Datasheet for ABIN7554582

# JNK Protein (AA 1-427) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | JNK (MAPK8) |
| Protein Characteristics: | AA 1-427 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This JNK protein is labelled with His tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

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| Purpose: | Custom-made recombinat MAPK8 Protein expressed in mammalien cells. |
| Sequence: | MSRSKRDNNF YSVEIGDSTF TVLKRYQNLK PIGSGAQGIV CAAYDAILER NVAIKKLSRP FQNQTHAKRA YRELVLMKCV NHKNIIGLLN VFTPQKSLEE FQDVYIVMEL MDANLCQVIQ MELDHERMSY LLYQMLCGIK HLHSAGIIHR DLKPSNIVVK SDCTLKILDF GLARTAGTSF MMTPYVVTRY YRAPEVILGM GYKENVDLWS VGCIMGEMVC HKILFPGRDY IDQWNKVIEQ LGTPCPEFMK KLQPTVRTYV ENRPKYAGYS FEKLFPDVLF PADSEHNKLK ASQARDLLSK MLVIDASKRI SVDEALQHPY INVWYDPSEA EAPPPKIPDK QLDEREHTIE EWKELIYKEV MDLEERTKNG VIRGQPSPLG AAVINGSQHP SSSSSVNDVS SMSTDPTLAS DTDSSLEAAA GPLGCCR **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. In case you have a special request, please contact us.** |
| Characteristics: | Key Benefits: |

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## Product Details

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalien cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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 try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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.

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| Purity: | > 90 % as determined by Bis-Tris Page, Western Blot |
| Grade: | custom-made |

## Target Details

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| Target: | JNK (MAPK8) |
| Alternative Name: | MAPK8 (MAPK8 Products) |
| Background: | Mitogen-activated protein kinase 8 (MAP kinase 8) (MAPK 8) (EC 2.7.11.24) (JNK-46) (Stress-activated protein kinase 1c) (SAPK1c) (Stress-activated protein kinase JNK1) (c-Jun N-terminal kinase 1),FUNCTION: Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular stimuli such as pro-inflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway (PubMed:28943315). In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK8/JNK1. In turn, MAPK8/JNK1 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN, JDP2 and ATF2 and thus regulates AP-1 transcriptional activity (PubMed:18307971). Phosphorylates the replication licensing factor CDT1, inhibiting the interaction between CDT1 and the histone H4 acetylase HBO1 to replication origins (PubMed:21856198). Loss of this interaction abrogates the acetylation required for replication initiation (PubMed:21856198). Promotes stressed cell apoptosis by phosphorylating key regulatory factors including p53/TP53 and Yes-associates protein YAP1 |

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| | (PubMed:21364637). In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Contributes to the survival of erythroid cells by phosphorylating the antagonist of cell death BAD upon EPO stimulation (PubMed:21095239). Mediates starvation-induced BCL2 phosphorylation, BCL2 dissociation from BECN1, and thus activation of autophagy (PubMed:18570871). Phosphorylates STMN2 and hence regulates microtubule dynamics, controlling neurite elongation in cortical neurons (By similarity). In the developing brain, through its cytoplasmic activity on STMN2, negatively regulates the rate of exit from multipolar stage and of radial migration from the ventricular zone (By similarity). Phosphorylates several other substrates including heat shock factor protein 4 (HSF4), the deacetylase SIRT1, ELK1, or the E3 ligase ITCH (PubMed:20027304, PubMed:16581800, PubMed:17296730). Phosphorylates the CLOCK-BMAL1 heterodimer and plays a role in the regulation of the circadian clock (PubMed:22441692). Phosphorylates the heat shock transcription factor HSF1, suppressing HSF1-induced transcriptional activity (PubMed:10747973). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteasomal degradation (By similarity). Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1 (PubMed:22327296). In neurons, phosphorylates SYT4 which captures neuronal dense core vesicles at synapses (By similarity). Phosphorylates EIF4ENIF1/4-ET in response to oxidative stress, promoting P-body assembly (PubMed:22966201). Phosphorylates SIRT6 in response to oxidative stress, stimulating its mono-ADP-ribosyltransferase activity (PubMed:27568560). Phosphorylates NLRP3, promoting assembly of the NLRP3 inflammasome (PubMed:28943315). {ECO:0000250\|UniProtKB:P49185, ECO:0000250\|UniProtKB:Q91Y86, ECO:0000269\|PubMed:10747973, ECO:0000269\|PubMed:16581800, ECO:0000269\|PubMed:17296730, ECO:0000269\|PubMed:18307971, ECO:0000269\|PubMed:18570871, ECO:0000269\|PubMed:20027304, ECO:0000269\|PubMed:21095239, ECO:0000269\|PubMed:21364637, ECO:0000269\|PubMed:21856198, ECO:0000269\|PubMed:22327296, ECO:0000269\|PubMed:22441692, ECO:0000269\|PubMed:22966201, ECO:0000269\|PubMed:27568560, ECO:0000269\|PubMed:28943315}., FUNCTION: JNK1 isoforms display different binding patterns: beta-1 preferentially binds to c-Jun, whereas alpha-1, alpha-2, and beta-2 have a similar low level of binding to both c-Jun or ATF2. However, there is no correlation between binding and phosphorylation, which is achieved at about the same efficiency by all isoforms. |
| Molecular Weight: | 48.3 kDa |
| UniProt: | P45983 |

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## Target Details

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| Pathways: | MAPK Signaling, WNT Signaling, TLR Signaling, Fc-epsilon Receptor Signaling Pathway, Neurotrophin Signaling Pathway, Activation of Innate immune Response, Hepatitis C, Toll-Like Receptors Cascades, Signaling of Hepatocyte Growth Factor Receptor, S100 Proteins |

## Application Details

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| 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. |
| 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 |

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