

Product Information

Anti-AS160

produced in rabbit, affinity isolated antibody

Product Number **SAB4200101**

Product Description

Anti-AS160 is developed in rabbit using as the immunogen a synthetic peptide corresponding to a fragment of human AS160 (GeneID 9882), conjugated to KLH. The corresponding sequence is identical in rat and mouse AS160. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-AS160 specifically recognizes human AS160. The antibody can be used in several immunochemical techniques including immunoblotting (~160 kDa) and immunofluorescence. Detection of the AS160 band by immunoblotting is specifically inhibited by the AS160 immunizing peptide.

Insulin signaling cascades regulate many cellular processes, with regulation of glucose homeostasis being one of the most critical functions. Defects in glucose uptake result in insulin resistance and type II diabetes. Insulin stimulates the translocation of the glucose transporter 4 (GLUT4) to the plasma membrane of fat and muscle cells in a signaling pathway regulated by PKB/Akt.^{1,2} Several candidate signaling intermediates, including Synip, AS160, and PIKfyve/PIP5K3, have been identified as functional links between the insulin signaling cascade and GLUT4 vesicles.² AS160 (Akt substrate of 160 kDa, also known as TBC1D4) is a RabGAP protein that is phosphorylated by Akt on at least six separate sites in response to insulin, and is thought to play an inhibitory role in the transport of GLUT4 vesicles.^{3,4} AS160 is associated with GLUT4 vesicles in basal states and dissociates in response to insulin. Consistent with the inhibitory role of AS160 in the basal state, reduced expression of AS160 in adipocytes has been shown to increase plasma membrane levels of GLUT4 in an insulin-dependent manner.^{5,6} Rab10 has been reported to be a target of AS160, required for insulin-stimulated translocation of GLUT4.⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.8-1.6 µg/mL is recommended using extracts of HEK-293T cells overexpressing human AS160.

Immunofluorescence: a working antibody concentration of 8-16 µg/mL is recommended using HEK-293T cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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3. Kane, S., et al., *J. Biol. Chem.*, **277**, 22115-22118 (2002).
4. Sano, H., et al., *J. Biol. Chem.*, **278**, 14599-14602 (2003).
5. Larance, M., et al., *J. Biol. Chem.*, **280**, 37803-37813 (2005).
6. Eguez, L., et al., *Cell Metab.*, **2**, 263-271 (2005).
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