Rabbit Anti-Rat DARPP-32 (Thr\textsuperscript{75})

CLN127AP
Lot:
Size: 100 µl
Isotype: Rabbit IgG

Product Description: Affinity purified rabbit polyclonal antibody

Presentation: 100 µl in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol.

Storage and Stability: For long term storage –20°C is recommended. Stable at –20°C for at least 1 year.

Applications: WB: 1:1000

Antigen: Phosphopeptide corresponding to amino acid residues surrounding the phospho-Thr\textsuperscript{75} of rat DARPP-32.

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

Biological Significance: DARPP-32 is a dopamine (DA) and cAMP-regulated ~32k phosphoprotein that is associated with dopaminergic neurons (Fienberg et al., 1998). The protein inhibits protein phosphatase I when it is phosphorylated on Thr\textsuperscript{34}. In contrast, when DARPP-32 is phosphorylated on Thr\textsuperscript{75} the protein acts as an inhibitor of PKA (Bibb et al., 1999). Phosphorylation of DARPP-32 is thought to play a critical role in the regulation of dopaminergic neurotransmission. In addition, the activity of DARPP-32 is also thought to play important roles in the actions of alcohol, caffeine and Prozac® (Maldve et al., 2002; Lindskog et al., 2002; Svenningsson et al., 2002).

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Western blot of rat caudate lysate showing specific immunolabeling of the ~32k DARPP-32 phosphorylated at Thr\textsuperscript{75} (Control). The phosphospecificity of this labeling is shown in the second lane (\textit{lambda}-phosphatase: \textlambda\text{-Ptase}). The blot is identical to the control except that it was incubated in \textlambda\text{-Ptase} (1200 units for 30 min) before being exposed to the Anti-Thr\textsuperscript{75} DARPP-32. The immunolabeling is completely eliminated by treatment with \textlambda\text{-Ptase}.

Purification Method: Prepared from rabbit serum by affinity purification via sequential chromatography on phospho- and dephosphopeptide affinity columns.

Antibody Specificity: Specific for the ~32k DARPP-32 protein phosphorylated at Thr\textsuperscript{75}. Immunolabeling is blocked by \textlambda\text{-phosphatase treatment.

Quality Control Tests: Western blots performed on each lot.

References:


Laboratory Reagent For Research Use Only