Datasheet for ABIN7545997

Sestrin 2 Protein (SESN2) (AA 1-480) (His tag)

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Overview

Quantity:	1 mg
Target:	Sestrin 2 (SESN2)
Protein Characteristics:	AA 1-480
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Sestrin 2 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant SESN2 Protein expressed in mammalian cells.
Sequence:	MIVADSECRA ELKDYLRFAP GGVGDSGPGE EQRESRARRG PRGPSAFIPV EEVLREGAES LEQHLGLEAL MSSGRVDNLA VVMGLHPDYF TSFWRLHYLL LHTDGPLASS WRHYIAIMAA ARHQCSYLVG SHMAEFLQTG GDPEWLLGLH RAPEKLRKLS EINKLLAHRP WLITKEHIQA LLKTGEHTWS LAELIQALVL LTHCHSLSSF VFGCGILPEG DADGSPAPQA PTPPSEQSSP PSRDPLNNSG GFESARDVEA LMERMQQLQE SLLRDEGTSQ EEMESRFELE KSESLLVTPS ADILEPSPHP DMLCFVEDPT FGYEDFTRRG AQAPPTFRAQ DYTWEDHGYS LIQRLYPEGG QLLDEKFQAA YSLTYNTIAM HSGVDTSVLR RAIWNYIHCV FGIRYDDYDY GEVNQLLERN LKVYIKTVAC YPEKTTRRMY NLFWRHFRHS EKVHVNLLLL EARMQAALLY ALRAITRYMT **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

Product Details

	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:	Sestrin 2 (SESN2)
Alternative Name:	SESN2 (SESN2 Products)
Background:	Sestrin-2 (EC 1.11.1.-) (Hypoxia-induced gene),FUNCTION: Functions as an intracellular leucine sensor that negatively regulates the mTORC1 signaling pathway through the GATOR complex (PubMed:18692468, PubMed:25263562, PubMed:25457612, PubMed:26449471, PubMed:26612684, PubMed:26586190, PubMed:31586034, PubMed:35114100, PubMed:35831510, PubMed:36528027). In absence of leucine, binds the GATOR subcomplex GATOR2 and prevents mTORC1 signaling (PubMed:18692468, PubMed:25263562, PubMed:25457612, PubMed:26449471, PubMed:26612684, PubMed:26586190, PubMed:31586034, PubMed:35114100, PubMed:35831510, PubMed:36528027). Binding of leucine to SESN2 disrupts its interaction with GATOR2 thereby activating the TORC1 signaling pathway (PubMed:26449471, PubMed:26586190, PubMed:35114100, PubMed:35831510, PubMed:36528027). This stress-inducible metabolic regulator also plays a role in protection against oxidative and genotoxic stresses. May negatively regulate protein translation in

Target Details

	response to endoplasmic reticulum stress, via mTORC1 (PubMed:24947615). May positively regulate the transcription by NFE2L2 of genes involved in the response to oxidative stress by facilitating the SQSTM1-mediated autophagic degradation of KEAP1 (PubMed:23274085). May also mediate TP53 inhibition of TORC1 signaling upon genotoxic stress (PubMed:18692468). Moreover, may prevent the accumulation of reactive oxygen species (ROS) through the alkylhydroperoxide reductase activity born by the N-terminal domain of the protein (PubMed:26612684). Was originally reported to contribute to oxidative stress resistance by reducing PRDX1 (PubMed:15105503). However, this could not be confirmed (PubMed:19113821). {ECO:0000269|PubMed:15105503, ECO:0000269|PubMed:18692468, ECO:0000269|PubMed:19113821, ECO:0000269|PubMed:23274085, ECO:0000269|PubMed:24947615, ECO:0000269|PubMed:25263562, ECO:0000269|PubMed:25457612, ECO:0000269|PubMed:26449471, ECO:0000269|PubMed:26586190, ECO:0000269|PubMed:26612684, ECO:0000269|PubMed:35114100, ECO:0000269|PubMed:35831510, ECO:0000269|PubMed:36528027}.
Molecular Weight:	54.5 kDa
UniProt:	P58004

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