abcam

Product datasheet

Anti-Phosphothreonine antibody ab9337

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Overview

Product name	Anti-Phosphothreonine antibody
Description	Rabbit polyclonal to Phosphothreonine
Host species	Rabbit
Specificity	Recognize proteins phosphorylated on threonine residues. Not cross-reacted with phosphotyrosine.
Tested applications	**Suitable for:** WB, IP, ELISA, IHC-Fr
Species reactivity	**Reacts with:** Mouse, Species independent
Immunogen	Chemical/ Small Molecule corresponding to Phosphothreonine conjugated to keyhole limpet haemocyanin.
Positive control	Use mouse spleen lysate treated with sodium vanadate or mouse brain lysate for WB. Synthetic phosphopeptide (phosphorylated on threonine) for ELISA.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 6.00 Constituents: PBS, 50% Glycerol
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

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The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab9337 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

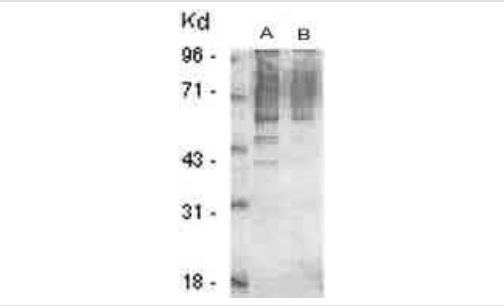
Application	Abreviews	Notes
WB	★★★★☆ **(3)**	Use a concentration of 2 µg/ml.
IP		Use a concentration of 10 µg/ml. Use at a concentration of 10 µg/mg. Acetone precipitation of the protein extract followed by SDS denaturation is recommended for successful immunoprecipitation.
ELISA		Use a concentration of 0.5 µg/ml.
IHC-Fr		Use at an assay dependent concentration.

Target

Relevance

Phosphorylation of threonine residues is associated with many growth factors and oncogene protein kinases, and is important for cell signaling in activation, proliferation and differentiation. Protein phosphorylation and dephosphorylation are basic mechanisms for the modification of protein function in eukaryotic cells. Phosphorylation is a rare post-translational event in normal tissue, however, the abundance of phosphorylated cellular proteins increases several fold following various activation processes which are mediated through phosphotyrosine, phosphoserine or phosphothreonine (p-tyr/p-ser/p-thr). Many signal transduction pathways, such as the EGF, PDGF and insulin receptor systems, contain tyr/ser/thr kinase which phosphorylate specific tyr/ser/thr residues upon binding of ligands to their receptors. T cell antigen receptor complex or the receptors for some hemopoietic growth factors may stimulate these phosphorylation associated kinases, and cells transformed by viral oncogenes contain elevated levels of phosphorylated tyr/ser/thr. An understanding of transformation by oncogenes and mitogenic processes of growth factors depends on the identification of their substrate and a subsequent determination of how phosphorylation affects their properties. Studies on the role of phosphorylated proteins have been hampered by their low abundance and the problem of distinguishing the various types of phosphorylated proteins. The most common procedure is to label intact cells or small tissue fragments with 32P and subsequently to isolate 32P labeled proteins by conventional biochemical methods. In order to identify the specific amino acids that undergo phosphorylation, additional long and tedious procedures for phosphoamino acid analysis are required. Immunoblotting of cellular proteins with antibodies directed against phosphoamino acids is advantageous as it does not involve 32P labeling, and can therefore be employed to monitor alterations in phosphorylation of specific proteins as they occur in intact organs or the whole animal. Indeed, mono and polyclonal antibodies directed against phosphorylated residues have been generated and found useful as analytical and preparative tools because they enable the rapid identification, quantification and immunoaffinity isolation of phosphorylated cellular proteins.

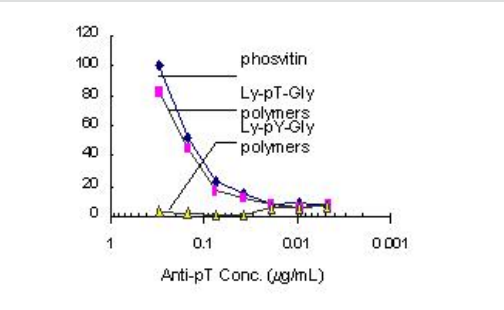
Images



Western blot - Anti-Phosphothreonine antibody (ab9337)

Immunoblotting of fetal mouse brain extract (125 ug - A and 25 ug - B)

Immunoblotting of fetal mouse brain extract (125 ug - A and 25 ug - B)



ELISA - Anti-Phosphothreonine antibody (ab9337)

Antibody Capture ELISA

Label: immobilized antigen

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