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Sestrin-3 Antibody (Center Y335)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12471c

Product Information

Application	WB, IHC-P, E
Primary Accession	P58005
Other Accession	Q9CYP7, NP_653266.2
Reactivity	Human, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18605
Calculated MW	57291
Antigen Region	320-347

Additional Information

Gene ID	143686
Other Names	Sestrin-3, SESN3, SEST3
Target/Specificity	This Sestrin-3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 320-347 amino acids from the Central region of human Sestrin-3.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
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-3 Antibody (Center Y335) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SESN3 (HGNC:23060)
Function	May function as an intracellular leucine sensor that negatively regulates the TORC1 signaling pathway (PubMed:25263562). May also regulate the insulin-receptor signaling pathway through activation of TORC2 (By similarity).

This metabolic regulator may also play a role in protection against oxidative and genotoxic stresses (By similarity). 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).

Cellular Location Cytoplasm.

Tissue Location Widely expressed..

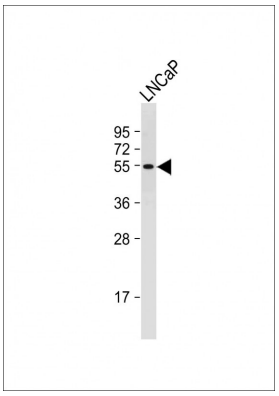
Background

Sestrins form a small family of redox enzymes which regulate accumulation of Reactive Oxygen Species. They protect cells and their DNA against oxidative damage and regulate cell growth and viability. These genes are often deregulated in cancers and their inactivation accelerates the growth of model tumors in mice.

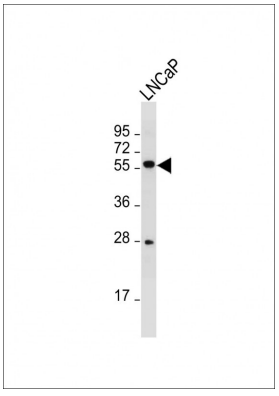
References

Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Chen, C.C., et al. Dev. Cell 18(4):592-604(2010)
Peeters, H., et al. Hum. Genet. 112 (5-6), 573-580 (2003) :

Images



Anti-Sestrin-3 Antibody (Center Y335) at 1:2000 dilution + LNCaP whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 57 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



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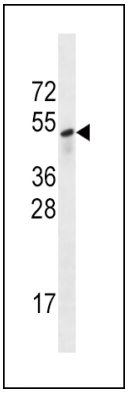
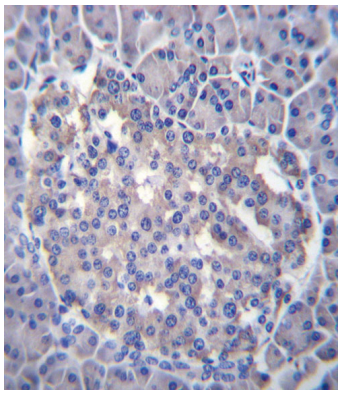
Sestrin-3 Antibody (Center Y335) (Cat. #AP12471c) western blot analysis in A549 cell line lysates (35ug/lane).This demonstrates the Sestrin-3 antibody detected the Sestrin-3 protein (arrow).





Sestrin-3 Antibody (Center Y335) (Cat. #AP12471c)immunohistochemistry analysis in formalin fixed and paraffin embedded human pancreas tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of Sestrin-3 Antibody (Center Y335) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- ATF4-Mediated Upregulation of REDD1 and Sestrin2 Suppresses mTORC1 Activity during Prolonged Leucine Deprivation
- Evidence for a Role for Sestrin1 in Mediating Leucine-Induced Activation of mTORC1 in Skeletal Muscle.
- Leucine induced dephosphorylation of Sestrin2 promotes mTORC1 activation.
- GCN2 sustains mTORC1 suppression upon amino acid deprivation by inducing Sestrin2.
- Amino Acid-Induced Activation of mTORC1 in Rat Liver Is Attenuated by Short-Term Consumption of a High-Fat Diet.