

## Product datasheet for **TA328801**

### Drd4 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)RRWEAARHTKLHSR, corresponding to amino acid residues 215-228Å of rat D4 Dopamine receptor. 3rd intracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	dopamine receptor D4
Database Link:	<a href="#">NP_037076</a> <a href="#">Entrez Gene 13491 Mouse</a> <a href="#">Entrez Gene 25432 Rat</a>



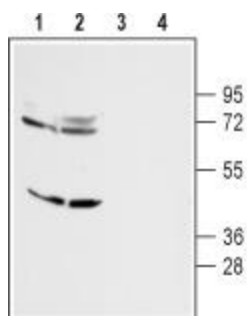
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**Background:**

The Dopamine neurotransmitter belongs to catecholamines and can therefore be further converted into adrenaline and noreadrenaline. Dopamine has various physiological roles, including learning and memory, motor output and endocrine regulation. It does so by binding and activating Dopamine receptors which belong to the G-protein coupled receptor superfamily (GPCR). The D4 Dopamine Receptor belongs to the D2-like family as do D2 and D3 Dopamine Receptors and like all GPCRs has seven transmembrane spanning membrane regions. Structure wise members of the family share high homology in the transmembrane domains and lower homology in the extracellular N-Terminal and the intracellular C-terminal domains. Notably, the coding region of the 3rd intracellular loop of D4 Receptor is known to undergo extensive polymorphism. Like many GPCRs, each dopamine receptor subtype can react with more than one G-protein giving rise to different signaling possibilities. Whereas D2-like dopamine receptors are generally considered to couple to  $G_i$ , and therefore inhibit adenylyl cyclase, the signaling through D4 is complicated due to the polymorphisms in the 3rd intracellular loop. It seems that this region is important to G-coupling as different polyphormisms in the region influence the ability of D4 to couple to adenylyl cyclase and G-proteins. D4 Dopamine Receptors also influence  $Ca^{2+}$  levels. They could also interact with G-protein couple inwardly rectifying  $K^+$  channel to ultimately cause a decrease in the firing rate of neurons. The distribution of D4 Dopamine Receptor mostly includes the brain and is mainly found post-synaptically in dendritic shafts and spines of mammalian striatum.

**Synonyms:**

D4DR

**Product images:**

Western blot analysis of rat (lanes 1 and 3) and mouse (lanes 2 and 4) brain lysates: 1, 2. Anti-D4 Dopamine Receptor antibody, (1:200). 3, 4. Anti-D4 Dopamine Receptor antibody, preincubated with the control peptide antigen.