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TRIM72 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11980b

Product Information

Application	IHC-P, WB, E
Primary Accession	Q6ZMU5
Other Accession	NP_001008275.2
Reactivity	Human, Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB29696
Calculated MW	52731
Antigen Region	299-327

Additional Information

Gene ID	493829
Other Names	Tripartite motif-containing protein 72, Mitsugumin-53, Mg53, TRIM72 (HGNC:32671), MG53
Target/Specificity	This TRIM72 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 299-327 amino acids from the C-terminal region of human TRIM72.
Dilution	IHC-P~~1:100~500 WB~~1:2000 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	TRIM72 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRIM72 (HGNC:32671)
Synonyms	MG53
Function	Muscle-specific E3 ubiquitin-protein ligase that plays a central role in cell

membrane repair by nucleating the assembly of the repair machinery at injury sites (PubMed:36944613). Its ubiquitination activity is mediated by E2 ubiquitin-conjugating enzymes UBE2D1, UBE2D2 and UBE2D3 (By similarity). Acts as a sensor of oxidation: upon membrane damage, entry of extracellular oxidative environment results in disulfide bond formation and homooligomerization at the injury site (By similarity). This oligomerization acts as a nucleation site for recruitment of TRIM72-containing vesicles to the injury site, leading to membrane patch formation (By similarity). Probably acts upstream of the Ca(2+)-dependent membrane resealing process (By similarity). Required for transport of DYSF to sites of cell injury during repair patch formation (By similarity). Regulates membrane budding and exocytosis (By similarity). May be involved in the regulation of the mobility of KCNB1-containing endocytic vesicles (By similarity).

Cellular Location

Cell membrane, sarcolemma. Cytoplasmic vesicle membrane Note=Tethered to plasma membrane and cytoplasmic vesicles via its interaction with phosphatidylserine. {ECO:0000250, ECO:0000269|PubMed:36944613, ECO:0000269|PubMed:37770719}

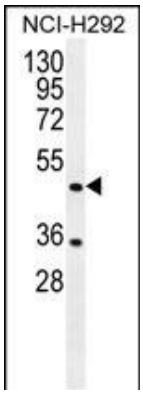
Background

TRIM72 is a muscle-specific protein that plays a central role in cell membrane repair by nucleating the assembly of the repair machinery at injury sites. Specifically binds phosphatidylserine. Acts as a sensor of oxidation: upon membrane damage, entry of extracellular oxidative environment results in disulfide bond formation and homooligomerization at the injury site. This oligomerization acts as a nucleation site for recruitment of TRIM72-containing vesicles to the injury site, leading to membrane patch formation. Probably acts upstream of the Ca(2+)-dependent membrane resealing process. Required for transport of DYSF to sites of cell injury during repair patch formation. Regulates membrane budding and exocytosis. May be involved in the regulation of the mobility of KCNB1-containing endocytic vesicles (By similarity).

References

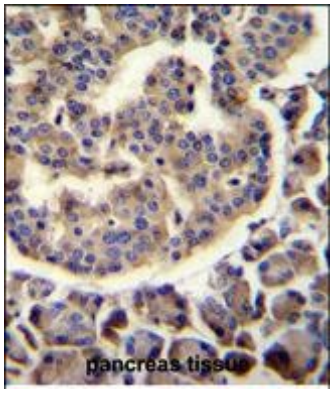
Park, E.Y., et al. Proteins 78(3):790-795(2010)
Han, S., et al. Hum. Mol. Genet. 18(6):1171-1180(2009)
Martin, J., et al. Nature 432(7020):988-994(2004)

Images



TRIM72 Antibody (C-term) (Cat. #AP11980b) western blot analysis in NCI-H292 cell line lysates (35ug/lane).This demonstrates the TRIM72 antibody detected the TRIM72 protein (arrow).

TRIM72 Antibody (C-term) (Cat. #AP11980b)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 TRIM72 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.