

Phospho-DARPP-32 (Thr34) (D27A4) Rabbit mAb

✓ 100 µl
(10 western blots)



Orders ■ 877-616-CELL (2355)
orders@cellsignaling.com
Support ■ 877-678-TECH (8324)
info@cellsignaling.com
Web ■ www.cellsignaling.com

New 03/13

For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #84152
Swiss-Prot Acc. #Q9UD71

Applications W Endogenous	Species Cross-Reactivity* H, (M, R)	Molecular Wt. 32 kDa	Isotype Rabbit IgG**
---------------------------------	--	-------------------------	-------------------------

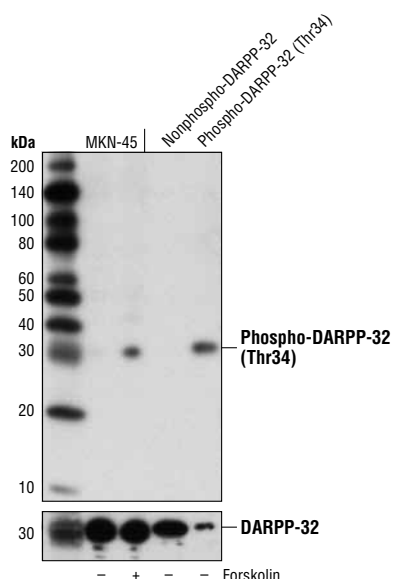
Background: DARPP-32 (dopamine and cyclic AMP-regulated phosphoprotein, relative molecular mass 32,000) is a cytosolic protein highly enriched in medium-sized spiny neurons of the neostriatum (1). It is a bifunctional signaling molecule that controls serine/threonine kinase and serine/threonine phosphatase 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).

Specificity/Sensitivity: Phospho-DARPP-32 (Thr34) (D27A4) Rabbit mAb detects endogenous levels of DARPP-32 only when phosphorylated at Thr34.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr34 of human DARPP-32 protein.

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.



Western blot analysis of extracts from MKN-45 cells, untreated (-) or treated with Forskolin #3828 (30 µM, 20 min; +), or nonphospho-DARPP-32 and phospho-DARPP-32 (Thr34) recombinant proteins using Phospho-DARPP-32 (Thr34) (D27A4) Rabbit mAb (upper) or DARPP-32 (19A3) Rabbit mAb #2306 (lower).

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.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000

For product specific protocols please see the web page for this product at www.cellsignaling.com.

Please visit www.cellsignaling.com for a complete listing of recommended complementary products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.