

DARPP-32 (G-5): sc-398360

BACKGROUND

Dopaminergic signaling pathways, which are essential for multiple brain functions, are abnormal in several neurological disorders, such as schizophrenia, Parkinson's disease and drug abuse. DARPP-32 (for dopamine and adenosine 3',5'-monophosphate-regulated phosphoprotein) is abundant in neurons that receive dopaminergic input. Activation of PKA and the consequent phosphorylation of DARPP-32 on threonine occurs in response to dopamine acting upon D1-like receptors. Dopamine interaction with D2-like receptors results in the inhibition of PKA activation, the activation of protein phosphatase 2B and the consequent dephosphorylation of DARPP-32. Neurotransmitters other than dopamine may also be able to stimulate the phosphorylation or dephosphorylation of DARPP-32. Phosphorylated DARPP-32 is a potent inhibitor of PP-1.

CHROMOSOMAL LOCATION

Genetic locus: PPP1R1B (human) mapping to 17q12; Ppp1r1b (mouse) mapping to 11 D.

SOURCE

DARPP-32 (G-5) is a mouse monoclonal antibody raised against amino acids 134-195 mapping epitope corresponding to amino acids 134-195 of DARPP-32 of bovine origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

DARPP-32 (G-5) is recommended for detection of DARPP-32 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

DARPP-32 (G-5) is also recommended for detection of DARPP-32 in additional species, including bovine.

Suitable for use as control antibody for DARPP-32 siRNA (h): sc-35173, DARPP-32 siRNA (m): sc-35174, DARPP-32 siRNA (r): sc-156003, DARPP-32 shRNA Plasmid (h): sc-35173-SH, DARPP-32 shRNA Plasmid (m): sc-35174-SH, DARPP-32 shRNA Plasmid (r): sc-156003-SH, DARPP-32 shRNA (h) Lentiviral Particles: sc-35173-V, DARPP-32 shRNA (m) Lentiviral Particles: sc-35174-V and DARPP-32 shRNA (r) Lentiviral Particles: sc-156003-V.

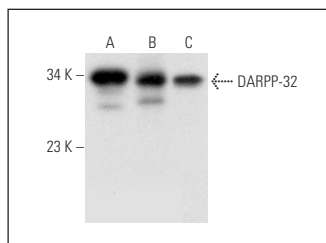
Molecular Weight of DARPP-32: 32 kDa.

Positive Controls: rat cerebellum extract: sc-2398, SH-SY5Y cell lysate: sc-3812 or human cerebellum extract: sc-516706.

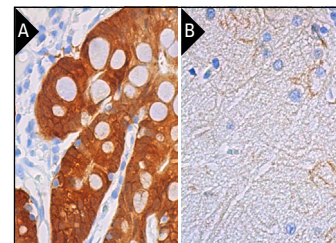
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



DARPP-32 (G-5): sc-398360. Western blot analysis of DARPP-32 expression in rat cerebellum (A) and human cerebellum (B) tissue extracts and SH-SY5Y whole cell lysate (C).



DARPP-32 (G-5): sc-398360. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue (A) and human cerebellum tissue (B) showing cytoplasmic and nuclear staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

1. Alam, S.K., et al. 2020. ASCL1-regulated DARPP-32 and t-DARPP stimulate small cell lung cancer growth and neuroendocrine tumour cell proliferation. Br. J. Cancer 123: 819-832.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **DARPP-32 (H-3): sc-271111** for DARPP-32 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.