

Product Information

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Anti-phospho-Cortactin (pTyr⁴²¹)

produced in rabbit, affinity isolated antibody

Product Number **C0739**

Product Description

Anti-phospho-Cortactin (pTyr⁴²¹) was produced in rabbit using a synthetic phosphopeptide derived from the region of mouse cortactin that is phosphorylated on Tyr⁴²¹ as immunogen. The antibody is preadsorbed to remove any reactivity towards a non-phosphorylated cortactin. The final product is generated by affinity chromatography using a cortactin-derived peptide that is phosphorylated at Tyr⁴²¹.

Anti-phospho-Cortactin (pTyr⁴²¹) specifically recognizes mouse cortactin phosphorylated at Tyr⁴²¹ (80-85 kDa). The antibody does not cross react with human cortactin. It is used in immunoblotting and immunocytochemistry applications.

Cortactin is an 80-85 kDa cytoskeleton protein that facilitates assembly of cortical actin. Cortactin is widely expressed in most adherent cells and is a prominent substrate of protein-tyrosine kinase Src *in vivo* and *in vitro*. In mouse, between the proline rich region and the SH3 domain, there are a series of Src phosphorylation sites at tyrosines 421, 466, and 482 (corresponding to tyrosines 421, 470 and 486 in the human sequence). Phosphorylation of these sites promotes the cross-linking of F-actin into meshworks.¹ Cortactin also becomes phosphorylated at tyrosine residues upon hydrogen peroxide (H₂O₂) mediated injury to endothelial cells in a manner dependent on the activity of Src.² Shrinkage of cells induces Fyn dependent tyrosine phosphorylation of cortactin contributing to the cell size dependent reorganization of the cytoskeleton and cell-cell contact.^{3, 4}

Reagent

Supplied as a solution in Dulbecco's phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.3, with 50% glycerol, 1.0 mg/mL bovine serum albumin (IgG and protease free) and 0.05% sodium azide.

Sufficient for 10 blots.

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. Upon initial thawing, freeze the solution in working aliquots for extended storage. Avoid repeated freezing and thawing to prevent denaturing the antibody. Do not store in frost-free freezers. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a recommended working dilution of 1:1,000.

Note: In order to obtain the best results in various techniques and preparations, we recommend determining optimal working concentration by titration.

References

1. Ozawa, K., et al., Translocation of cortactin (p80/85) to the actin-based cytoskeleton during thrombin receptor-mediated platelets activation. *Exp. Cell. Res.*, **221**, 197-204 (1995).
2. Li, Y., et al., Tyrosine phosphorylation of cortactin is required for H₂O₂-mediated injury of human endothelial cells. *J. Biol. Chem.*, **275**, 37187-37193 (2000).
3. Kapus, A., et al., Cell volume-dependent phosphorylation of proteins of the cortical cytoskeleton and cell-cell contact sites. The role of Fyn and FER kinases. *J. Biol. Chem.*, **275**, 32289-32298 (2000).
4. Liu, J., et al., Src is required for cell migration and shape changes induced by fibroblast growth factor 1. *Oncogene*, **18**, 6700-6706 (1999).

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