

**Biotin-labeled Antibody to Dopamine Transporter (DAT-NT)
RAT MONOCLONAL**

Catalog Number: BT-N18
Quantity: 100 micrograms
Format: PBS (0.14 M Sodium Chloride; 0.003 M Potassium Chloride; 0.002 M Potassium Phosphate; 0.01 M Sodium Phosphate; pH 7.4), no preservative.
Host: Rat
Clone: hDAT-NT
Immunogen: GST-DAT-NT fusion protein (the N-terminus, consisting of amino acids 1-66)

Background:

The dopamine transporter (DAT) is a sodium-dependent reuptake carrier that is suspected to play a role in such neurologic and psychiatric disorders as Parkinson's disease, Tourette's disease, schizophrenia, and addiction. It is a 12-transmembrane domain transporter with the N- and C- terminus regions located within the cytoplasm.

Specificity and Preparation:

This antibody recognizes the N-terminus of the dopamine transporter (DAT-NT) in rat and human. It was produced in rat by immunization with a GST-DAT-NT fusion protein, then construction of a hybridoma with the murine nonsecreting myeloma cell line Sp2/0. The N-terminus, consisting of amino acids 1-66, was used to construct the fusion protein. It has been conjugated to biotin via an amide bond.

Usage and Storage:

Applications include immunocytochemistry (culture supernatant 1:100, rat)^{2,3}, immunohistochemistry (1:500, human)¹, and immunoblotting (ammonium sulfate precipitated culture supernatant 1:500, rat)³. Store antibody at -20°C for one year. Avoid repeated freezing and thawing. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate.

References:

1. Ma SY, Ciliax BJ, Stebbins G, Jaffar S, Joyce JN, Cochran EJ, Kordower JH, Mash DC, Levey AI, Mufson EJ (1999) Dopamine transporter-immunoreactive neurons decrease with age in the human substantia nigra. *J Comp Neurol* 409(1):25-37.
2. Sesack SR, Hawrylak VA, Matus C, Guido MA, Levey AI (1998) Dopamine axon varicosities in the prelimbic division of the rat prefrontal cortex exhibit sparse immunoreactivity for the dopamine transporter. *J Neurosci* 18(7):2697-2708.
3. Hersch SM, Yi H, Heilman CJ, Edwards RH, Levey AI (1997) Subcellular localization and molecular topology of the dopamine transporter in the striatum and substantia nigra. *J Comp Neurol* 388(2):211-227.

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