

#11893 Store at 4°C

DARPP-32 (19A3) Rabbit mAb (Alexa Fluor® 488 Conjugate)

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Entrez-Gene ID #84152
UniProt ID #Q9UD71

rev. 05/09/16

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

Applications	Species Cross-Reactivity*	Isotype
IF-F Endogenous	M, R, (H)	Rabbit IgG

Description: This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 fluorescent dye and tested in-house for direct immunofluorescent analysis in rat tissue. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated DARPP-32 (19A3) Rabbit mAb #2306.

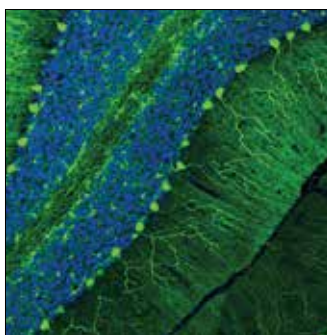
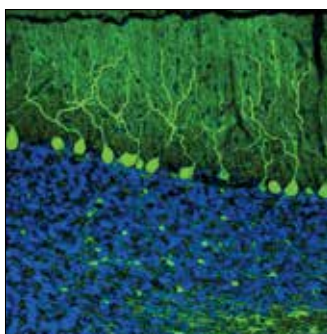
Background: DARPP-32 (dopamine and cyclic AMP-regulated phosphoprotein, relative molecular mass 32,000) is a cytosolic protein highly enriched in medium-sized spiny neurons of the neostriatum (1). It is a bifunctional signaling molecule that controls serine/threonine kinase and serine/threonine phosphatase 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 (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total DARPP-32 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Glu160 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.



Confocal immunofluorescent analysis of normal rat cerebellum using DARPP-32 (19A3) Rabbit mAb (Alexa Fluor® 488 Conjugate) (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Storage: Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

*Species cross-reactivity other than rat is determined by western blot using the unconjugated antibody.

Recommended Antibody Dilutions:

Immunofluorescence (IF-F) 1:50

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

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