

Product Specification Sheet

D9-Tetrahydrocannabinol (THC) Antibodies

Cat. # THC11-S	Sheep Anti-THC antiserum # 1 FORM: Soln Lyophilized	SIZE: 100 ul
Cat. # THC12-M	Mouse Monoclonal Anti-THC IgG # 2 FORM: Soln Lyophilized	SIZE: 100 ug

Cannabinoids, a group of C₂₁ compounds present in Cannabis sativa L., their carboxylic acids, analogs, and transformation products, are the active ingredients found in hashish and marijuana. (-)-trans-D9-tetrahydrocannabinol (**D9-THC**) is the major psychopharmacologically active component of cannabis. Cannabis affect cognition and memory, euphoria and sedation, and antinociception (analgesia) without the respiratory depression problems associated with opioid analgesics. Δ⁹-THC is also immunosuppressive and impairs cell-mediated immunity, humoral immunity and cellular defenses against a variety of infectious agents both *in vivo* and *in vitro*. To date, two sub-types of the G-protein coupled **cannabinoid receptor, CB₁ and CB₂**, have been identified. The first brain-derived endogenous cannabinoids, an unsaturated fatty-acid ethanolamide, arachidonylethanolamide (**AEA**, also called **anandamide**) was found in brain. AEA has higher affinity for the CB₁ than for the CB₂.

THC is rapidly adsorbed by the lungs and almost completely metabolized. The major metabolite is 11-nor-delta-9-tetrahydrocannabinol-9-carboxylic acid and is found with other metabolites in plasma, feces, and urine. THC-metabolites can be detected within hours of exposure and may be detectable for several days. A cut-off level of 50 ng/ml marijuana metabolites has been selected as the initial screening level by the US Dept. of Health.

Source of Antigen and Antibodies

Antibodies to THC were produced in sheep (polyclonal) or in mouse (monoclonal). Mouse Monoclonal (IgG1) have been purified using Protein A/G affinity chromatography.

Form & Storage

Antiserum (unpurified, undiluted)
 100 ul/vial solution contains 0.05% sodium azide
 50 ul/vial lyophilized powder
Reconstitute powder in the original vol. of water

Affinity pure IgG
 100 ug/100ul solution contains 0.05% sodium azide
 50 ug/50 ul lyophilized powder
 Buffer: 100 mM Tris, pH 7.5, 0.2% BSA
Reconstitute powder in the original vol. of water

Storage

Short-term: unopened, undiluted vials for less than a week at 4°C.

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique). We provide THC-BSA protein conjugate for this purpose. This technique can be used to test antibodies.

ELISA (1:10K-1:100K; using 50-100 ng of THC-BSA or other protein conjugates/well). The antibodies can be used in a variety of other tests such dot blots, rapid diagnostic test kits.

Specificity & Cross-reactivity

Anti-THC reacts with THC in all species.

General References:

Hunt CA et al (1980) J. Pharmacol. Exp. Ther. 215, 35;
 Wall ME (1976) in "metabolism of Cannabinoid in Man"
 Braude MC and Szara S, Eds, Vol 1, Raven Press, 93-116;
 Kanter SI et al (1974) Clin. Chem. 20, 860.

*This product is for In vitro research use only.

Related material available from ADI

Anti-CB₁, CB₂, FAAH, THC, and THC ELISA kit

ReadyBrain Blot- Study distribution of protein in 12 regions of mouse/rat brain using pre-made protein blots.

THC11-S 40601A

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