ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Dopamine D2R Receptor (D2R) Antibodies

Cat # D2R11-P	Rat D2R control peptide #1	**SIZE**: 100 ug
Cat # D2R11-S	Rabbit Anti Rat D2R Antiserum	**SIZE**: 100 ul
Cat # D2R11-A	Rabbit Anti Rat D2R IgG #1, affinity pure	**SIZE**: 100 ug

Dopamine is an endogenous catecholamine that influences many cellular activities, including behavior, hormone synthesis and release, blood pressure and intracellular ion transport. A family of at least 5 Dopamine Receptors (DR) genes, D1-D5, have been identified based upon the amino acid identity, pharmacological specificity and effector responses. DR have been classified into either the D1-like (D1, D1B, and D5) or D2-like (D2, D3, and D4). Dopamine D2 receptor is known to exist in the short ($D2_S$) and the long ($D2_L$)forms that are encoded by splice variants of a single gene and differ only by the presence of an additional 29 amino acid in the intracellular, cytoplasmic loop 3 (1). D2L receptor is a 446 aa, G-protein coupled, and transmembrane receptor protein. D2R may play a role in the coupling of the receptor to G-proteins. All members of this family have similar structure and contain 7 putative transmembrane domains.

Source of Antigen, Antibodies

Antigen	11-aa peptide of rat D2R ; **Designated (D2R11-P or control peptide) conjugated to KLH. Epitope location** ~ N-terminal, Extracellular domain 1
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (**cat #D2R11-S**) & Aff pure IgG (**cat #D2R11-A**) purified over antigen-agarose column
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	**# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control**

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.
Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for antiserum and 1-10 ug/ml for affinity pure IgG using Chemiluminescence technique.

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry: not tested. We recommend the use of affinity purified antibody at 2-10 ug/ml.

Specificity & Cross-reactivity

The 11 AA rat D2R11-P peptide showed 100% homology with mouse 90% homology with human, bovine, 72% with dog D2R receptors. The antibody has been shown to cross react with human (CNS and peripheral), Lobster, Squid and crawfish (2). Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: the web site).

General References:

(1) Bunzow, JR (1989) Nature 336, 783-787**1**. (2) Sakata, M (1992) Brain Res. 575, 309-314; Farooqui, SM (1991) J Neurochem. 57, 1363; Farooqui, SM I (1992) BBRC 184, 661; Brock, J (1992) Brain Res. (1992) 578, 244; Farooqui, SM (1992) Life. Sci. 51, 1509-1516.

(2) Citations of ADI's Antibodies (see web site for updated list)

Kamiya T, 2003, BBBRC 306, 544-549, WB,, IHC, IF, IP
Farooqui SM, 1991, J. Neurochem., 57, 1363-1369, WB, ,
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Sakata M, 1992, BBRC. 575, 309-314, WB,, ,
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Sutoo D, 2003, Brain Research, 980, 24-30, , IHC,

*This product is for In vitro research use only.

D2R11-S-A-P 71218S

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