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Product Information

Anti-TC10

Developed in Rabbit, Affinity Isolated Antibody

Product Number **T 8950**

Product Description

Anti-TC10 was developed in rabbit using a synthetic peptide D(136)PKTLARLNDMKEKPIC(152) corresponding to amino acid residues 136-152 from human TC10 as the immunogen. The antibody was affinity isolated on immobilized immunogen.

Anti-TC10 detects human and mouse TC10 protein in transfected cell samples and endogenous levels in tissue extracts. By immunoblotting this antibody detects an ~24 kDa protein representing TC10 in transfected COS cells and a non-specific, unidentified band at ~50 kDa. Anti-TC10 is specific for isotype TC10 α and demonstrates slight cross-reactivity with TC10 β .

TC10 has been classified as a member of the Rho family of GTPases and possesses characteristics most closely related to Cdc42. This family of proteins regulates a wide variety of cellular activity including cytoskeletal rearrangements, motility, proliferation and apoptosis. TC10 is predominately localized to the cell membrane and TC10 mRNA was most highly expressed in heart and skeletal muscle, and is also present in spinal cord neurons.^{1,2} In adipocytes, TC10 regulates the insulin-stimulated glucose transporter Glut4 translocation.³ Overexpression of TC10, specifically the TC10 α isotype, disrupts adipocyte cortical actin structure and inhibits insulin-stimulated GLUT4 translocation when targeted to lipid raft microdomains of the plasma membrane.⁴

Reagent

Supplied as affinity-isolated antibody at a concentration of 1 mg/ml in phosphate buffered saline containing 1.0 mg/ml BSA and 0.05 % sodium azide as preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling.

Storage/Stability

Store at -20 °C. For extended storage, freeze in working aliquots. Avoid repeated freezing and thawing. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

The recommended working dilution is 1 μ g/ml for immunoblotting.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, determination of optimal working dilutions by titration test is recommended.

References

1. JeBailey, L., et al., Skeletal muscle cells and adipocytes differ in their reliance on TC10 and Rac for insulin-induced actin remodeling., *Mol. Endocrinol.*, **18**, 359-372 (2004).
2. Erschbamer, M.K., et al., RhoA, RhoB, RhoC, Rac1, Cdc42, and Tc10 mRNA levels in spinal cord, sensory ganglia, and corticospinal tract neurons and long-lasting specific changes following spinal cord injury., *J. Comp. Neurol.*, **484**, 224-233 (2005).
3. Cheng, J., et al., Regulation of cystic fibrosis transmembrane regulator trafficking and protein expression by a Rho family small GTPase TC10., *J. Biol. Chem.*, **280**, 3731-3739 (2005).
4. Chunqiu Hou, J.C. and Pessin, J.E., Lipid Raft targeting of the TC10 amino terminal domain is responsible for disruption of adipocyte cortical actin., *Mol. Biol. Cell* **14**, 3578-3591 (2003).

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