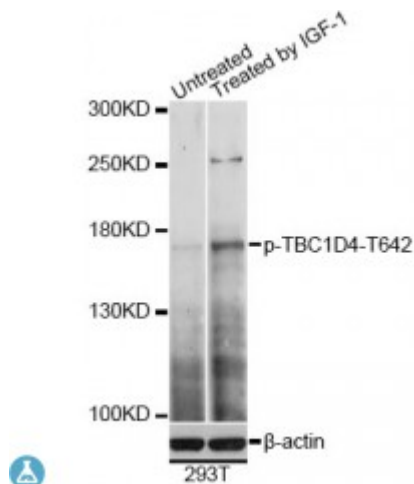


Anti-Phospho-TBC1D4-(T642) Antibody



Description

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 phosphotyrosine-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.

Model	STJ117889
Host	Rabbit
Reactivity	Human, Mouse
Applications	WB
Immunogen	A synthetic phosphorylated peptide around T642 of human TBC1D4 (NP_055647.2).

Gene ID	9882
Gene Symbol	TBC1D4
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Widely expressed, Isoform 2 is the highest overexpressed in most tissues, Isoform 1 is highly expressed in skeletal muscle and heart, but was not detectable in the liver nor in adipose tissue, 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, Expressed in pancreatic Langerhans islets, including beta cells (at protein level), Expression is decreased by twofold in pancreatic islets in
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	TBC1 domain family member 4 Akt substrate of 160 kDa AS160
Molecular Weight	146.563 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:19165OMIM:612465Reactome:R-HSA-1445148
Alternative Names	TBC1 domain family member 4 Akt substrate of 160 kDa AS160
Function	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,
Cellular Localization	Cytoplasm,
Post-translational Modifications	Phosphorylated by AKT1