

Dopamine (2B11): sc-51871

BACKGROUND

Dopamine (C₆H₃(OH)₂-CH₂-CH₂-NH₂) is a catecholamine neurotransmitter expressed mainly in the brain that activates dopamine receptors. Dopamine is also a neurohormone released by the hypothalamus. Its chemical name is 4-(2-aminoethyl)benzene-1,2-diol and its main function is to inhibit the release of prolactin from the anterior lobe of the pituitary. Dopamine can be used as a sympathomimetic drug because it produces effects such as increased heart rate and blood pressure. Changes in Dopamine concentration within the brain may explain symptoms observed in individuals with Schizophrenia, and a reduction in its concentration is associated with Parkinson's disease.

REFERENCES

1. Meltzer, H.Y. and Stahl, S.M. 1976. The dopamine hypothesis of Schizophrenia: a review. *Schizophr. Bull.* 2: 19-76.
2. Keibian, J.W. and Calne, D.B. 1979. Multiple receptors for dopamine. *Nature* 277: 93-96.
3. Horn, A.S. 1990. Dopamine uptake: a review of progress in the last decade. *Prog. Neurobiol.* 34: 387-400.
4. Kalivas, P.W. and Stewart, J. 1992. Dopamine transmission in the initiation and expression of drug- and stress- sensitization of motor activity. *Brain research. Brain Res. Rev.* 16: 223-244.
5. Seeman, P. and Van Tol, H.H. 1994. Dopamine receptor pharmacology. *Trends Pharmacol. Sci.* 15: 264-270.
6. Laruelle, M. 1998. Imaging dopamine transmission in Schizophrenia. A review and meta-analysis. *Q. J. Nucl. Med.* 42: 211-221.

SOURCE

Dopamine (2B11) is a mouse monoclonal antibody raised against dopamine conjugated with BSA.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Dopamine (2B11) is recommended for detection of catecholamine of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

STORAGE

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

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.

SELECT PRODUCT CITATIONS

1. Kubelt, C., et al. 2021. Influence of simulated deep brain stimulation on the expression of inflammatory mediators by human central nervous system cells *in vitro*. *Neuromolecular Med.* E-published.