

#24591 Store at -20C

## PhosphoPlus® DARPP-32 (Thr34) Antibody Duet



**Cell Signaling**  
TECHNOLOGY®

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

**UniProt ID:**  
#Q9UD71

**Entrez-Gene Id:**  
84152

Product Includes	Product #	Quantity	Mol. Wt.	Isotype/Source
Phospho-DARPP-32 (Thr34) (D27A4) Rabbit mAb	12438	100 µl	32 kDa	Rabbit IgG
DARPP-32 (19A3) Rabbit mAb	2306	100 µl	32 kDa	Rabbit

Please visit [cellsignal.com](http://cellsignal.com) for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

### Description

PhosphoPlus® Duets from Cell Signaling Technology (CST) provide a means to assess protein activation status. Each Duet contains an activation-state and total protein antibody to your target of interest. These antibodies have been selected from CST's product offering based upon superior performance in specified applications.

### 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.*

### 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

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.

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