10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TBC1D4 Antibody
Catalog # ASC10621

Specification

TBC1D4 Antibody - Product Information

Application	**IHC**
Primary Accession	O60343
Other Accession	NP_055647, 114688046
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**Predicted: 143 kDa** **Observed: 140 kDa KDa**
Application Notes	**TBC1D4 antibody can be used for immunohistochemistry starting at 10 µg/mL.**

TBC1D4 Antibody - Additional Information

Gene ID	**9882**

Target/Specificity
TBC1D4;

Reconstitution & Storage
TBC1D4 antibody can be stored at 4℃ for three months and -20℃, 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

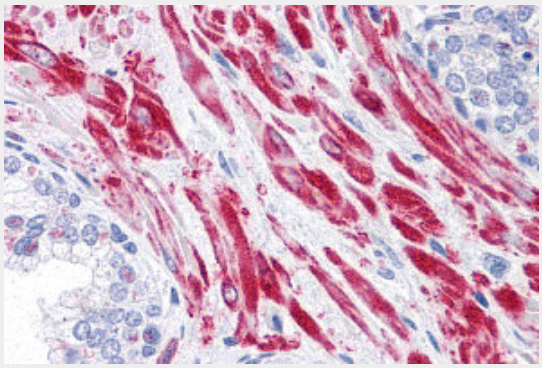
expressed in skeletal muscle and heart, but was not detectable in the liver nor in adipose tissue. Isoform 2 is strongly expressed in adrenal and thyroid gland, and also in lung, kidney, colon, brain and adipose tissue Isoform 2 is moderately expressed in skeletal muscle. Expressed in pancreatic Langerhans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