

Product Information

Monoclonal Anti-D1 Dopamine Receptor Clone 1-1-F11 S.E6

produced in rat, purified immunoglobulin

Catalog Number **D187**

Product Description

Monoclonal Anti-D₁ Dopamine Receptor (rat IgG2a) is produced by immunizing rats with a 97 amino acid synthetic peptide corresponding to the C-terminus of the human D₁ dopamine receptor.

This antibody is specific for human (DRD1 Gene ID 1812), monkey, and rat (Drd1a Gene ID 24316) D₁ dopamine receptors. It can be used for immunohistochemistry and immunoblotting.

Dopamine receptors were initially divided into two general categories on the basis of differences in receptor pharmacology and biochemical mechanisms of signal transduction. With the application of the techniques of molecular biology, two predominant dopamine receptors, D₁ and D₂, were cloned. Later other dopamine receptors with homology to either the D₁ or D₂ receptor were identified. Thus, at present, two families of vertebrate dopamine receptors (designated as D₁-like and D₂-like) are recognized. The D₁-like family consists of the D₁ and D₅ receptors while the D₂-like family consists of the D₂, D₃ and D₄ receptors.

The D₁ and D₂ receptors occur in sufficiently high concentrations that they can be studied *in situ*. The D₃, D₄ and D₅ receptors occur in such low concentrations that study of them *in situ* is difficult. Thus, the majority of study of these receptors has been accomplished using cell lines cloned to express these receptors.

Reagent

Supplied as a solution in 20 mM sodium phosphate, pH 7.2, containing 150 mM sodium chloride and 0.02% sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: recommended dilution 1:250

Immunohistochemistry: recommended dilution 1:500

References

1. Hersch, S.M., et al., Electron microscopic analysis of D1 and D2 dopamine receptor proteins in the dorsal striatum and their synaptic relationships with motor corticostriatal afferents. *J. Neurosci.*, **15**, 5222-5237 (1995).
2. Levey, A.L., et al., Localization of D1 and D2 dopamine receptors in brain with subtype-specific antibodies. *Proc. Natl. Acad. Sci. USA*, **90**, 8861-8865 (1993).
3. Smiley, J.F., et al., D1 dopamine receptor immunoreactivity in human and monkey cerebral cortex: Predominant and extrasynaptic localization in dendritic spines. *Proc. Natl. Acad. Sci. USA*, **91**, 5720-5724 (1994).
4. Yung, K.K.L., et al., Immunocytochemical localization of D1 and D2 dopamine receptors in the basal ganglia of the rat: Light and electron microscopy. *Neuroscience*, **65**, 709-730 (1995).

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