

# Dopamine D3 receptor Rabbit pAb

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Catalog # AP52186

## Product Information

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| <b>Application</b>             | WB, IHC-P, IHC-F, IF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Primary Accession</b>       | <a href="#">P30728</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Reactivity</b>              | Rat, Human, Mouse                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Host</b>                    | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Clonality</b>               | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Calculated MW</b>           | 49669                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Physical State</b>          | Liquid                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Immunogen</b>               | KLH conjugated synthetic peptide derived from mouse DRD3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Epitope Specificity</b>     | 352-446/446                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Isotype</b>                 | IgG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity</b>                  | affinity purified by Protein A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Buffer</b>                  | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SUBCELLULAR LOCATION</b>    | Cell membrane; Multi-pass membrane protein. Note=Both membrane-bound and scattered in the cytoplasm during basal conditions. Receptor stimulation results in the rapid internalization and sequestration of the receptors at the perinuclear area (5 and 15 minutes), followed by the dispersal of the receptors to the membrane (30 minutes). DRD3 and GRK4 co-localize in lipid rafts of renal proximal tubule cells.                                                                                                                                                                                                                                                                             |
| <b>Important Note</b>          | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Background Descriptions</b> | This is one of the five types (D1 to D5) of receptors for dopamine. The activity of this receptor is mediated by G proteins which inhibit adenylyl cyclase. This receptor is expressed in phylogenetically older regions of the brain, suggesting that it plays a role in cognitive and emotional functions. It is a target for drugs which treat schizophrenia, drug addiction, and Parkinson disease. Alternative splicing of this gene results in multiple transcript variants that would encode different isoforms, although some variants may be subject to nonsense-mediated decay (NMD). Also known as: dopamine D3 receptor; 3 dopamine receptor; D; Dopamine receptor D3; DRD; ETM1; FET1. |

## Additional Information

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| <b>Gene ID</b>     | 13490                                                                                                                                                                                           |
| <b>Other Names</b> | D(3) dopamine receptor, Dopamine D3 receptor, Drd3                                                                                                                                              |
| <b>Dilution</b>    | WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:200-800                                                                                                                                      |
| <b>Storage</b>     | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| <b>Name</b>              | Drd3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Function</b>          | Dopamine receptor that is primarily expressed in limbic areas of the brain and is involved in the modulation of cognitive, emotional, and endocrine functions. Plays a key role in regulating neuronal signaling pathways associated with motivation, reward, and behavior. Coupled to G(i)/G(o) proteins; activation leads to inhibition of adenylate cyclase and decreased intracellular cAMP levels. Involved in the control of locomotor activity and implicated in several neuropsychiatric disorders, including schizophrenia and substance use disorders. Promotes cell proliferation through MAP kinase signaling. Also involved in autophagy regulation: receptor activation stimulates AMPK, which phosphorylates RPTOR and enhances its interaction with MTOR, thereby inhibiting MTORC1 signaling and its downstream target RPS6KB1. This leads to activation of ULK1 and initiation of the autophagy cascade. Forms heterotetramers with DRD1 to potentiate beta-arrestin recruitment and mediate locomotor activity (PubMed: <a href="#">40523512</a> ). |
| <b>Cellular Location</b> | Cell membrane; Multi-pass membrane protein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Tissue Location</b>   | Strongly expressed in astrocyte and microglia in the mesolimbic reward regions of normal mice                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

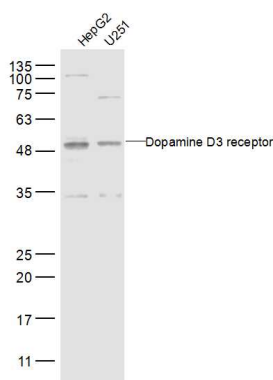
## Background

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

## References

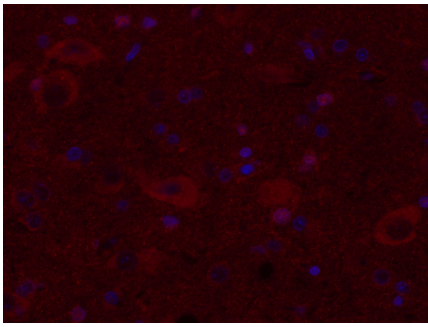
Fishburn C.S., et al. J. Biol. Chem. 268:5872-5878(1993).  
Fu D., et al. DNA Cell Biol. 14:485-492(1995).

## Images

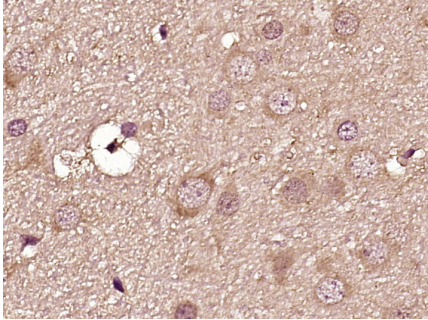


Sample:  
HepG2 Cell Lysate at 30 ug  
U251 Cell Lysate at 30 ug  
Primary: Anti-Dopamine D3 receptor (AP52186) at 1/300 dilution  
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution  
Predicted band size: 44 kD  
Observed band size: 48 kD

Paraformaldehyde-fixed, paraffin embedded (Rat brain);  
Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody



incubation with (Dopamine D3 receptor) Polyclonal Antibody, Unconjugated (AP52186) at 1:400 overnight at 4°C, followed by a conjugated Goat Anti-Rabbit IgG antibody (AP52186-AF594) for 90 minutes, and DAPI for nuclei staining.



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Dopamine D3 receptor) Polyclonal Antibody, Unconjugated (AP52186) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.