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

WIPI2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13314a

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9Y4P8
Other Accession	NP_001028690.1, NP_057087.2, NP_001028691.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33312
Calculated MW	49408
Antigen Region	4-32

Additional Information

Gene ID	26100
Other Names	WD repeat domain phosphoinositide-interacting protein 2, WIPI-2, WIPI49-like protein 2, WIPI2
Target/Specificity	This WIPI2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 4-32 amino acids from the N-terminal region of human WIPI2.
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	WIPI2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	WIPI2 (HGNC:32225)
Function	Component of the autophagy machinery that controls the major intracellular degradation process by which cytoplasmic materials are packaged into autophagosomes and delivered to lysosomes for degradation

	(PubMed:20505359, PubMed:28561066). Involved in an early step of the formation of preautophagosomal structures (PubMed:20505359, PubMed:28561066). Binds and is activated by phosphatidylinositol 3-phosphate (PtdIns3P) forming on membranes of the endoplasmic reticulum upon activation of the upstream ULK1 and PI3 kinases (PubMed:28561066). Mediates ER-isolation membranes contacts by interacting with the ULK1:RB1CC1 complex and PtdIns3P (PubMed:28890335). Once activated, WIPI2 recruits at phagophore assembly sites the ATG12-ATG5-ATG16L1 complex that directly controls the elongation of the nascent autophagosomal membrane (PubMed:20505359, PubMed:28561066).
Cellular Location	Preautophagosomal structure membrane; Peripheral membrane protein; Cytoplasmic side. Note=Localizes to omegasomes membranes which are endoplasmic reticulum connected structures at the origin of preautophagosomal structures. Enriched at preautophagosomal structure membranes in response to PtdIns3P.
Tissue Location	Ubiquitously expressed (at protein level). Highly expressed in heart, skeletal muscle and pancreas. Expression is down- regulated in pancreatic and in kidney tumors

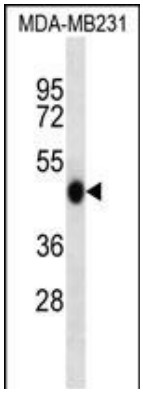
Background

WD40 repeat proteins are key components of many essential biologic functions. They regulate the assembly of multiprotein complexes by presenting a beta-propeller platform for simultaneous and reversible protein-protein interactions. Members of the WIPI subfamily of WD40 repeat proteins, such as WIPI2, have a 7-bladed propeller structure and contain a conserved motif for interaction with phospholipids (Proikas-Cezanne et al., 2004 [PubMed 15602573]).

References

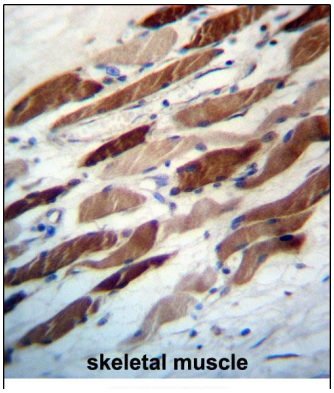
Sugiyama, N., et al. Mol. Cell Proteomics 6(6):1103-1109(2007)
Proikas-Cezanne, T., et al. Oncogene 23(58):9314-9325(2004)
Simpson, J.C., et al. EMBO Rep. 1(3):287-292(2000)

Images



WIPI2 Antibody (N-term) (Cat. #AP13314a) western blot analysis in MDA-MB231 cell line lysates (35ug/lane).This demonstrates the WIPI2 antibody detected the WIPI2 protein (arrow).

WIPI2 Antibody (N-term) (Cat. #AP13314a)immunohistochemistry analysis in formalin fixed and paraffin embedded human skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of WIPI2 Antibody (N-term) for



immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Defects of Vps15 in skeletal muscles lead to autophagic vacuolar myopathy and lysosomal disease.