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TRIM72 Polyclonal Antibody

Catalog # AP63497

Product Information

Application	WB, IHC-P
Primary Accession	Q6ZMU5
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	52731

Additional Information

Gene ID	493829
Other Names	Tripartite motif-containing protein 72; Mitsugumin-53; Mg53
Dilution	WB~~WB: 1:1000 IHC: 1:200-500 IHC-P~~WB: 1:1000 IHC: 1:200-500
Format	PBS, pH 7.4, containing 0.09% (W/V) sodium azide as Preservative and 50% Glycerol.
Storage Conditions	-20℃

Protein Information

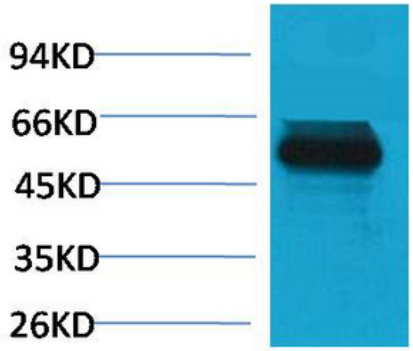
Name	TRIM72 (HGNC:32671)
Synonyms	MG53
Function	Muscle-specific E3 ubiquitin-protein ligase that plays a central role in cell membrane repair by nucleating the assembly of the repair machinery at injury sites (PubMed:36944613). Its ubiquitination activity is mediated by E2 ubiquitin-conjugating enzymes 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}

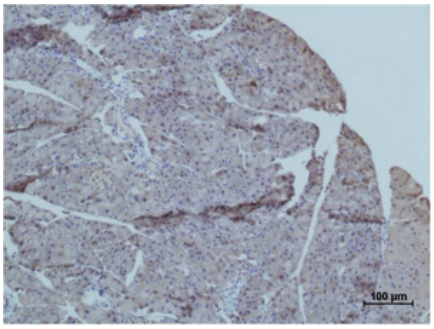
Background

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).

Images



Western blot analysis of Mouse skeletal muscle using TRIM72 Polyclonal Antibody.. Secondary antibody was diluted at 1:20000



Immunohistochemical analysis of paraffin-embedded Mouse PancreasTissue using TRIM72 Polyclonal Antibody.