Polyclonal Anti- Dopamine receptor D1, *DRD1 (*Sepharose Bead Conjugate)

Catalogue No. PA1231-S

Lot No. 09E01

Ig type: rabbit IgG

Size: 100µg/vial

Specificity

Human, rat, mouse. No cross reactivity with other proteins.

Recommended application

(Immunoprecipitation(IP)

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminal of human DRD1, identical to the related rat and mouse sequence.

Purification

Immunogen affinity purified.

Formulation

50% slurry in PBS pH 7.2 with 0.01mg NaN_3a_3 preservative.

Storage

Store at 4˚C for frequent use.

Description:

This Antagene antibody is immobilized via covalent binding of primary amino groups to N-hydroxysuccinimide (NHS)-activated sepharose beads. It is useful for immunoprecipitation assays

BACKGROUND

Dopamine receptor D1, also known as DRD1, is a human gene. It is the most highly expressed DA receptor subtype among the DA receptor family.1 Receptors for dopamine have been classified into two functional types, D1 and D2. They belong to the family of receptors acting through G (or guanine nucleotide-binding) proteins. D2 receptors inhibit adenylyl cyclase, but D1 receptors stimulate adenylyl cyclase and activate cyclic AMP-dependent protein kinases. Dopamine D1 and D2 receptors are targets of drug therapy in many psychomotor disorders, including Parkinson's disease and schizophrenia, and may also have a role in drug addiction and alcoholism. D1 receptors regulate neuron growth and differentiation, influence behaviour and modify dopamine D2 receptor-mediated events. And the presence of a D1 receptor gene restriction fragment length polymorphism will be helpful for future disease linkage studies.2 DRD1 also regulates the neurochemical architecture of the striatum and is critical for the normal expression of motor activity.3

REFERENCE

1. Zhang J, Xiong B, Zhen X, Zhang A. (2009). "Dopamine D1 receptor ligands: where are we now and where are we going.". *Med Res Rev.* 29 (2): 272-294.

2. Sunahara, R. K.; Niznik, H. B.; Weiner, D. M.; Stormann, T. M.; Brann, M. R.; Kennedy, J. L.; Gelernter, J. E.; Rozmahel, R.; Yang, Y.; Israel, Y.; Seeman, P.; O'Dowd, B. F. :Human dopamine D1 receptor encoded by an intronless gene on chromosome 5. *Nature* 347: 80-83, 1990.

3. Xu, M.; Moratalla, R.; Gold, L. H.; Hiroi, N.; Koob, G. F.; Graybiel, A. M.; Tonegawa, S. : Dopamine D1 receptor mutant mice are deficient in striatal expression of dynorphin and in dopamine-mediated behavioral responses. *Cell* 79: 729-742, 1994.

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