

TBC1D4 Antibody
Catalog # ASC10621**Specification**

TBC1D4 Antibody - Product Information

Application	IHC-P, E
Primary Accession	O60343
Other Accession	NP_055647 , 114688046
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 143 kDa

Application Notes	Observed: 140 kDa KDa TBC1D4 antibody can be used for immunohistochemistry starting at 10 µg/mL.
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TBC1D4 Antibody - Additional Information

Gene ID	9882
Target/Specificity	
TBC1D4;	

Reconstitution & Storage

TBC1D4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

TBC1D4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

TBC1D4 Antibody - Protein Information

Name TBC1D4

Synonyms AS160, KIAA0603

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 Location

Cytoplasm. Note=Isoform 2 shows a cytoplasmic perinuclear localization in a myoblastic cell line in resting and insulin-stimulated cells

Tissue Location

Widely expressed. Isoform 2 is the highest overexpressed in most tissues. Isoform 1 is highly

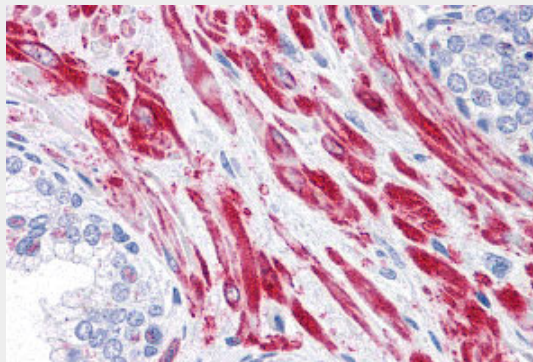
expressed in skeletal muscle and heart, but was not detectable in the liver nor in adipose tissue. Isoform 2 is strongly expressed in adrenal and thyroid gland, and also in lung, kidney, colon, brain and adipose tissue. Isoform 2 is moderately expressed in skeletal muscle. Expressed in pancreatic Langerhans 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.

TBC1D4 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

TBC1D4 Antibody - Images



Immunohistochemistry of TBC1D4 in human prostate tissue with TBC1D4 antibody at 10 µg/mL.

TBC1D4 Antibody - Background

TBC1D4 Antibody: TBC1D4, also known as the Akt substrate AS160, was initially identified as an Akt substrate containing a GTPase-activating domain that regulates GLUT4 trafficking, with activation following insulin stimulation. TBC1D4 truncations in humans is a major cause of dominant inherited insulin resistance. The loss of TBC1D4 results in the accumulation of GLUT4 in compartments that are primed for fusion in basal adipocytes.

TBC1D4 Antibody - References

Kane S, Sano H, Liu SCH, et al. Akt phosphorylates a novel adipocyte protein with a Rab GTPase-activating protein (GAP) domain. *J. Biol. Chem.* 2002; 277:22115-8.
Sano H, Kane S, Sano E, et al. Insulin-stimulated phosphorylation of a Rab GTPase-activating protein regulates GLUT4 translocation. *J. Biol. Chem.* 2003; 278:14599-602.
Dash S, Sano H, Rochford JJ, et al. A truncation mutation in TBC1D4 in a family with acanthosis nigricans and postprandial hyperinsulinemia. *Proc. Natl. Acad. Sci. U.S.A.* 2009; 106:9350-5.
Brewer PD, Romenskaia I, Kanow MA, et al. Loss of AS160 Akt substrate causes Glut4 protein to accumulate in compartments that are primed for fusion in basal adipocytes. *J. Biol. Chem.* 2011;

286:26287-97.