acrosome content secretion in sperm cells by interacting with RIMS1 (By similarity). Plays a role in the regulation of dopamine release by interacting with synaptotagmin I/SYT (By similarity).  
{ECO:0000250|UniProtKB:P20336, ECO:0000250|UniProtKB:P63012, ECO:0000269|PubMed:11598194, ECO:0000269|PubMed:15159548, ECO:0000269|PubMed:20674857}.

Molecular Weight: 25.0 kDa

UniProt: [P63011](#)

Pathways: [Synaptic Membrane](#), [Synaptic Vesicle Exocytosis](#), [Dicarboxylic Acid Transport](#)

## Application Details

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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.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: Unlimited (if stored properly)