Datasheet for ABIN7552072

AGO2 Protein (AA 1-859) (His tag)

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Overview

Quantity:	1 mg
Target:	AGO2
Protein Characteristics:	AA 1-859
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This AGO2 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Purpose:	Custom-made recombinat AGO2 Protein expressed in mammalien cells.
Sequence:	MYSGAGPALA PPAPPPPIQG YAFKPPPRPD FGTSGRTIKL QANFFEMDIP KIDIYHYELD IKPEKCPRRV NREIVEHMVQ HFKTQIFGDR KPVFDGRKNL YTAMPLPIGR DKVELEVTLP GEGKDRIFKV SIKWVSCVSL QALHDALSGR LPSVPFETIQ ALDVVMRHLP SMRYTPVGRS FFTASEGCSN PLGGGREVWF GFHQSVRPSL WKMMLNIDVS ATAFYKAQPV IEFVCEVLDF KSIEEQQKPL TDSQRVKFTK EIKGLKVEIT HCGQMKRKYR VCNVTRRPAS HQTFPLQQES GQTVECTVAQ YFKDRHKLVL RYPHLPCLQV GQEQKHTYLP LEVCNIVAGQ RCIKKLTDNQ TSTMIRATAR SAPDRQEEIS KLMRSASFNT DPYVREFGIM VKDEMTDVTG RVLQPPSILY GGRNKAIATP VQGVWDMRNK QFHTGIEIKV WAIACFAPQR QCTEVHLKSF TEQLRKISRD AGMPIQGQPC FCKYAQGADS VEPMFRHLKN TYAGLQLVVV ILPGKTPVYA EVKRVGDTVL GMATQCVQMK NVQRTTPQTL SNLCLKINVK LGGVNNILLP QGRPPVFQQP VIFLGADVTH PPAGDGKKPS IAAVVGSMDA HPNRYCATVR VQQHRQEIIQ DLAAMVRELL IQFYKSTRFK

Product Details

	PTRIIFYRDG VSEGQFQQVL HHELLAIREA CIKLEKDYQP GITFIVVQKR HHTRLFCTDK NERVGKSGNI PAGTTVDTKI THPTEFDFYL CSHAGIQGTS RPSHYHVLWD DNRFSSDELQ ILTYQLCHTY VRCTRSVSIP APAYYAHLVA FRARYHLVDK EHDSAEGSHT SGQSNGRDHQ ALAKAVQVHQ DTLRTMYFA **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: • 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	AGO2
Alternative Name:	AGO2 (AGO2 Products)
Background:	Protein argonaute-2 (Argonaute2) (hAgo2) (EC 3.1.26.n2) (Argonaute RISC catalytic component 2) (Eukaryotic translation initiation factor 2C 2) (eIF-2C 2) (eIF2C 2) (PAZ Piwi domain protein) (PPD) (Protein slicer),FUNCTION: Required for RNA-mediated gene silencing (RNAi) by the RNA-induced silencing complex (RISC). The 'minimal RISC' appears to include AGO2 bound to a short guide RNA such as a microRNA (miRNA) or short interfering RNA (siRNA). These guide RNAs direct RISC to complementary mRNAs that are targets for RISC-mediated gene silencing. The precise mechanism of gene silencing depends on the degree of complementarity between

	the miRNA or siRNA and its target. Binding of RISC to a perfectly complementary mRNA generally results in silencing due to endonucleolytic cleavage of the mRNA specifically by AGO2. Binding of RISC to a partially complementary mRNA results in silencing through inhibition of translation, and this is independent of endonuclease activity. May inhibit translation initiation by binding to the 7-methylguanosine cap, thereby preventing the recruitment of the translation initiation factor eIF4-E. May also inhibit translation initiation via interaction with EIF6, which itself binds to the 60S ribosomal subunit and prevents its association with the 40S ribosomal subunit. The inhibition of translational initiation leads to the accumulation of the affected mRNA in cytoplasmic processing bodies (P-bodies), where mRNA degradation may subsequently occur. In some cases RISC-mediated translational repression is also observed for miRNAs that perfectly match the 3' untranslated region (3'-UTR). Can also up-regulate the translation of specific mRNAs under certain growth conditions. Binds to the AU element of the 3'-UTR of the TNF (TNF-alpha) mRNA and up-regulates translation under conditions of serum starvation. Also required for transcriptional gene silencing (TGS), in which short RNAs known as antigene RNAs or agRNAs direct the transcriptional repression of complementary promoter regions. {ECO:0000250|UniProtKB:Q8CJG0, ECO:0000255|HAMAP-Rule:MF_03031, ECO:0000269|PubMed:15105377, ECO:0000269|PubMed:15260970, ECO:0000269|PubMed:15284456, ECO:0000269|PubMed:15337849, ECO:0000269|PubMed:15800637, ECO:0000269|PubMed:16081698, ECO:0000269|PubMed:16142218, ECO:0000269|PubMed:16271387, ECO:0000269|PubMed:16289642, ECO:0000269|PubMed:16357216, ECO:0000269|PubMed:16756390, ECO:0000269|PubMed:16936728, ECO:0000269|PubMed:17382880, ECO:0000269|PubMed:17507929, ECO:0000269|PubMed:17524464, ECO:0000269|PubMed:17531811, ECO:0000269|PubMed:17932509, ECO:0000269|PubMed:18048652, ECO:0000269|PubMed:18178619, ECO:0000269|PubMed:18690212, ECO:0000269|PubMed:18771919, ECO:0000269|PubMed:19167051, ECO:0000269|PubMed:23746446}., FUNCTION: (Microbial infection) Upon Sars-CoV-2 infection, associates with viral miRNA-like small RNA, CoV2-miR-O7a, and may repress mRNAs, such as BATF2, to evade the IFN response. {ECO:0000269|PubMed:34903581}.
Molecular Weight:	97.2 kDa
UniProt:	Q9UKV8
Pathways:	Fc-epsilon Receptor Signaling Pathway, Regulatory RNA Pathways, EGFR Signaling Pathway, Neurotrophin Signaling Pathway, Ribonucleoprotein Complex Subunit Organization

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.
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

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