

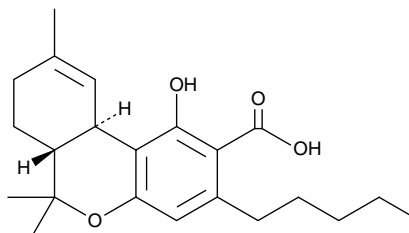
Product Information



THCA-A (exempt preparation)

Item No. 15679

CAS Registry No.: 23978-85-0
Formal Name: 6aR,7,8,10aR-tetrahydro-1-hydroxy-6,6,9-trimethyl-3-pentyl-6H-dibenzo[b,d]pyran-2-carboxylic acid
Synonyms: Δ^9 -Tetrahydrocannabinolic Acid, Δ^9 -THC Carboxylic Acid
MF: $C_{22}H_{30}O_4$
FW: 358.5
Purity: $\geq 95\%$
Stability: ≥ 2 years at -20°C
Supplied as: A solution in methanol
UV/Vis.: λ_{max} : 223, 270, 306 nm



Laboratory Procedures

For long term storage, we suggest that tetrahydrocannabinolic acid-A (THCA-A) (exempt preparation) be stored as supplied at -20°C . It should be stable for at least two years.

THCA-A (exempt preparation) is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of THCA-A (exempt preparation) in these solvents is approximately 35, 60, and 50 mg/ml, respectively.

THCA-A (exempt preparation) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the DMSO solution of THCA-A (exempt preparation) should be diluted with the aqueous buffer of choice. THCA-A (exempt preparation) has a solubility of approximately 250 $\mu\text{g/ml}$ in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

THCA-A is one of two natural THCAs that are precursors of the psychotropic component Δ^9 -THC (Item No. 12068) in *Cannabis* spp.¹ This compound, the A isomer, has the carboxylic acid group at the two position, whereas the group is found on the four position of THCA-B.¹ Neither isomer has psychoactive activities *in vivo*, although both are decarboxylated upon heating to form the active compound, Δ^9 -THC.¹ THCA-A is an inhibitor of transient receptor potential (Trp) channel TrpM8 ($\text{IC}_{50} = 150 \text{ nM}$) and diacylglycerol lipase α ($\text{IC}_{50} = 27.3 \mu\text{M}$).² This product is intended for forensic and research applications.

References

1. Rosenqvist, E. and Ottersen, T. The crystal and molecular structure of Δ^9 -tetrahydrocannabinolic acid B. *Acta Chem. Scand. B* **29(3)**, 379-384 (2014).
2. De Petrocellis, L., Ligresti, A., Moriello, A.S., *et al.* Effects of cannabinoids and cannabinoid-enriched *Cannabis* extracts on TRP channels and endocannabinoid metabolic enzymes. *Br. J. Pharmacol.* **163(7)**, 1479-1494 (2011).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/15679

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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