Datasheet for ABIN7555236

# RIPK2 Protein (AA 1-540) (His tag)

Go to Product page

## Overview

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| Quantity: | 1 mg |
| Target: | RIPK2 |
| Protein Characteristics: | AA 1-540 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This RIPK2 protein is labelled with His tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

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| Purpose: | Custom-made recombinat RIPK2 Protein expressed in mammalien cells. |
| Sequence: | MNGEAICSAL PTIPYHKLAD LRYLSRGASG TVSSARHADW RVQVAVKHLH IHTPLLDSER KDVLREAEIL HKARFSYILP ILGICNEPEF LGIVTEYMPN GSLNELLHRK TEYPDVAWPL RFRILHEIAL GVNYLHNMTP PLLHHDLKTQ NILLDNEFHV KIADFGLSKW RMMSLSQSRS SKSAPEGGTI IYMPPENYEP 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 PEILVVSRSP SLNLLQNKSM **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary.** |

## Product Details

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| | **In case you have a special request, please contact us.** |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalien cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>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. |
| Purity: | > 90 % as determined by Bis-Tris Page, Western Blot |
| Grade: | custom-made |

## Target Details

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| 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 |

## Target Details

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| | 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 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

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| Application Notes: | In addition to the applications listed above we expect the protein to work for functional studies |

## Application Details

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| | as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition 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: | 12 months |