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Datasheet for ABIN3094894

RAB7A Protein (AA 2-207) (His tag)

Overview Quantity: 1 mg RAB7A Target: Protein Characteristics: AA 2-207 Origin: Human Source: Insect Cells Protein Type: Recombinant Purification tag / Conjugate: This RAB7A protein is labelled with His tag. Application: ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys) **Product Details** TSRKKVLLKV IILGDSGVGK TSLMNQYVNK KFSNQYKATI GADFLTKEVM VDDRLVTMQI

Sequence:

WDTAGQERFQ SLGVAFYRGA DCCVLVFDVT APNTFKTLDS WRDEFLIQAS PRDPENFPFV

VLGNKIDLEN RQVATKRAQA WCYSKNNIPY FETSAKEAIN VEQAFQTIAR NALKQETEVE

LYNEFPEPIK LDKNDRAKAS AESCSC

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.

· Human RAB7A 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 made proteins from other companies is that there is no financial obligation in case the protein 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:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

- 1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate fractions are analyzed by SDS-PAGE.
- 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.

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:	RAB7A
Alternative Name:	RAB7A (RAB7A Products)
Background:	Key regulator in endo-lysosomal trafficking. Governs early-to-late endosomal maturation,
	microtubule minus-end as well as plus-end directed endosomal migration and positioning, and
	endosome-lysosome transport through different protein-protein interaction cascades. Plays a

central role, not only in endosomal traffic, but also in many other cellular and physiological events, such as growth-factor-mediated cell signaling, nutrient-transportor mediated nutrient uptake, neurotrophin transport in the axons of neurons and lipid metabolism. Also involved in regulation of some specialized endosomal membrane trafficking, such as maturation of melanosomes, pathogen-induced phagosomes (or vacuoles) and autophagosomes. Plays a role in the maturation and acidification of phagosomes that engulf pathogens, such as S.aureus and M.tuberculosis. Plays a role in the fusion of phagosomes with lysosomes. Plays important roles in microbial pathogen infection and survival, as well as in participating in the life cycle of viruses. Microbial pathogens possess survival strategies governed by RAB7A, sometimes by employing RAB7A function (e.g. Salmonella) and sometimes by excluding RAB7A function (e.g. Mycobacterium). In concert with RAC1, plays a role in regulating the formation of RBs (ruffled borders) in osteoclasts. Controls the endosomal trafficking and neurite outgrowth signaling of NTRK1/TRKA (PubMed:11179213, PubMed:12944476, PubMed:14617358, PubMed:20028791, PubMed:21255211). Regulates the endocytic trafficking of the EGF-EGFR complex by regulating its lysosomal degradation. Involved in the ADRB2-stimulated lipolysis through lipophagy, a cytosolic lipase-independent autophagic pathway (By similarity). Required for the exosomal release of SDCBP, CD63 and syndecan (PubMed:22660413). {ECO:0000250|UniProtKB:P51150, ECO:0000269|PubMed:11179213, ECO:0000269|PubMed:12944476, ECO:0000269|PubMed:14617358, ECO:0000269|PubMed:20028791, ECO:0000269|PubMed:22660413}.

Molecular Weight:	24.3 kDa Including tag.
UniProt:	P51149
D .II	

Pathways: EGFR Signaling Pathway, Maintenance of Protein Location, SARS-CoV-2 Protein Interactome

Application Details

Restrictions:	For Research Use only
	receive your protein of interest.
	increase solubility. We will discuss all possible options with you in detail to assure that you
	insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to
Comment:	In cases in which it is highly likely that the recombinant protein with the default tag will be
	though.
	as well. As the protein has not been tested for functional studies yet we cannot offer a gurantee
Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies

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)