Store at –20°C

#2447

AS160 Antibody

Cell Signaling TECHNOLOGY®

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

rev. 12/22/15

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #9882
Swiss-Prot Acc. #O60343

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H	160 kDa	Rabbit**

Background: The polypeptide insulin is a major hormone controlling critical energy functions such as glucose and lipid metabolism. Insulin binds and activates the insulin receptor (IR) tyrosine kinase, which phosphorylates and recruits different adaptor proteins. The signaling pathway initiated by insulin and its receptor stimulates glucose uptake in muscle cells and adipocytes through translocation of GLUT4 glucose transporters from the cytoplasm to the plasma membrane (1). A 160 kDa substrate of the Akt serine/threonine kinase (AS160, TBC1D4) is a Rab GTPase activating protein that regulates insulin-stimulated GLUT4 trafficking. AS160 was found to be expressed in many tissues including brain, kidney, liver and brown and white fat (2). Multiple Akt phosphorylation sites were identified on AS160 in vivo, with five sites showing increased phosphorylation following insulin treatment (2,3). Studies using recombinant AS160 demonstrated that insulin-stimulated phosphorylation of AS160 is a crucial step in GLUT4 translocation (3) and is reduced in some patients with type 2 diabetes (4). The interaction of 14-3-3 regulatory proteins with AS160 phosphorylated at Thr642 is another necessary step for GLUT4 translocation (5). Phosphorylation of AS160 by AMPK is involved in the regulation of contraction-stimulated GLUT4 translocation (6).

Specificity/Sensitivity: AS160 Antibody detects endogenous levels of total AS160 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Cys1286 of human AS160. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) Watson, R.T. and Pessin, J.E. (2006) *Trends Biochem. Sci.* 31, 215–222.

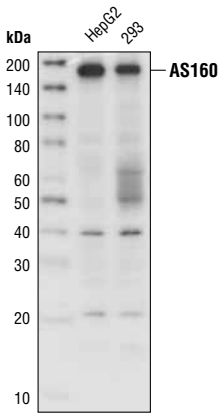
(2) Kane, S. et al. (2002) *J. Biol. Chem.* 277, 22115–22118.

(3) Sano, H. et al. (2003) *J. Biol. Chem.* 278, 14599–14602.

(4) Karlsson, H.K. et al. (2005) *Diabetes* 54, 1692–1697.

(5) Ramm, G. et al. (2006) *J. Biol. Chem.* 281, 29174–29180.

(6) Kramer, H.F. et al. (2006) *J. Biol. Chem.* 281, 31478–31485.



Western blot analysis of extracts from HepG2 and 293 cells using AS160 Antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.