Datasheet for ABIN7564141

# DDX58 Protein (AA 1-926) (His tag)

Go to Product page

## Overview

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| Quantity: | 1 mg |
| Target: | DDX58 |
| Protein Characteristics: | AA 1-926 |
| Origin: | Mouse |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This DDX58 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant Rigi Protein expressed in mammalian cells. |
| Sequence: | MTAEQRQNLQ AFRDYIKKIL DPTYILSYMS SWLEDEEVQY IQAEKNNKGP MEAASLFLQY LLKLQSEGWF QAFLDALYHA GYCGLCEAIE SWDFQKIEKL EEHRLLLRRL EPEFKATVDP NDILSELSEC LINQECEEIR QIRDTKGRMA GAEKMAECLI RSDKENWPKV LQLALEKDNS KFSELWIVDK GFKRAESKAD EDDGAEASSI QIFIQEEPEC QNLSQNPGPP SEASSNNLHS PLKPRNYQLE LALPAKKGKN TIICAPTGCG KTFVSLLICE HHLKKFPCGQ KGKVVFFANQ IPVYEQQATV FSRYFERLGY NIASISGATS DSVSVQHIIE DNDIIILTPQ ILVNNLNNGA IPSLSVFTLM IFDECHNTSK NHPYNQIMFR YLDHKLGESR DPLPQVVGLT ASVGVGDAKT AEEAMQHICK LCAALDASVI ATVRDNVAEL EQVVYKPQKI SRKVASRTSN TFKCIISQLM KETEKLAKDV SEELGKLFQI QNREFGTQKY EQWIVGVHKA CSVFQMADKE EESRVCKALF LYTSHLRKYN DALIISEDAQ MTDALNYLKA FFHDVREAAF DETERELTRR FEEKLEELEK VSRDPSNENP KLRDLYLVLQ EEYHLKPETK TILFVKTRAL VDALKKWIEE NPALSFLKPG ILTGRGRTNR ATGMTLPAQK CVLEAFRASG DNNILIATSV ADEGIDIAEC NLVILYEYVG NVIKMIQTRG |

## Product Details

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| | RGRARDSKCF LLTSSADVIE KEKANMIKEK IMNESILRLQ TWDEMKFGKT VHRIQVNEKL LRDSQHKPQP VPDKENKKLL CGKCKNFACY TADIRVVETS HYTVLGDAFK ERFVCKPHPK PKIYDNFEKK AKIFCAKQNC SHDWGIFVRY KTFEIPVIKI ESFVVEDIVS GVQNRHSKWK DFHFERIQFD PAEMSV **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.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian 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, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | DDX58 |
| Alternative Name: | Rigi (DDX58 Products) |
| Background: | Antiviral innate immune response receptor RIG-I (ATP-dependent RNA helicase DDX58) (EC 3.6.4.13) (DEAD box protein 58) (RIG-I-like receptor 1) (RLR-1) (RNA sensor RIG-I) (Retinoic acid-inducible gene 1 protein) (RIG-1) (Retinoic acid-inducible gene I protein) (RIG-I),FUNCTION: Innate immune receptor that senses cytoplasmic viral nucleic acids and activates a downstream signaling cascade leading to the production of type I interferons and pro- |

## Target Details

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| | inflammatory cytokines. Forms a ribonucleoprotein complex with viral RNAs on which it homooligomerizes to form filaments. The homooligomerization allows the recruitment of RNF135 an E3 ubiquitin-protein ligase that activates and amplifies the RIG-I-mediated antiviral signaling in an RNA length-dependent manner through ubiquitination-dependent and -independent mechanisms. Upon activation, associates with mitochondria antiviral signaling protein (MAVS/IPS1) that activates the IKK-related kinases TBK1 and IKBKE which in turn phosphorylate the interferon regulatory factors IRF3 and IRF7, activating transcription of antiviral immunological genes including the IFN-alpha and IFN-beta interferons. Ligands include: 5'-triphosphorylated ssRNA and dsRNA and short dsRNA (<1 kb in length). In addition to the 5'-triphosphate moiety, blunt-end base pairing at the 5'-end of the RNA is very essential. Overhangs at the non-triphosphorylated end of the dsRNA RNA have no major impact on its activity. A 3'overhang at the 5'triphosphate end decreases and any 5'overhang at the 5' triphosphate end abolishes its activity. Detects both positive and negative strand RNA viruses including members of the families Paramyxoviridae: Sendai virus (SeV), Rhabdoviridae and Flaviviridae. It also detects rotavirus and orthoreovirus. Also involved in antiviral signaling in response to viruses containing a dsDNA genome. Detects dsRNA produced from non-self dsDNA by RNA polymerase III. May play important roles in granulocyte production and differentiation, bacterial phagocytosis and in the regulation of cell migration. {ECO:0000269\|PubMed:16039576, ECO:0000269\|PubMed:16625202, ECO:0000269\|PubMed:17942531, ECO:0000269\|PubMed:19576794, ECO:0000269\|PubMed:19609254, ECO:0000269\|PubMed:19631370}. |
| Molecular Weight: | 106.0 kDa |
| UniProt: | Q6Q899 |
| Pathways: | Activation of Innate immune Response, Hepatitis C |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. 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

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| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |