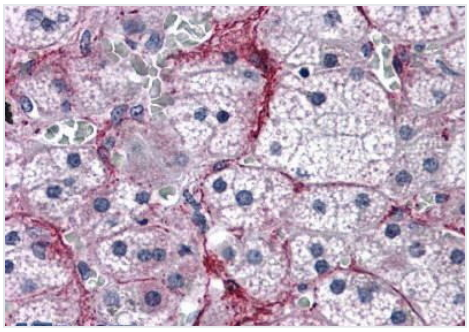
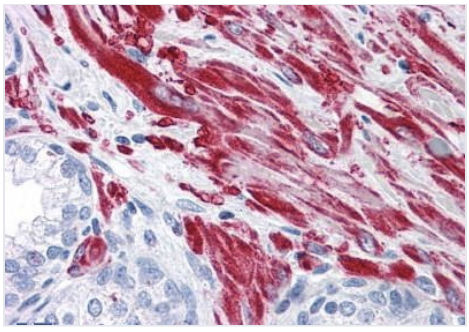
# TBC1D4 Antibody – Rabbit Polyclonal

## PRODUCT OVERVIEW

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| **Product Name** | TBC1D4, Polyclonal Antibody |
| **Full Product Name** | TBC1D4, CT (TBC1 Domain Family Member 4, Akt Substrate Of 160kD, AS160, KIAA0603) |
| **Product Gene Name** | anti-TBC1D4 antibody |
| **Product Synonym Names** | Anti -TBC1D4, CT (TBC1 Domain Family Member 4, Akt Substrate Of 160kD, AS160, KIAA0603) |
| **Clonality** | Polyclonal |
| **Host** | Rabbit |
| **Species Reactivity** | Human |
| **Form/Format** | Supplied as a liquid in PBS, 0.02% sodium azide. |
| **Purity/Purification** | Affinity Purified<br>Purified by immunoaffinity chromatography. |
| **Specificity** | Recognizes human TBC1D4. |
| **Preparation and Storage** | May be stored at 4 degree C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20 degree C. Aliquots are stable for at least 12 months. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. |
| **Molecular Weight** | 146,563 Da |
| **Chromosome Location** | Chromosome: 13; NC_000013.10 (75858809..76056782, complement). Location: 13q22.2 |
| **OMIM** | 612465 |
| **3D Structure** | ModBase 3D Structure for O60343 |
| **Immunogen** | Human TBC1D4 |
| **Product Categories/Family for anti-TBC1D4 antibody** | Antibodies; Abs to Proteins |
| **Applications Tested/Suitable for anti-TBC1D4 antibody** | Immunohistochemistry (IHC) |
| **Application Notes for anti-TBC1D4 antibody** | Suitable for use in Immunohistochemistry.<br>Dilution: Immunohistochemistry (Formalin fixed paraffin embedded): 5ug/ml |
| **Related Product Information for anti-TBC1D4 antibody** | TBC1D4 may act as a GTPase-activating protein for RAB2A, RAB8A, RAB10 and RAB14. Isoform 2 promotes insulin-induced glucose transporter SLC2A4/GLUT4 translocation at the plasma membrane, thus increasing glucose uptake. |
| **Other Notes** | Small volumes of anti-TBC1D4 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply. |
| **Searchable Terms for TBC1D4 purchase** | MBS6009143 is an antibody targeting TBC1D4. Also known as TBC1D4, CT (TBC1 Domain Family Member 4, Akt Substrate Of 160kD, AS160, KIAA0603). Reactive in Human. Host: Rabbit. |



**Immunohistochemistry (IHC) of anti-TBC1D4 antibody**
Human Adrenal: Formalin-Fixed, Paraffin-Embedded (FFPE)



**Immunohistochemistry (IHC) of anti-TBC1D4 antibody**
Human Prostate: Formalin-Fixed, Paraffin-Embedded (FFPE)

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TBC1D4. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 114688046 |
| **NCBI GeneID** | 9882 |
| **NCBI Accession #** | NP_055647.2 |
| **UniProt Primary Accession #** | O60343 |
| **UniProt Secondary Accession #** | Q5W0B9; Q68D14; A7E2X8; B4DU25; B4E235; B6ETN8; B6ETN9 |
| **UniProt Related Accession #** | O60343 |
| **GenBank Nucleotide #** | NM_014832.2 |
| **NCBI Official Full Name** | TBC1 domain family member 4 |
| **NCBI Official Synonym Full Names** | TBC1 domain family, member 4 |
| **NCBI Official Symbol** | TBC1D4 |
| **NCBI Official Synonym Symbols** | AS160 |
| **UniProt Protein Name** | TBC1 domain family member 4 |
| **UniProt Synonym Protein Names** | Akt substrate of 160 kDa |
| **Protein Family** | TBC1 domain family |
| **UniProt Gene Name** | TBC1D4 |
| **UniProt Synonym Gene Names** | AS160; KIAA0603; AS160 |
| **UniProt Entry Name** | TBCD4_HUMAN |
| **NCBI Protein Information** | TBC1 domain family member 4; akt substrate of 160 kDa; Acrg embryonic lethality minimal region ortholog; TBC (Tre-2, BUB2, CDC16) domain-containing protein |
| **NCBI Summary for TBC1D4** | This gene is a member of the Tre-2/BUB2/CDC16 domain family. The protein encoded by this gene is a Rab-GTPase-activating protein, and contains two phopshotyrosine-binding domains (PTB1 and PTB2), a calmodulin-binding domain (CBD), a Rab-GTPase domain, and multiple AKT phosphomotifs. This protein is thought to play an important role in glucose homeostasis by regulating the insulin-dependent trafficking of the glucose transporter 4 (GLUT4), important for removing glucose from the bloodstream into skeletal muscle and fat tissues. Reduced expression of this gene results in an increase in GLUT4 levels at the plasma membrane, suggesting that this protein is important in intracellular retention of GLUT4 under basal conditions. When exposed to insulin, this protein is phosphorylated, dissociates from GLUT4 vesicles, resulting in increased GLUT4 at the cell surface, and enhanced glucose transport. Phosphorylation of this protein by AKT is required for proper translocation of GLUT4 to the cell surface. Individuals homozygous for a mutation in this gene are at higher risk for type 2 diabetes and have higher levels of circulating glucose and insulin levels after glucose ingestion. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Aug 2015] |

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| **UniProt Comments for TBC1D4** | AS160: a widely-expressed Rab GTPase-activating protein which apparently plays a role in mediating insulin action. Phosphorylated by the Ser/Thr protein kinase Akt in response to insulin. Is redistributed from low-density microsomes to the cytosol upon insulin treatment. Insulin stimulation of GLUT4 exocytosis is dependent on AS160. The translocation of GLUT4 from intracellular storage sites to the cell surface functions to stimulate insulin uptake by adipose and muscle tissue. Its expression is decreased by twofold in pancreatic islets in type 2 diabetes patients compared to control subjects; its phosphorylation is impaired in skeletal muscle of type 2 diabetics. The protein is expressed in pancreatic Langerhans islets, including beta cells. Up-regulated in T cells from patients with atopic dermatitis. Two alternatively spliced isoforms have been described. Isoform 2, which promotes GLUT4 translocation at the plasma membrane, is the highest overexpressed in most tissues. Isoform 2 shows a cytoplasmic perinuclear localization in a myoblastic cell line in resting and insulin-stimulated cells Isoform 2 is strongly expressed in adrenal and thyroid gland, and also in lung, kidney, colon, brain and adipose tissue. Isoform 2 is moderately expressed in skeletal muscle. Isoform 1 is highly expressed in skeletal muscle and heart, but was not detectable in the liver or adipose tissue.<br><br>Protein type: GAPs; GAPs, Rab<br><br>Chromosomal Location of Human Ortholog: 13q22.2<br><br>Cellular Component: cytoplasmic vesicle membrane; cytoplasm<br><br>Biological Process: vesicle-mediated transport; negative regulation of vesicle fusion; cellular response to insulin stimulus<br><br>Disease: Diabetes Mellitus, Noninsulin-dependent, 5 |
| **Research Articles on TBC1D4** | **1.** insulin resistance in muscles from healthy individuals is associated with suppression of site-specific phosphorylation of AS160 |
| **Precautions** | All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines. |
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