ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Dopamine D3 Receptor (D3R) Antibodies

□ Cat. # D3R12-P	Rat D3R Receptor Control/blocking Peptide # 2	**SIZE**: 100 ug
□ Cat. # D3R12-S	Rabbit Anti-Rat D3R Antiserum # 2	**SIZE**: 100 ul
□ Cat. # D3R12-A	Rabbit Anti-Rat D3R IgG # 2 (aff 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). The two isoforms of D2R, D2 long (D2L) and short D2S), are encoded by splice variants of a single gene and differ only by the presence of an additional 29 AA in the intracellular domain 3 of the D2 long form. It 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. A given cell or tissue may express more than one DR. Specific radioligands do not exist that can differentiate between these DR. Therefore, specific antibodies are needed to distinguish, localize, and document changes in DR levels in cells and tissues under various normal and pathological conditions.

Source of Antigen, Antibodies

Antigen	19-aa peptide of Rat D3R (protein accession #P19020); **Designated (D3R12-P or control peptide /blocking peptide**) conjugated to KLH. **Epitope location** ~ cytoplasmic domain 3
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#**D3R12**-S) and IgG, purified over antigen-agarose (Cat # **D3R12**-A)
2-Ab	Cat # 20320, **goat anti-rabbit IgG-HRP** (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 ECL). (see published refs using this antibody in 2).

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: We recommend the use of affinity purified antibody at 2-10 ug/ml. (see published refs using this antibody in 2).

Specificity & Cross-reactivity

Rat D3R12-P peptide sequence is 88% conserved in mouse and 63% with human/monkey D3R receptors (1-2). No significant sequence homology with other dopamine receptors (D1, D2, D4 or D5). Antibody crossreactivity from various species is not known. 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: Giros B (1990) CR Acad. Sci. Vie 311, 501-508; Schmauss C (1993) PNAS 90, 8942-8946; Liu K (1994) JBC 269, 29220-29226; Fu D (1995) DNA Cell Biol 14, 485-192; Sokoloff P (1990) Nature 347, 146-151; Giros B (1991) BBRC 176, 1584-1592; Livingstone CD (1992) Bichem J 287, 277-282.

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

Cho D-I 2003, Life Sciences, 73, 2991-300, WB, IHC, IP
Chu, Eugenia, 2000, JPET 293: 710-716, IHC,
Zeng C, 2002, Hypertension, 41, 724-729, WB, IP
Zeng C, 2004, Hypertension, 43: 673 – 679, WB, IHC, IP
Zeng C 2004, Hypertension, 43: 654 - 660 WB, IP
Ladines, CA, 2001, AJP Regul. Integ. Comp Physiol 281, R1071, wb

*This product is for In vitro research use only.

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Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, S an Antonio, T X 7 8 24 4 , U S A;

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400 Fax: +91-11-42208444 Email: customerservice@lifetechindia.com Website: www.lifetechindia.com