

Product Information

Anti-Cannabinoid Receptor 1

produced in rabbit, affinity isolated antibody

Catalog Number **C2866**

Product Description

Anti-Cannabinoid Receptor 1 is produced in rabbit using as immunogen a synthetic peptide conjugated to KLH. The peptide corresponds to the third cytoplasmic loop of human Cannabinoid Receptor 1 (CB1). The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Cannabinoid Receptor 1 specifically recognizes Cannabinoid Receptor 1 in human brain neurons by immunohistochemistry with formalin-fixed, paraffin-embedded tissues, and by immunocytochemistry. The antibody cross-reacts with monkey and rat CB1 receptor.

Cannabinoids exert their well known physiological effects through two G-protein coupled receptors, CB1 and CB2.¹ Both receptors have been shown to inhibit adenylyl cyclase, as well as stimulate the mitogen activated protein kinase, MAPK. CB1 receptors also modulate ion channels through direct G-protein interactions. Δ^9 Tetrahydrocannabinol and related ligands exert their psychoactive effects by inhibiting presynaptic N- and Q-type calcium channels.² The CB1 receptor is primarily expressed in brain (particularly cortex, striatum, hippocampus and cerebellum), spinal cord, eye and testis.³ ESTs have been isolated from brain, embryo, heart/melanocyte/uterus, lung, placenta, testis, tonsil, and vessel libraries. CB1 receptors are involved in the modulation of nociception, movement, learning and memory, emotion and many other neuronal processes.⁴ The CB2 receptor is 44 % identical to CB1 at the amino acid level. It is thought to function primarily in the peripheral immune system, having been found in the spleen. It may be present in the central nervous system, including the retina.⁵

Reagent

Supplied as a solution of 1 mg/ml in PBS, pH 7.7, containing 0.1% sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze in working aliquots at $-70\text{ }^{\circ}\text{C}$. Repeated freezing and thawing, or storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a recommended working concentration of 8-11 $\mu\text{g/ml}$ was determined using human brain and neurons tissues.

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Felder, C. C. and Glass, M., *Ann. Rev. Pharmacol. Toxicol.*, **38**, 179-200 (1998).
2. Twitchell, W., et al., *J. Neurophysiol.*, **78**, 43-50 (1997).
3. Tsou, K., et al., *Neuroscience*, **83**, 393-411 (1998).
4. Pertwee, R.G., *Curr. Med. Chem.*, **6**, 635-664 (1999).
5. Lu, Q., et al., *Vis. Neurosci.*, **17**, 91-95 (2000).

This product manufactured by MBL International.

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