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Tensin-2 Polyclonal Antibody

Catalog # AP73842

Product Information

Application	WB
Primary Accession	Q63HR2
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	152580

Additional Information

Gene ID	23371
Other Names	TENC1; KIAA1075; TNS2; Tensin-like C1 domain-containing phosphatase; C1 domain-containing phosphatase and tensin homolog; C1-TEN; Tensin-2
Dilution	WB~~Western Blot: 1/500 - 1/2000. ELISA: 1/10000. Not yet tested in other applications.
Format	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.
Storage Conditions	-20℃

Protein Information

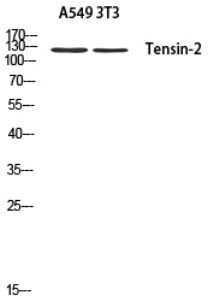
Name	TNS2
Synonyms	KIAA1075, TENC1
Function	Tyrosine-protein phosphatase which regulates cell motility, proliferation and muscle-response to insulin (PubMed:15817639, PubMed:23401856). Phosphatase activity is mediated by binding to phosphatidylinositol-3,4,5-triphosphate (PtdIns(3,4,5)P3) via the SH2 domain (PubMed:30092354). In muscles and under catabolic conditions, dephosphorylates IRS1 leading to its degradation and muscle atrophy (PubMed:23401856, PubMed:30092354). Negatively regulates PI3K-AKT pathway activation (PubMed:15817639, PubMed:23401856, PubMed:30092354). Dephosphorylates nephrin NPHS1 in podocytes which regulates activity of the mTORC1 complex (PubMed:28955049). Under normal glucose conditions, NPHS1 outcompetes IRS1 for binding to phosphatidylinositol 3-kinase (PI3K) which balances mTORC1 activity but high glucose conditions lead to up-regulation of TNS2, increased NPHS1 dephosphorylation and activation of mTORC1, contributing to podocyte hypertrophy and proteinuria (PubMed:28955049). Required for correct

	podocyte morphology, podocyte-glomerular basement membrane interaction and integrity of the glomerular filtration barrier (By similarity). Enhances RHOA activation in the presence of DLC1 (PubMed:26427649). Plays a role in promoting DLC1-dependent remodeling of the extracellular matrix (PubMed:20069572).
Cellular Location	Cell junction, focal adhesion. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasm. Note=Detected at the end of actin stress fibers. Detected in cytoplasmic punctate bodies (PubMed:22019427, PubMed:25101860). Localizes to both focal adhesions and fibrillar adhesions but is found mainly in focal adhesions (PubMed:20069572) Enriched in dynamic focal adhesions at the leading edge of the cell and is found only rarely in fibrillar adhesions on the ventral surface of cells (PubMed:20069572).
Tissue Location	Detected in heart, kidney, brain, thymus, spleen, liver, placenta, lung, skeletal muscle and small intestine

Background

Regulates cell motility and proliferation. May have phosphatase activity. Reduces AKT1 phosphorylation. Lowers AKT1 kinase activity and interferes with AKT1 signaling.

Images



Western blot analysis of A549 3T3 using Tensin-2 antibody. Antibody was diluted at 1:500. Secondary antibody was diluted at 1:20000