

Sestrin-1 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP7650a

Product Information

Application WB, E **Primary Accession** Q9Y6P5

Reactivity Human, Mouse

Host Rabbit
Clonality Polyclonal
Isotype Rabbit IgG
Clone Names RB18600
Calculated MW 56557
Antigen Region 14-43

Additional Information

Gene ID 27244

Other Names Sestrin-1, p53-regulated protein PA26, SESN1, PA26, SEST1

Target/Specificity This Sestrin-1 antibody is generated from rabbits immunized with a KLH

conjugated synthetic peptide between 14-43 amino acids from the N-terminal

region of human Sestrin-1.

Dilution 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-1 Antibody (N-term) is for research use only and not for use in

diagnostic or therapeutic procedures.

Protein Information

Name SESN1 (<u>HGNC:21595</u>)

Function Functions as an intracellular leucine sensor that negatively regulates the

TORC1 signaling pathway through the GATOR complex. In absence of leucine, binds the GATOR subcomplex GATOR2 and prevents TORC1 signaling. Binding of leucine to SESN2 disrupts its interaction with GATOR2 thereby activating the TORC1 signaling pathway (PubMed: 25263562, PubMed: 26449471). This

stress-inducible metabolic regulator may also play a role in protection against oxidative and genotoxic stresses (By similarity). 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). Moreover, may prevent the accumulation of reactive oxygen species (ROS) through the alkylhydroperoxide reductase activity born by the N-terminal domain of the protein (By similarity). Was originally reported to contribute to oxidative stress resistance by reducing PRDX1 (PubMed:15105503). However, this could not be confirmed (By similarity).

Cellular Location Nucleus. Cytoplasm

Tissue Location Widely expressed..

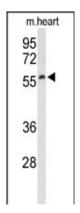
Background

Sestrin-1 is involved in the reduction of peroxiredoxins. This protein may also be regulator of cellular growth.

References

Budanov, A.V., Science 304 (5670), 596-600 (2004) Peeters, H., Hum. Genet. 112 (5-6), 573-580 (2003) Velasco-Miguel, S., Oncogene 18 (1), 127-137 (1999)

Images



Western blot analysis of Sestrin-1 Antibody (N-term) (Cat. #AP7650a) in mouse heart tissue lysates (35ug/lane). Sestrin-1 (arrow) was detected using the purified Pab.

Citations

• GCN2 sustains mTORC1 suppression upon amino acid deprivation by inducing Sestrin2.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.