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Phospho-DARPP-32 (Thr75) Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

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|---------------------------|---------------------------|-----------------------------------|------------------------|----------------------------------|-------------------------------|---------------------------------|
| Applications: W | Reactivity: M R | Sensitivity: Endogenous | MW (kDa): 32 | Source/Isotype: Rabbit | UniProt ID: #Q9UD71 | Entrez-Gene Id: 84152 |
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| Product Usage Information | Application Western Blotting | Dilution 1:1000 |
| Storage | Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody. | |
| Specificity/Sensitivity | Phospho-DARPP-32 (Thr75) Antibody detects endogenous levels of DARPP-32 only when phosphorylated at threonine 75. The antibody does not cross-react with DARPP-32 phosphorylated at Thr34. | |
| Source / Purification | Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr75 of human DARPP-32. Antibodies are purified by protein A and peptide affinity chromatography. | |
| Background | DARPP-32 (dopamine and cyclic AMP-regulated phosphoprotein, relative molecular mass 32,000) is a cytosolic protein highly enriched in medium-sized spiny neurons of the neostriatum (1). It is a bifunctional signaling molecule that controls serine/threonine kinase and serine/threonine phosphatase activity (2). Dopamine stimulates phosphorylation of DARPP-32 through D1 receptors and activation of PKA. PKA phosphorylation of DARPP-32 at Thr34 converts it into an inhibitor of protein phosphatase 1 (1). DARPP-32 is converted into an inhibitor of PKA when phosphorylated at Thr75 by cyclin-dependent kinase 5 (CDK5) (2). Mice containing a targeted deletion of the DARPP-32 gene exhibit an altered biochemical, electrophysiological, and behavioral phenotype (3). | |
| Background References | <ol style="list-style-type: none"> 1. Nishi, A. et al. (1997) <i>J. Neurosci.</i> 17, 8147-8155. 2. Bibb, J.A. et al. (1999) <i>Nature</i> 402, 669-671. 3. Fienberg, A.A. et al. (1998) <i>Science</i> 281, 838-842. | |

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| Species Reactivity | Species reactivity is determined by testing in at least one approved application (e.g., western blot). |
| Western Blot Buffer | IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight. |
| Applications Key | W: Western Blotting |
| Cross-Reactivity Key | M: Mouse R: Rat |
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