

Store at
-20°C

#24591

PhosphoPlus® DARPP-32 (Thr34) Antibody Duet



Cell Signaling
TECHNOLOGY®

Support: +1-978-867-2388 (U.S.)
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Entrez-Gene ID #84152
UniProt ID #Q9UD71

New 04/18

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

Products Included	Product #	Quantity	Mol. Wt.	Isotype/Source
P-DARPP-32 (T34) (D27A4) Rabbit mAb	12438	100 µl	32 kDa	Rabbit IgG
DARPP-32 (19A3) Rabbit mAb	2306	100 µl	32 kDa	Rabbit IgG

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

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.

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: DARPP-32 (19A3) Rabbit mAb detects endogenous levels of total DARPP-32 protein. Species reactivity: (H), M, R. Phospho-DARPP-32 (Thr34) (D27A4) Rabbit mAb detects endogenous levels of DARPP-32 only when phosphorylated at Thr34. Species reactivity: H, (M, R).

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu160 of human DARPP-32 or a synthetic phosphopeptide corresponding to residues surrounding Thr34 of human DARPP-32 protein.

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 product specific protocols and a complete listing of recommended companion products please see the product web page at www.cellsignal.com.

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.

U.S. Patent No. 7,429,487, foreign equivalents, and child patents deriving therefrom.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** 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.