SANTA CRUZ BIOTECHNOLOGY, INC.

D3DR (H-50): sc-9114

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The members of the G protein-coupled receptor family are distinguished by their slow transmitting response to ligand binding. These 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. β-adrenergic receptor bound to adrenaline activates adenylyl cyclase, while α_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.

CHROMOSOMAL LOCATION

Genetic locus: DRD3 (human) mapping to 3q13.31; Drd3 (mouse) mapping to 16 B4.

SOURCE

D3DR (H-50) is a rabbit polyclonal antibody raised against amino acids 1-50 of D3DR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

D3DR (H-50) is recommended for detection of D3DR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for D3DR siRNA (h): sc-35163, D3DR siRNA (m): sc-35164, D3DR shRNA Plasmid (h): sc-35163-SH, D3DR shRNA Plasmid (m): sc-35164-SH, D3DR shRNA (h) Lentiviral Particles: sc-35163-V and D3DR shRNA (m) Lentiviral Particles: sc-35164-V.

Molecular Weight of D3DR: 44 kDa.

Positive Controls: mouse brain extract: sc-2253, c4 whole cell lysate: sc-364186 or mouse pancreas extract: sc-364244.

STORAGE

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

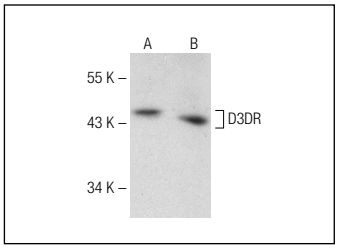
PROTOCOLS

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

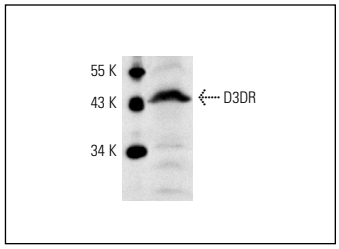
RESEARCH USE

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

DATA



D3DR (H-50): sc-9114. Western blot analysis of D3DR expression in c4 whole cell lysate (**A**) and mouse pancreas tissue extract (**B**).



D3DR (H-50): sc-9114. Western blot analysis of D3DR expression in mouse brain extract.

SELECT PRODUCT CITATIONS

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3. Kim, Y., et al. 2009. Effect of lavender oil on motor function and dopamine receptor expression in the olfactory bulb of mice. J. Ethnopharmacol. 125: 31-35.
4. Strell, C., et al. 2009. Divergent effects of norepinephrine, dopamine and substance P on the activation, differentiation and effector functions of human cytotoxic T lymphocytes. BMC Immunol. 10: 62.
5. Bence, M., et al. 2009. Hypoxia-induced transcription of dopamine D3 and D4 receptors in human neuroblastoma and astrocytoma cells. BMC Neurosci. 10: 92.
6. Everett, P.B., et al. 2010. D3 dopamine receptor signals to activation of phospholipase D through a complex with Rho. J. Neurochem. 112: 963-971.
7. Merlo, S., et al. 2011. Distinct effects of pramipexole on the proliferation of adult mouse sub-ventricular zone-derived cells and the appearance of a neuronal phenotype. Neuropharmacology 60: 892-900.
8. Ikeda, E., et al. 2013. Molecular mechanism regulating 24-hour rhythm of dopamine D3 receptor expression in mouse ventral striatum. Mol. Pharmacol. 83: 959-967.