

Sestrin-2 Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP6674c**Specification**

Sestrin-2 Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [P58004](#)**Sestrin-2 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 83667**Other Names**

Sestrin-2, Hi95, SESN2, SEST2

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP6674c](/products/AP6674c) was selected from the Center region of human Sestrin-2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

Sestrin-2 Antibody (Center) Blocking Peptide - Protein Information**Name** SESN2 ([HGNC:20746](#))**Function**

Functions as an intracellular leucine sensor that negatively regulates the mTORC1 signaling pathway through the GATOR complex (PubMed: [18692468](http://www.uniprot.org/citations/18692468), PubMed: [25263562](http://www.uniprot.org/citations/25263562), PubMed: [25457612](http://www.uniprot.org/citations/25457612), PubMed: [26449471](http://www.uniprot.org/citations/26449471), PubMed: [26586190](http://www.uniprot.org/citations/26586190), PubMed: [26612684](http://www.uniprot.org/citations/26612684), PubMed: [31586034](http://www.uniprot.org/citations/31586034), PubMed: [35114100](http://www.uniprot.org/citations/35114100), PubMed: [35831510](http://www.uniprot.org/citations/35831510), PubMed: [36528027](http://www.uniprot.org/citations/36528027)). In absence of

leucine, binds the GATOR subcomplex GATOR2 and prevents mTORC1 signaling (PubMed:18692468, PubMed:25263562, PubMed:25457612, PubMed:26449471, PubMed:26586190, PubMed:26612684, 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 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).

Cellular Location

Cytoplasm.

Tissue Location

Widely expressed..

Sestrin-2 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

Sestrin-2 Antibody (Center) Blocking Peptide - Images**Sestrin-2 Antibody (Center) Blocking Peptide - Background**

SESN2 is a member of the sestrin family of PA26-related proteins. The protein may function in the regulation of cell growth and survival. This protein may be involved in cellular response to different stress conditions.

Sestrin-2 Antibody (Center) Blocking Peptide - References

Budanov,A.V., Science 304 (5670), 596-600 (2004)Peeters,H., Hum. Genet. 112 (5-6), 573-580

(2003)