

Datasheet for ABIN3095041
RIPK2 Protein (AA 1-540) (Strep Tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	RIPK2
Protein Characteristics:	AA 1-540
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This RIPK2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MNGEAICSAL PTIPYHKLAD LRYLSRGASG TVSSARHADW RVQVAVKHLH IHTPLLDSE KDVLR AEIL HKARFSYILP ILGICNEPEF LGIVTEYMPN GSLNELLHRK TEYPDVAWPL RFRILHEIAL GVNYLHNMTPL LHHD LKTQ NILLDNEFHV KIADFGLSKW RMMSLSQSRS SKSAPEGGTI IYMPPE NYEP GQKSRASIKH DIYSYAVITW EVLSRKQPFE DVTNPLQIMY SVSQGHRPVI NEESLPYDIP HRARMISLIE SGWAQNPDER PSFLKCLIEL EPVLRTFEEI TFLEAVIQLK KTKLQSVSSA IHLCDKKKME LSLNIPVNHG PQEESCGSSQ LHENSGSPET SRSLPAPQDN DFLSRKAQDC YFMKLHHCPG NHSWDSTISG SQRAAFCDHK TTPCSSAIIN PLSTAGNSER LQPGIAQQWI QSKREDIVNQ MTEACLNQSL DALLSRDLIM KEDYELVSTK PTRTSKVRQL LDTTDIQGEE FAKVIVQKLK DNKQMGLQPY PEILVVSRSPLNLLQNKSM
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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.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

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.
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

Product Details

Western blot.

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)

Grade: Crystallography grade

Target Details

Target: RIPK2

Alternative Name: RIPK2 ([RIPK2 Products](#))

Background: Receptor-interacting serine/threonine-protein kinase 2 (EC 2.7.11.1) (CARD-containing interleukin-1 beta-converting enzyme-associated kinase) (CARD-containing IL-1 beta ICE-kinase) (RIP-like-interacting CLARP kinase) (Receptor-interacting protein 2) (RIP-2) (Tyrosine-protein kinase RIPK2) (EC 2.7.10.2),FUNCTION: Serine/threonine/tyrosine-protein kinase that plays an essential role in modulation of innate and adaptive immune responses (PubMed:9575181, PubMed:9642260, PubMed:14638696, PubMed:21123652, PubMed:17054981, PubMed:28656966). Acts as a key effector of NOD1 and NOD2 signaling pathways: upon activation by bacterial peptidoglycans, NOD1 and NOD2 oligomerize and recruit RIPK2 via CARD-CARD domains, leading to the formation of RIPK2 filaments (PubMed:17562858, PubMed:21123652, PubMed:17054981, PubMed:22607974, PubMed:28656966, PubMed:29452636, PubMed:30026309). Once recruited, RIPK2 autophosphorylates and undergoes 'Lys-63'-linked polyubiquitination by E3 ubiquitin ligases XIAP, BIRC2 and BIRC3, as well as 'Met-1'-linked (linear) polyubiquitination by the LUBAC complex, becoming a scaffolding protein for downstream effectors (PubMed:22607974, PubMed:29452636, PubMed:28545134, PubMed:30279485, PubMed:30478312, PubMed:30026309). 'Met-1'-linked polyubiquitin chains attached to RIPK2 recruit IKBKG/NEMO, which undergoes 'Lys-63'-linked polyubiquitination in a RIPK2-dependent process (PubMed:22607974, PubMed:17562858, PubMed:29452636, PubMed:30026309). 'Lys-63'-linked polyubiquitin chains attached to RIPK2 serve as docking sites for TAB2 and TAB3 and mediate the recruitment of MAP3K7/TAK1 to IKBKG/NEMO, inducing subsequent activation of IKBKB/IKKB (PubMed:18079694). In turn, NF-kappa-B is released from NF-kappa-B inhibitors and translocates into the nucleus where it activates the transcription of hundreds of genes involved in immune response, growth control, or protection against apoptosis (PubMed:18079694). The protein kinase activity is dispensable for the NOD1 and NOD2 signaling pathways (PubMed:29452636, PubMed:30026309). Contributes to the tyrosine

Target Details

phosphorylation of the guanine exchange factor ARHGEF2 through Src tyrosine kinase leading to NF-kappa-B activation by NOD2 (PubMed:21887730). Also involved in adaptive immunity: plays a role during engagement of the T-cell receptor (TCR) in promoting BCL10 phosphorylation and subsequent NF-kappa-B activation (PubMed:14638696). Plays a role in the inactivation of RHOA in response to NGFR signaling (PubMed:26646181).

{ECO:0000269|PubMed:14638696, ECO:0000269|PubMed:17054981, ECO:0000269|PubMed:17562858, ECO:0000269|PubMed:18079694, ECO:0000269|PubMed:21123652, ECO:0000269|PubMed:21887730, ECO:0000269|PubMed:22607974, ECO:0000269|PubMed:26646181, ECO:0000269|PubMed:28545134, ECO:0000269|PubMed:28656966, ECO:0000269|PubMed:29452636, ECO:0000269|PubMed:30026309, ECO:0000269|PubMed:30279485, ECO:0000269|PubMed:30478312, ECO:0000269|PubMed:9575181, ECO:0000269|PubMed:9642260}.

Molecular Weight: 61.2 kDa

UniProt: [O43353](#)

Pathways: [TCR Signaling](#), [Neurotrophin Signaling Pathway](#), [Activation of Innate immune Response](#), [Cellular Response to Molecule of Bacterial Origin](#), [Positive Regulation of Immune Effector Process](#), [Toll-Like Receptors Cascades](#)

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.

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Restrictions: For Research Use only

Handling

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)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process