Qty: 100 µg

Mouse anti-Dopamine Receptor 3

Catalog No. 32-0900

Lot No.

Mouse anti-Dopamine Receptor 3 (D_3)

FORM
The antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This monoclonal antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 3A8[(1)] **ISOTYPE:** IgG_3

IMMUNOGEN
Fusion protein incorporating amino acid residues 252-284 of the putative third cytoplasmic loop of the human D_3 receptor.

SPECIFICITY
This antibody recognizes an approximately ~50 kDa band on western blots and by immunoprecipitation, corresponding to the D_3 core protein. In immunoprecipitation experiments, additional bands at higher molecular weights are also observed that appear to correspond to D_3 multimers.

REACTIVITY
Reactivity with this antibody is confirmed for human, monkey and rat. Reactivity with other species has not been evaluated. Check the Zymed website for recent updates.

Sample	ELISA	Immuno-precipitation (native)	Immuno-histochemistry (vibratome)	Western Blotting
Human		+	+	not tested
Monkey		+	+	+
Rat		+	+	+
Immunogen	+			

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA: 0.1-1.0 µg/ml
Immunohistochemistry: 1-5 µg/ml
Immunoprecipitation: 2-5 µg
Western Blotting: 1-2 µg/ml

Reactivity of this antibody in applications other than those named here has not been evaluated.

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND[2]

The 5 major receptors for the monoamine neurotransmitter dopamine are usually classified into two subfamilies based on biochemical, pharmacological, physiological. D_1 subfamily receptors include the D_1 and D_5 (D1b) receptors. D_2 subfamily receptors include the D_2, D_3, and D_4 receptors. Each of these receptors exhibit the general structural characteristics of G-protein coupled receptors with seven transmembrane domains, an extracellular N-terminal domain, three extracellular loops, and four cytoplasmic loops, the last of which is formed by membrane insertion of a palmitoylated residue located in the intracellular C-terminal domain. The third intracellular loop is thought to be important for interaction with G- proteins. D_1 subfamily receptors are characterized by short third intracellular loops and long C-terminal domains and generally stimulate adenylate cyclase production. D_2 subfamily receptors have long third intracellular loops and short C-terminal domains and in general, appear to inhibit adenylate cyclase production. The D_2 and D_3 receptors vary in certain tissues and species as a result of alternative splicing.

The D_3 receptor is localized preferentially in limbic brain areas, notably the ventral striatum in the shell of nucleus accumbens and islands of Calleja, and is strongly associated with emotional control. The D_3 binds all anti-psychotics with high affinity and is studied intensively for its role in schizophrenia and drug addiction.

REFERENCES

1. Nimchinsky, EA, Expression of dopamine D_3 receptor dimers and tetramers in brain and in transfected cells. J. Biol. Chem., 272(46):29229:29237 (1997).
2. Missale C, et al., Dopamine receptors: from structure to function. Physiol Rev. 78(1):189-225 (1998).

RELATED PRODUCTS

Product	Clone	Cat. No.
Ms x α-CaM Kinase II	CBα-2	13-7300
Ms x β-CaM Kinase II	CBβ-1	13-9800
Sheep x Dopamine β-Hydroxylase	--	51-5500
Rb x Glycine Receptor	--	51-5300
Ms x Nitrotyrosine	HM11	32-1900
Rb x Serotonin (5-HT)	--	18-0077
Rb x Synapsin-1	--	51-5200
Rb x Synaptophysin	Z66	18-0130
Ms x Tyrosine Hydroxylase	1hy1	32-2100
Ms x Ubiquitin	Ubi-1	13-1600

Product	Conjugate	Cat. No.
Rabbit anti-Mouse IgG_3	Purified	61-0400
	HRP	61-0420
	AP	61-0422
	Biotin	61-0440

Product	Conjugate	Cat. No.
Goat anti-Mouse IgG (H+L)	Purified	81-6500
(ZyMAX™ Grade)	FITC	81-6511
	TRITC	81-6514
	Cy™3	81-6515
	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
	Biotin	81-6540

Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

For Research Use Only