



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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#2306

## DARPP-32 (19A3) Rabbit mAb

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

<b>Applications:</b> W, IP, IHC-P, IF-F	<b>Reactivity:</b> M R	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 32	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q9UD71	<b>Entrez-Gene Id:</b> 84152
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Immunohistochemistry (Paraffin)  
Immunofluorescence (Frozen)

#### Dilution

1:1000  
1:50  
1:200  
1:400

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

For a carrier free (BSA and azide free) version of this product see product #26031.

### Specificity/Sensitivity

DARPP-32 (19A3) Rabbit mAb detects endogenous levels of total DARPP-32 protein.

### Species predicted to react based on 100% sequence homology

Human

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu160 of human DARPP-32.

### 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

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

### 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 **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **IF-F:** Immunofluorescence (Frozen)

### Cross-Reactivity Key

**M:** Mouse **R:** Rat

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