

## Datasheet for ABIN3135838 KRIT1 Protein (AA 1-736) (His tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	KRIT1
Protein Characteristics:	AA 1-736
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This KRIT1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

#### Product Details

Sequence:	<p>MGNPENIEDA YVAVIRPKNT ASLNSREYRA KSYEILLHEV PIEGQKKKRK KVLLETKLQS</p> <p>NSEIAQGILD YVETTKPIS PANQGIKGR VLMRKFLPD GEKTGREAAAL FIVPSVVKDN</p> <p>TKYAYTPGCP IFYCLQDIMR VCSSTHFA TLARMLIAL DKWLDERHAQ SHFIPALFRP</p> <p>SPLERIKTNV INPAYAAELG QVDNSLHMGY SALEIKSKML ALEKADTCIY NPLFGSDLQY</p> <p>TNRVDKVVIN PYFGLGAPDY SKIQPKQEK WQRSMSSVVE DKERQWVDDF PLHRNACEGD</p> <p>SELLSHLLDK GLSVNQLDND HWAPIHYACW YGKVEATRIL LEKGKCNPNL LNGQLSSPLH</p> <p>FAAGGGHAEI VQILLTHPDI DRHITDQQGR SPLNVCEENK QNNWEEAAKL LKDAINKPYE</p> <p>KVRIYRMDGS YRSVELKHGN NTAQQIMEG MRLSQETQRY FTIWICSENL SLQFKPYHKP</p> <p>LQQVHDWPEI LAELTNLDPQ RETPQLFLRR DVGLPLEVEK KIEDPLAILI LFDEARYNLL</p> <p>KGFYTAPDAK LITLASLLLQ IVYGNYESKK HKQGFLNEET LKSIVPITKL KSKAPHWINR</p> <p>ILHEYKNLSL SEGVSKEMHH LQRMFLQNCW EIPTYGAAFF TGQIFTKASP SNHKVIPVYV</p> <p>GVNIKGLHLL NMETKALLIS LKYCCFTWQL GDAGTCFQIH SMENKMSFIV HTKQAGLVVK</p>
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LLMKLNGQLM PSERNS

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Krit1 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.

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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.

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Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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Sterility:

0.22 µm filtered

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Endotoxin Level:

Protein is endotoxin free.

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## Product Details

Grade: Crystallography grade

## Target Details

Target: KRIT1

Alternative Name: Krit1 ([KRIT1 Products](#))

Background: Component of the CCM signaling pathway which is a crucial regulator of heart and vessel formation and integrity. Negative regulator of angiogenesis. Inhibits endothelial proliferation, apoptosis, migration, lumen formation and sprouting angiogenesis in primary endothelial cells. Promotes AKT phosphorylation in a NOTCH-dependent and independent manner, and inhibits ERK1/2 phosphorylation indirectly through activation of the DELTA-NOTCH cascade. Acts in concert with CDH5 to establish and maintain correct endothelial cell polarity and vascular lumen and these effects are mediated by recruitment and activation of the Par polarity complex and RAP1B. Required for the localization of phosphorylated PRKCZ, PARD3, TIAM1 and RAP1B to the cell junction, and cell junction stabilization. Plays a role in integrin signaling via its interaction with ITGB1BP1, this prevents the interaction between ITGB1 and ITGB1BP1. Microtubule-associated protein that binds to phosphatidylinositol 4,5-bisphosphate (PIP2)-containing membranes in a GTP-bound RAP1-dependent manner (By similarity). Plays an important role in the maintenance of the intracellular reactive oxygen species (ROS) homeostasis to prevent oxidative cellular damage. Regulates the homeostasis of intracellular ROS through an antioxidant pathway involving FOXO1 and SOD2. Facilitates the down-regulation of cyclin-D1 (CCND1) levels required for cell transition from proliferative growth to quiescence by preventing the accumulation of intracellular ROS through the modulation of FOXO1 and SOD2 levels. {ECO:0000250, ECO:0000269|PubMed:20332120, ECO:0000269|PubMed:20616044, ECO:0000269|PubMed:20668652}.

Molecular Weight: 84.9 kDa Including tag.

UniProt: [Q6S5J6](#)

Pathways: [Cell RedoxHomeostasis](#)

## 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

## Application Details

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