

Datasheet for ABIN3135644 BRSK2 Protein (AA 1-735) (His tag)



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Overview

Quantity:	1 mg
Target:	BRSK2
Protein Characteristics:	AA 1-735
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This BRSK2 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

Product Details

Sequence:	<p>MTSTGKDGGG AQHAQYVGPy RLEKTLGKGQ TGLVKLGIHC VTCQKVAIKI VNREKLSESV</p> <p>LMKVEREIAI LKLIHPPHVL KLHDVYENKK YLYLVLEHVS GGELFDYLVK KGRLTPKEAR</p> <p>KFFRQIISAL DFCHSHSICH RDLKPENLLL DERNNIRIAD FGMASLQVGD SLLETSCGSP</p> <p>HYACPEVIRG EKYDGRKADV WSCGVILFAL LVGALPFDDD NLRQLLEKVK RGVFHMPPHI</p> <p>PPDCQSLLRG MIEVDAARRL TLEHIQKHIW YIGGKNEPEP EQPIPRKVQI RSLPSLEDID</p> <p>PDVLDSMHSL GCFRDRNKLL QDLLSEENQ EKMIYFLLLD RKERYPSHED EDLPPRNEID</p> <p>PPRKRVDSPM LNRHGKRRPE RKSMEVLSVT DGGSPVPARR AIEMAQHGQR SRSISGASSG</p> <p>LSTSPLSSPR VTPHPSRGS PLTPKGTPV HTPKESPAGT PNPTPPSSPS VGGVPWRTRL</p> <p>NSIKNSFLGS PRFHRRLQV PTPEEMSNLT PESSPELAKK SWFGNFINLE KEEQIFVVIK</p> <p>DKPLSSIKAD IVHAFLSIPS LSHSVISQTS FRAEYKATGG PAVFQKPVKF QVDITYTEGG</p> <p>EAQKENGIIYS VTFTLLSGPS RRFKRVVETI QAQLLSTHDQ PSAQHLSDTT NCMEVMTGRL</p> <p>SKCGTPLSNF FDIKQLFSD EKNQQAQAP STPAKRSAHG PLGDSAAAGP GGDTEYPMGK</p>
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DMAKMGPAA RREQP

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 Brsk2 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 receipt 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.

Product Details

Grade: Crystallography grade

Target Details

Target: BRSK2

Alternative Name: Brsk2 ([BRSK2 Products](#))

Background: Serine/threonine-protein kinase that plays a key role in polarization of neurons and axonogenesis, cell cycle progress and insulin secretion. Phosphorylates CDK16, CDC25C, MAPT/TAU, PAK1 and WEE1. Following phosphorylation and activation by STK11/LKB1, acts as a key regulator of polarization of cortical neurons, probably by mediating phosphorylation of microtubule-associated proteins such as MAPT/TAU at 'Thr-504' and 'Ser-554'. Also regulates neuron polarization by mediating phosphorylation of WEE1 at 'Ser-642' in post-mitotic neurons, leading to down-regulate WEE1 activity in polarized neurons. Plays a role in the regulation of the mitotic cell cycle progress and the onset of mitosis. Plays a role in the regulation of insulin secretion in response to elevated glucose levels, probably via phosphorylation of CDK16 and PAK1. While BRSK2 phosphorylated at Thr-175 can inhibit insulin secretion (PubMed:22798068), BRSK2 phosphorylated at Thr-261 can promote insulin secretion (PubMed:22669945). Regulates reorganization of the actin cytoskeleton. May play a role in the apoptotic response triggered by endoplasmic reticulum (ER) stress. {ECO:0000269|PubMed:15705853, ECO:0000269|PubMed:17482548, ECO:0000269|PubMed:20026642, ECO:0000269|PubMed:22669945, ECO:0000269|PubMed:22798068}.

Molecular Weight: 82.7 kDa Including tag.

UniProt: [Q69Z98](#)

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: 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 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