



# TBC1D4 (phospho Thr642) Polyclonal Antibody

Catalog No	BYab-03609
Isotype	IgG
Reactivity	Human;Mouse
Applications	WB;IHC;IF;ELISA
Gene Name	TBC1D4
Protein Name	TBC1 domain family member 4
Immunogen	The antiserum was produced against synthesized peptide derived from human AS160 around the phosphorylation site of Thr642. AA range:611-660
Specificity	Phospho-TBC1D4 (T642) Polyclonal Antibody detects endogenous levels of TBC1D4 protein only when phosphorylated at T642.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/5000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	TBC1D4; AS160; KIAA0603; TBC1 domain family member 4; Akt substrate of 160 kDa; AS160
Observed Band	150kD
Cell Pathway	Cytoplasm . Isoform 2 shows a cytoplasmic perinuclear localization in a myoblastic cell line in resting and insulin-stimulated cells.
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 type 2 diabetes patients compared to control subjects. Up-regulated in T-cells from patients with atopic dermatitis.
Function	disease:May be involved in atopic dermatitis (AD).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

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plasma membrane, thus increasing glucose uptake.,PTM:Insulin-stimulated phosphorylation is required for SLC2A4/GLUT4 translocation.,PTM:Phosphorylated by AKT1; insulin-induced.,PTM:Physiological hyperinsulinemia increases phosphorylation in skeletal muscle. Insulin-stimulated phosphorylation is reduced by 39% in type 2 diabetic patients.,similarity:Contains 1 Rab-GAP TBC domain.,similarity:Contains 2 PID domains.,subcellular location:Isoform 2 shows a cytoplasmic perinuclear localization in a myoblastic cell line in resting and insulin-stimulated cells.,tissue specificity:Widely expressed, but differential expression for isoforms 1 and 2, with highest overall expressio

#### Background

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. Ph

#### matters needing attention

Avoid repeated freezing and thawing!

#### Usage suggestions

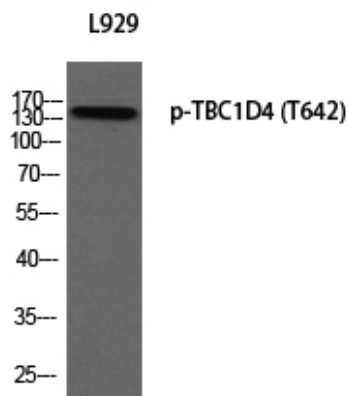
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

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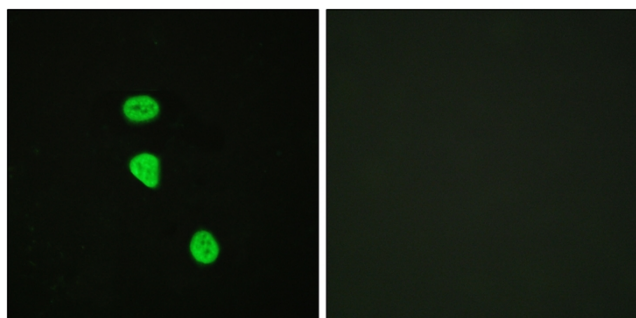


## Products Images

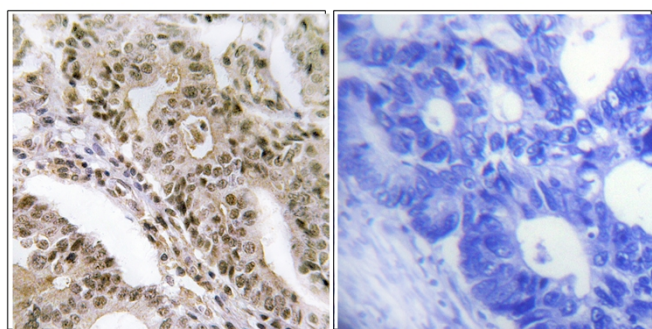
Western blot analysis of L929 using p-TBC1D4 (T642) antibody. Antibody was diluted at 1:2000



Immunofluorescence analysis of HeLa cells, using AS160 (Phospho-Thr642) Antibody. The picture on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human lung carcinoma, using AS160 (Phospho-Thr642) Antibody. The picture on the right is blocked with the phospho peptide.



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