

# ▶ DAT (N-19): sc-7515

## BACKGROUND

The members of the G protein-coupled receptor family are distinguished by their slow transmitting response to ligand binding. These seven transmembrane proteins include the adrenergic, serotonin and Dopamine receptors. The effect of the signaling molecule can be excitatory or inhibitory, depending on the type of receptor to which it binds.  $\beta$ -adrenergic receptor bound to adrenaline activates adenylyl cyclase, while  $\alpha_2$ -adrenergic receptor bound to adrenaline inhibits adenylyl cyclase. The Dopamine receptors are divided into two classes, D1 and D2, which differ in their functional characteristics in that D1 receptors stimulate adenylyl cyclase, while D2 receptors inhibit adenylyl cyclase activity. Five different subtypes of Dopamine receptor have been described to date. D1DR and D5DR belong to the D1 subclass, while D2DR, D3DR and D4DR belong to the D2 subclass of Dopamine receptors. The Dopamine transporter, DAT, is a sodium and chloride-dependent Dopamine transporter. DAT also can transport Dopamine neurotoxins and has been implicated in the selective vulnerability of nigrostriatal dopaminergic neurons in major models of Parkinson's disease.

## CHROMOSOMAL LOCATION

Genetic locus: SLC6A3 (human) mapping to 5p15.33; Slc6a3 (mouse) mapping to 13 C1.

## SOURCE

DAT (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal cytoplasmic domain of DAT of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-7515 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

DAT (N-19) is recommended for detection of DAT of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Suitable for use as control antibody for DAT siRNA (h): sc-41936, DAT siRNA (m): sc-41937, DAT shRNA Plasmid (h): sc-41936-SH, DAT shRNA Plasmid (m): sc-41937-SH, DAT shRNA (h) Lentiviral Particles: sc-41936-V and DAT shRNA (m) Lentiviral Particles: sc-41937-V.

Molecular Weight of non-glycosylated DAT: 50 kDa.

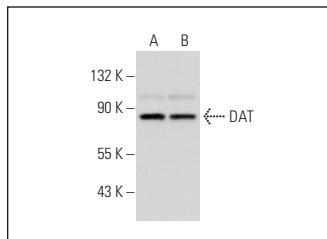
Molecular Weight of glycosylated DAT: 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or rat kidney tissue: sc-2394.

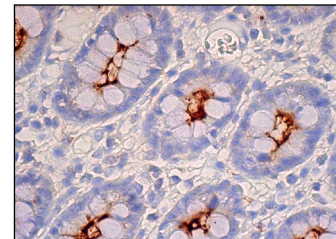
## STORAGE

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

## DATA



DAT (N-19): sc-7515. Western blot analysis of DAT expression in HeLa (A) and HEK293 (B) whole cell lysates.



DAT (N-19): sc-7515. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing apical membrane staining of glandular cells.

## SELECT PRODUCT CITATIONS

1. Amenta, F., et al. 2001. Identification of Dopamine plasma membrane and vesicular transporters in human peripheral blood lymphocytes. *J. Neuroimmunol.* 117: 133-142.
2. Mignini, F., et al. 2006. Dopamine plasma membrane transporter (DAT) in rat thymus and spleen: an immunochemical and immunohistochemical study. *Auton. Autacoid Pharmacol.* 26: 183-189.
3. Korkolopoulou, P., et al. 2007. c-FLIP expression in colorectal carcinomas: association with FAS/FAS-L expression and prognostic implications. *Histopathology* 51: 150-156.
4. Ramírez, A.R., et al. 2009. The presence and function of Dopamine type 2 receptors in boar sperm: a possible role for Dopamine in viability, capacitation, and modulation of sperm motility. *Biol. Reprod.* 80: 753-761.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **DAT (6-8D6): sc-32259** or **DAT (6-5G10): sc-32258**, our highly recommended monoclonal alternatives to DAT (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **DAT (6-8D6): sc-32259**.