

# Dopamine receptor D1 polyclonal antibody

Dopamine is the predominant catecholamine neurotransmitter in the mammalian brain, where it regulates locomotor, emotional, memory, and dietary intake functions, as well as peripheral roles such as hormone secretion and renal function. Dopamine receptors (D1-D5) are members of the seven transmembrane domain containing G-protein coupled receptor (GPCR) family A, and are the target of several anti-psychosis and anti-Parkinsonian drugs. The D2, D3, and D4 dopamine receptors are encoded by homologous intron-containing genes, and signal via coupling of Gi/Go alpha G-protein subunits to inhibit adenylyl cyclase activity, as well as modulate cellular ion channel conductance of K<sup>+</sup> and Ca<sup>2+</sup>. This is in contrast to D1 and D5 dopamine receptors, which signal via Gs alpha subunits to activate adenylyl cyclase activity. Coactivation of D1 and D2 receptors has been shown to activate a Gq mediated pathway, stimulating phospholipase C (PLC) and mobilizing intracellular calcium stores. D1 receptors were initially characterized in the striatum and retina and are expressed throughout the brain in the olfactory tubercle, islands of Calleja, entopeduncular nucleus, neocortex, hippocampus, and amygdala. Expression of the D2 receptor is found primarily in the brain (striatum, olfactory tubercle, and nucleus accumbens) and in the anterior and intermediate lobes of the pituitary.

This antibody is covered by our [Worry-Free Guarantee](#).

Citations: 1

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## Ordering Information

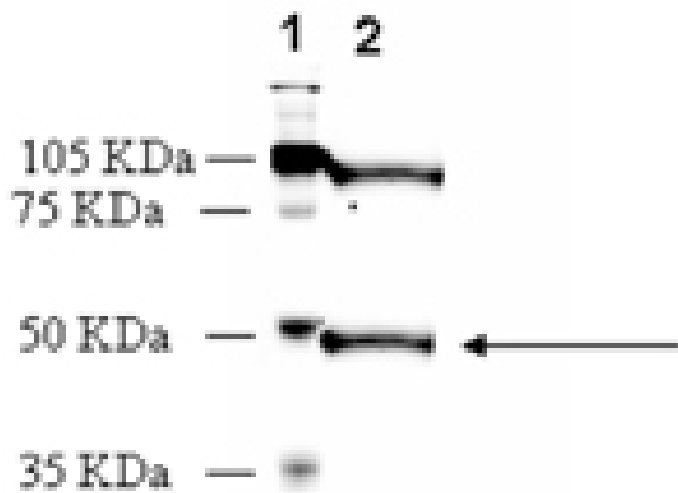
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ADI-905-789-100

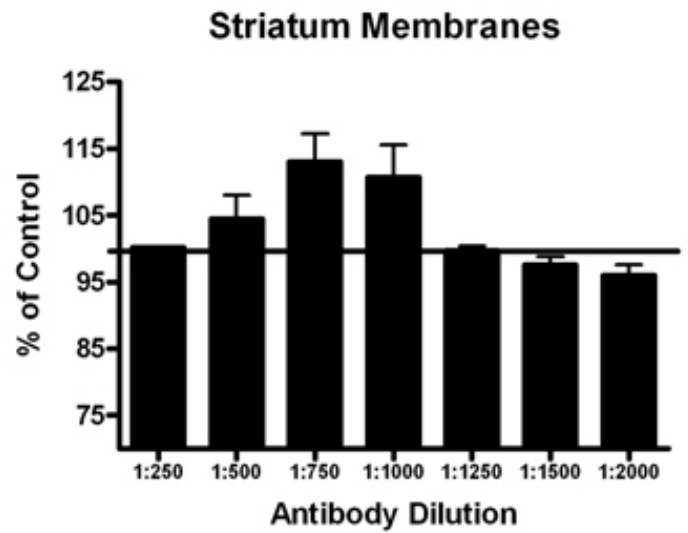
100µg

## Manuals, SDS & CofA

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Western blot analysis: MW marker (1) and 25µg of rat brain membrane extract (2) probed with Dopamine Receptor (D1) pAb at 2.2µg/ml.



Membrane ELISA: Lewis rat striatum membranes (5µg/well) were treated with 1 µM concentrations of agonist (SKF- 38393) and probed with Dopamine Receptor (D1) pAb (1:250 to 1:2000 of a 1µg/µl stock solution) by ELISA. Data from vehicle treated cells were taken as 100%. Results are the mean ± SEM (n=3).

# Handling & Storage

**Handling** Keep on ice at all times.

**Long Term Storage** -20°C

**Shipping** Blue Ice

**Regulatory Status** RUO - Research Use Only

## Product Details

**Alternative Name** DRD, D2R

**Application** ELISA, IHC, WB

**Application Notes** Suitable for cell-based and membrane-based ELISA. Predicted MW of ~49kDa. Higher MW species (~100kDa) and intermediates also observed by Western blot which reflect post-translational modification of the receptor.

**Crossreactivity** Predicted species reactivity based on epitope sequence homology: mouse, dog, bovine, wild boar.

**Formulation** Liquid. In PBS containing 50% glycerol and 0.01% sodium azide.

**Host** Rabbit

**Immunogen** Synthetic peptide corresponding to the sequence near the N-terminus of rat dopamine receptor D1.

**Purity Detail** Peptide affinity purified.

**Species Reactivity** Rat

**UniProt ID** P18901

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ENZO LIFE SCIENCES,  
INC.  
Phone: 800.942.0430  
[info-](mailto:info-usa@enzolifesciences.com)  
[usa@enzolifesciences.com](mailto:info-usa@enzolifesciences.com)

European Sales Office  
ENZO LIFE SCIENCES  
(ELS) AG  
Phone: +41 61 926 8989  
[info-](mailto:info-eu@enzolifesciences.com)  
[eu@enzolifesciences.com](mailto:eu@enzolifesciences.com)

Belgium, The Netherlands  
& Luxembourg  
Phone: +32 3 466 0420  
[info-](mailto:info-fr@enzolifesciences.com)  
[fr@enzolifesciences.com](mailto:fr@enzolifesciences.com)

France  
Phone: +33 472 440 655  
[info-](mailto:info-fr@enzolifesciences.com)  
[fr@enzolifesciences.com](mailto:fr@enzolifesciences.com)

Germany  
Phone: +49 7621 5500 526  
[info-](mailto:info-de@enzolifesciences.com)  
[de@enzolifesciences.com](mailto:de@enzolifesciences.com)

UK & Ireland  
Phone (UK customers):  
0845 601 1488  
Phone: +44 1392 825900  
[info-](mailto:info-uk@enzolifesciences.com)  
[uk@enzolifesciences.com](mailto:uk@enzolifesciences.com)

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