10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Sestrin-2 Antibody (Center)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6674c

Specification

Sestrin-2 Antibody (Center) - Product Information

Application	**FC, WB,E**
Primary Accession	P58004
Other Accession	P58043
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**54494**
Antigen Region	**283-311**

Sestrin-2 Antibody (Center) - Additional Information

Gene ID 83667

Other Names
Sestrin-2, Hi95, SESN2, SEST2

Target/Specificity
This Sestrin-2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 283-311 amino acids from the Central region of human Sestrin-2.

Dilution
FC~~1:10~50
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Sestrin-2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Sestrin-2 Antibody (Center) - 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, PubMed:25263562, PubMed:25457612, PubMed:26449471, PubMed:26586190, PubMed:26612684, 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: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) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Sestrin-2 Antibody (Center) - Images

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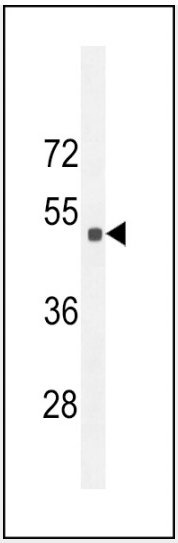
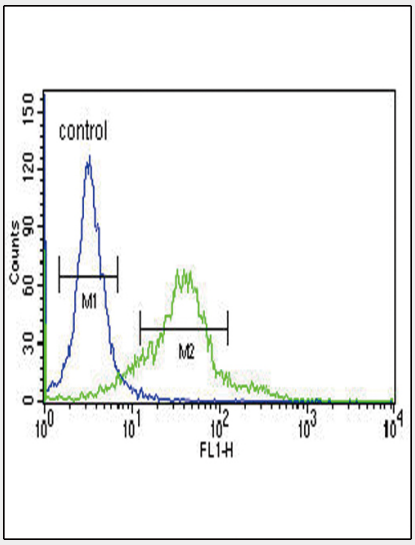


Western blot analysis of Sestrin-2 Antibody (Center) (Cat. #AP6674c) in 293 cell line lysates (35ug/lane). Sestrin-2 (arrow) was detected using the purified Pab. .



Sestrin-2 Antibody (Center) (Cat. #AP6674c) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Sestrin-2 Antibody (Center) - 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) - References

Budanov,A.V., Science 304 (5670), 596-600 (2004)
Peeters,H., Hum. Genet. 112 (5-6), 573-580 (2003)