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ProductInformation

Anti-phospho-DARPP32 [pThr^{75}]
produced in rabbit, affinity isolated antibody

Catalog Number **D2693**

Product Description

Anti-phospho-DARPP32 [pThr^{75}] is developed in rabbit using a synthetic phosphopeptide corresponding to amino acids residues surrounding the DARPP32 phosphorylated on threonine 75 as immunogen. The antibody is affinity purified using sequential chromatography on phospho-and non-phosphopeptide affinity columns.

Anti-phospho-DARPP32 [pThr^{75}] recognizes human and mouse forms of ~34 kDa DARPP32 phosphorylated at threonine 75. Other species reactivity has not been confirmed. It is used in immunoblotting and dot blot applications.

DARPP32, known also as Protein Phosphatase 1, Regulatory Subunit 1B, is a dopamine (DA) and cAMP-regulated ~32 kDa phosphoprotein associated with dopaminoceptive neurons bearing D-1 receptors in the basal ganglia. DARPP32 is a target for the actions of dopamine. In the densely dopamine- and glutamate-innervated rat caudate-putamen, DARPP32 is expressed in medium-sized spiny neurons that also express dopamine D1 receptors. Dopamine D1 receptor stimulation enhances cAMP formation, resulting in the phosphorylation of DARPP32. DARPP32 phosphorylated on Thr^{34} is a potent protein phosphatase- inhibitor. DARPP32 phosphorylated on Thr^{75} acts as an inhibitor of PKA. Phosphorylation of DARPP32 plays a critical role in the regulation of dopaminergic neurotransmission. In addition, the activity of DARPP32 plays important roles in the actions of alcohol, caffeine and Prozac®.

Reagent

Supplied as a 100 µL solution in 10 mM HEPES, pH 7.5, 150 mM NaCl, 100 µg/mL BSA and 50% glycerol.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

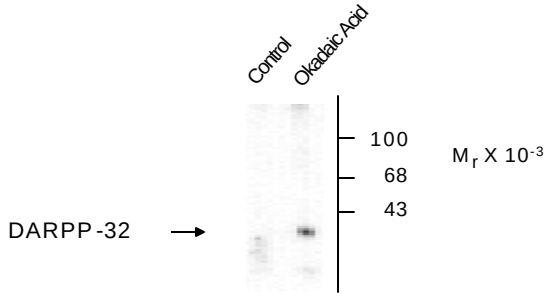
Store at -20 °C. For extended storage, upon initial thawing, freeze in working aliquots. Do not store in frost-free freezers. Avoid repeated freezing and thawing to prevent denaturing the antibody. Working dilution samples should be discarded if not used within 12 hours. The antibody is stable for at least 12 months when stored appropriately.

Product Profile

The amount of the reagent supplied is sufficient for 10 blots.
A minimum working dilution of 1:1000 is determined by immunoblotting, using rat caudate lysates. The same dilution is used for Dot Blot.

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

Anti-Phospho-Thr^{75} DARPP-32



Immunoblot of rat caudate lysates prepared from caudate slices that had been incubated in the absence and presence of okadaic acid. The labeling by the antibody to DARPP32 Thr^{75} is markedly increased by the okadaic acid treatment.

References

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3. Maldve, R.E., et al., DARPP32 and the regulation of the ethanol sensitivity of NMDA receptors in the nucleus accumbens, Nature Neurosci. **5**, 641–648 (2002).
4. Bibb, J.A., Phosphorylation of DARPP32 by Cdk5 modulates dopamine signaling in neurons, *Nature* (London*)* **402,** 669–671 (1999).
5. Fienberg, A. A., et al., DARPP32: regulator of the efficacy of dopaminergic neurotransmission. *Science*, **281**, 838-842, 1998.

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