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

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 (HGNC:21595)
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..

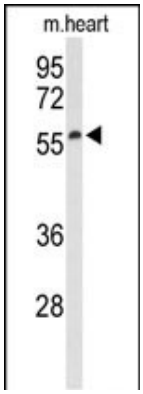
Background

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.