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TBCD7 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9903c

Product Information

Application	WB, E
Primary Accession	Q9P0N9
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24905
Calculated MW	33972
Antigen Region	150-179

Additional Information

Gene ID	51256
Other Names	TBC1 domain family member 7, Cell migration-inducing protein 23, TBC1D7, TBC7
Target/Specificity	This TBCD7 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 150-179 amino acids from the Central region of human TBCD7.
Dilution	WB~~1:1000 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	TBCD7 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TBC1D7 {ECO:0000303|PubMed:22795129}
Function	Non-catalytic component of the TSC-TBC complex, a multiprotein complex that acts as a negative regulator of the canonical mTORC1 complex, an evolutionarily conserved central nutrient sensor that stimulates anabolic

	reactions and macromolecule biosynthesis to promote cellular biomass generation and growth (PubMed:22795129, PubMed:24529379). The TSC-TBC complex acts as a GTPase-activating protein (GAP) for the small GTPase RHEB, a direct activator of the protein kinase activity of mTORC1 (PubMed:22795129, PubMed:24529379). In absence of nutrients, the TSC-TBC complex inhibits mTORC1, thereby preventing phosphorylation of ribosomal protein S6 kinase (RPS6KB1 and RPS6KB2) and EIF4EBP1 (4E-BP1) by the mTORC1 signaling (PubMed:22795129). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (PubMed:24529379).
Cellular Location	Lysosome membrane. Cytoplasmic vesicle. Cytoplasm, cytosol. Note=Localizes in the cytoplasmic vesicles of the endomembrane in association with the TSC-TBC complex (PubMed:17658474). Recruited to lysosomal membranes in a RHEB-dependent process in absence of nutrients (PubMed:24529379). In response to nutrients, the complex dissociates from lysosomal membranes and relocalizes to the cytosol (PubMed:24529379)
Tissue Location	Highly expressed in heart, and slightly in kidney, liver and placenta.

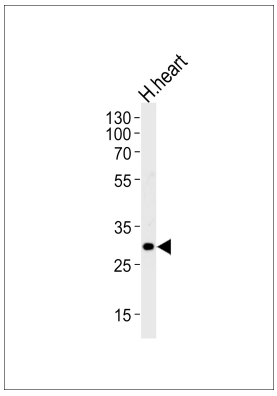
Background

TBC1D7 belongs to the family of proteins sharing a 180- to 200-amino acid TBC domain presumed to have a role in regulating cell growth and differentiation. These proteins share significant homology with TRE2.

References

Ishibashi, K., et al. Genes Cells 14(1):41-52(2009)
Nakashima, A., et al. Biochem. Biophys. Res. Commun. 361(1):218-223(2007)
Larson, M.G., et al. BMC Med. Genet. 8 SUPPL 1, S5 (2007)

Images



Western blot analysis of lysate from human heart tissue lysate, using TBCD7 Antibody (Center)(Cat. #AP9903c). AP9903c was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug per lane.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.