Datasheet for ABIN7547052

DDX58 Protein (AA 1-925) (His tag)

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Overview

Quantity:	1 mg
Target:	DDX58
Protein Characteristics:	AA 1-925
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This DDX58 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant RIGI Protein expressed in mammalian cells.
Sequence:	MTTEQRRSLQ AFQDYIRKTL DPTYILSYMA PWFREEEVQY IQAEKNNKGP MEAATLFLKF LLELQEEGWF RGFLDALDHA GYSGLYEAIE SWDFKKIEKL EEYRLLLKRL QPEFKTRIIP TDIISDLSEC LINQECEEIL QICSTKGMMA GAEKLVECLL RSDKENWPKT LKLALEKERN KFSELWIVEK GIKDVETEDL EDKMETSDIQ IFYQEDPECQ NLSENSCPPS EVSDTNLYSP FKPRNYQLEL ALPAMKGKNT IICAPTGCGK TFVSLLICEH HLKKFPQGQK GKVVFFANQI PVYEQQKSVF SKYFERHGYR VTGISGATAE NVPVEQIVEN NDIIILTPQI LVNNLKKGTI PSLSIFTLMI FDECHNTSKQ HPYNMIMFNY LDQKLGGSSG PLPQVIGLTA SVGVGDAKNT DEALDYICKL CASLDASVIA TVKHNLEELE QVVYKPQKFF RKVESRISDK FKYIIAQLMR DTESLAKRIC KDLENLSQIQ NREFGTQKYE QWIVTVQKAC MVFQMPDKDE ESRICKALFL YTSHLRKYND ALIISEHARM KDALDYLKDF FSNVRAAGFD EIEQDLTQRF EEKLQELESV SRDPSNENPK LEDLCFILQE EYHLNPETIT ILFVKTRALV DALKNWIEGN PKLSFLKPGI LTGRGKTNQN TGMTLPAQKC ILDAFKASGD HNILIATSVA DEGIDIAQCN LVILYEYVGN

Product Details

	VIKMIQTRGR GRARGSKCFL LTSNAGVIEK EQINMYKEKM MNDSILRLQT WDEAVFREKI LHIQTHEKFI RDSQEKPKPV PDKENKKLLC RKCKALACYT ADVRVIEECH YTVLGDAFKE CFVSRPHPKP KQFSSFEKRA KIFCARQNCS HDWGIHVKYK TFEIPVIKIE SFVVEDIATG VQTLYSKWKD FHFEKIPFDP AEMSK **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: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

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-

inflammatory cytokines (PubMed:15208624, PubMed:16125763, PubMed:15708988, PubMed:16127453, PubMed:16153868, PubMed:17190814, PubMed:18636086, PubMed:19122199, PubMed:19211564, PubMed:29117565, PubMed:28469175, PubMed:31006531, PubMed:34935440, PubMed:35263596, PubMed:36793726). Forms a ribonucleoprotein complex with viral RNAs on which it homooligomerizes to form filaments (PubMed:15208624, PubMed:15708988). 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 (PubMed:28469175, PubMed:31006531). 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 (PubMed:28469175, PubMed:31006531). Ligands include 5'-triphosphorylated ssRNAs and dsRNAs but also short dsRNAs (<1 kb in length) (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). In addition to the 5'-triphosphate moiety, blunt-end base pairing at the 5'-end of the RNA is very essential (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). Overhangs at the non-triphosphorylated end of the dsRNA RNA have no major impact on its activity (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). A 3'overhang at the 5'triphosphate end decreases and any 5'overhang at the 5' triphosphate end abolishes its activity (PubMed:15208624, PubMed:15708988, PubMed:19576794, PubMed:19609254, PubMed:21742966). Detects both positive and negative strand RNA viruses including members of the families Paramyxoviridae: Human respiratory syncytial virus and measles virus (MeV), Rhabdoviridae: vesicular stomatitis virus (VSV), Orthomyxoviridae: influenza A and B virus, Flaviviridae: Japanese encephalitis virus (JEV), hepatitis C virus (HCV), dengue virus (DENV) and west Nile virus (WNV) (PubMed:21616437, PubMed:21884169). It also detects rotaviruses and reoviruses (PubMed:21616437, PubMed:21884169). Detects and binds to SARS-CoV-2 RNAs which is inhibited by m6A RNA modifications (Ref.69). Also involved in antiviral signaling in response to viruses containing a dsDNA genome such as Epstein-Barr virus (EBV) (PubMed:19631370). Detects dsRNA produced from non-self dsDNA by RNA polymerase III, such as Epstein-Barr virus-encoded RNAs (EBERs). May play important roles in granulocyte production and differentiation, bacterial phagocytosis and in the regulation of cell migration. {ECO:0000269|PubMed:15208624, ECO:0000269|PubMed:15708988, ECO:0000269|PubMed:16125763, ECO:0000269|PubMed:16127453, ECO:0000269|PubMed:16153868, ECO:0000269|PubMed:17190814,

Target Details

	ECO:0000269|PubMed:18636086, ECO:0000269|PubMed:19122199, ECO:0000269|PubMed:19211564, ECO:0000269|PubMed:19576794, ECO:0000269|PubMed:19609254, ECO:0000269|PubMed:19631370, ECO:0000269|PubMed:21742966, ECO:0000269|PubMed:28469175, ECO:0000269|PubMed:29117565, ECO:0000269|PubMed:31006531, ECO:0000269|PubMed:34935440, ECO:0000269|PubMed:35263596, ECO:0000269|PubMed:36793726, ECO:0000269|Ref.69, ECO:0000303|PubMed:21616437, ECO:0000303|PubMed:21884169}.
Molecular Weight:	106.6 kDa
UniProt:	O95786
Pathways:	Activation of Innate immune Response, Hepatitis C

Application Details

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

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