

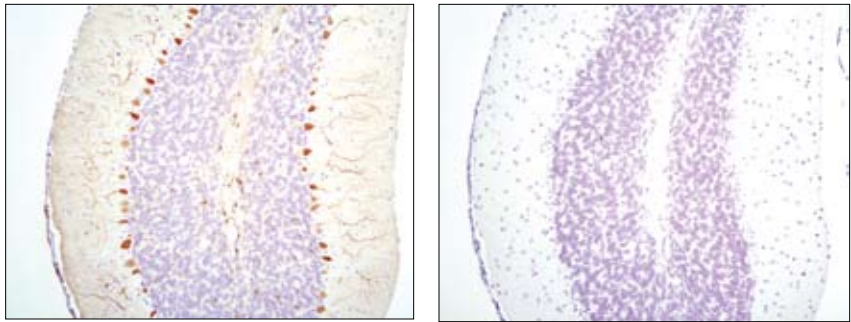
# DARPP-32 Blocking Peptide

✓ 100 µg

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New 10/07

This product is for *in vitro* research use only and is not intended for use in humans or animals.



Immunohistochemical analysis of paraffin-embedded mouse brain using DARPP-32 (19A3) Rabbit mAb #2306 in the presence of control peptide (left) or DARPP-32 Blocking Peptide (right).

**Storage:** Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

**Companion Products:**  
DARPP-32 (19A3) Rabbit mAb #2306

**Description:** This peptide is used to block DARPP-32 (19A3) Rabbit mAb #2306 reactivity in immunohistochemistry protocols.

**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).

**Quality Control:** The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks DARPP-32 (19A3) Rabbit mAb #2306 signal in immunohistochemistry.

**Directions For Use:** For immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the relevant product data sheet.

**Background References:**

- (1) Nishi, A. et al. (1997) *J. Neurosci.* 17, 8147–8155.
- (2) Bibb, J.A. et al. (1999) *Nature* 402, 669–671.
- (3) Fienberg, A.A. et al. (1998) *Science* 281, 838–842.