



PhosphoSolutions®
Antibodies that work™

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Anti-14-3-3 Protein

Catalog Number: 1433-P

Size: 100 µl

Product Description: Affinity purified rabbit polyclonal antibody

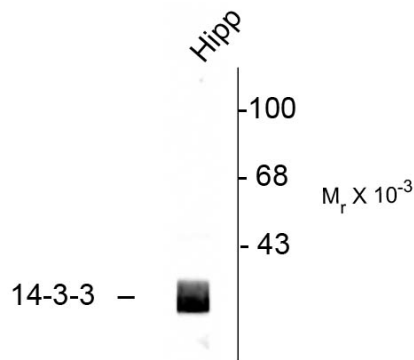
Applications: **WB:** 1:1000

Antigen: Peptide corresponding to amino acid residues from the N-terminal region of the rat 14-3-3 protein, conjugated to keyhole limpet hemocyanin (KLH).

Species reactivity: The antibody has been directly tested for reactivity in Western blots with rat tissue. It is anticipated that the antibody will react with bovine, canine, chicken, human, mouse, non-human primates, *Xenopus* and zebra fish based on the fact that these species have 100% homology with the amino acid sequence used as antigen.

Biological Significance: 14-3-3 proteins are a family of highly conserved proteins that appear to have multiple roles in cell signaling (Bridges and Moorhead, 2005). The proteins are abundantly expressed in the brain and have been detected in the cerebrospinal fluid of patients with different neurological disorders (Berg et al., 2003). 14-3-3 proteins bind protein ligands that are typically phosphorylated on serine or threonine residues and regulate the functions of these binding partners by a number of different mechanisms (Silhan et al., 2004; Dougherty and Morrison, 2004). The 14-3-3 proteins affect a diverse array of cellular processes including the cell cycle and transcription, signal transduction and intracellular trafficking.

Anti-14-3-3 Protein



Western blot of rat hippocampal (Hipp) lysate showing immunolabeling of the ~29k 14-3-3 protein.

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WB = Western Blot **IF** = Immunofluorescence **IHC** = Immunohistochemistry **IP** = Immunoprecipitation

Packaging: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol. Adequate amount of material to conduct 10-mini Western Blots.

Storage and Stability: Store at -20°C; stable for at least one year.

Shipment: Domestic - Blue Ice; International - Blue Ice or Dry Ice.

Purification Method: Prepared from rabbit serum by affinity purification via chromatography on an affinity column prepared with the N-terminal peptide used as antigen.

Antibody Specificity: Specific for the ~29k 14-3-3 protein. Immunolabeling of the 14-3-3 protein band is completely blocked by pre-adsorption of the antibody with the peptide that was used to generate the antibody.

Quality Control Tests: Western blots performed on each lot.

References:

Berg D, Holzmann C, Riess O (2003) 14-3-3 Proteins in the nervous system. *Nat Rev Neurosci* 4:752-762.

Bridges D, Moorhead GB (2005) 14-3-3 Proteins: a number of functions for a numbered protein. *Sci STKE* 2005:re10.
Dougherty MK, Morrison DK (2004) Unlocking the code of 14-3-3. *J Cell Sci* 117:1875-1884.

Silhan J, Obsilova V, Vecer J, Herman P, Sulc M, Teisinger J, Obsil T (2004) 14-3-3 Protein C-terminal stretch occupies ligand binding groove and is displaced by phosphopeptide binding. *J Biol Chem* 279:49113-49119.

Irina Surgucheva, Valery I. Shestopalov, and Andrei Surguchov (2008) Effect of τ -Synuclein Silencing on Apoptotic Pathways in Retinal Ganglion Cells *J. Biol. Chem.*, 283: 36377 - 36385.

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