

**TBCD7 Antibody (Center) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP9903c****Specification**

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**TBCD7 Antibody (Center) Blocking Peptide - Product Information**Primary Accession [Q9P0N9](#)**TBCD7 Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 107080638;51256**Other Names**

TBC1 domain family member 7, Cell migration-inducing protein 23, TBC1D7, TBC7

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**TBCD7 Antibody (Center) Blocking Peptide - 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:<a href="http://www.uniprot.org/citations/22795129" target="\_blank">22795129</a>, PubMed:<a href="http://www.uniprot.org/citations/24529379" target="\_blank">24529379</a>). 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:<a href="http://www.uniprot.org/citations/22795129" target="\_blank">22795129</a>, PubMed:<a href="http://www.uniprot.org/citations/24529379" target="\_blank">24529379</a>). 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:<a href="http://www.uniprot.org/citations/22795129" target="\_blank">22795129</a>). The TSC-TBC complex is inactivated in response to nutrients, relieving inhibition of mTORC1 (PubMed:<a href="http://www.uniprot.org/citations/24529379" target="\_blank">24529379</a>).

**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.

**TBCD7 Antibody (Center) Blocking Peptide - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

**TBCD7 Antibody (Center) Blocking Peptide - Images****TBCD7 Antibody (Center) Blocking Peptide - 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.

**TBCD7 Antibody (Center) Blocking Peptide - 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)