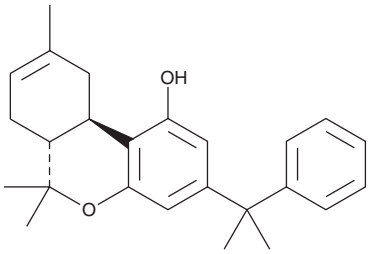
PRODUCT INFORMATION

KM 233

Item No. 10640

CAS Registry No.: 628263-22-9
Formal Name: 6aR,7,10,10aR-tetrahydro-6,6,9-trimethyl-3-(1-methyl-1-phenylethyl)-6H-dibenzo[b,d]pyran-1-ol
MF: $C_{25}H_{30}O_2$
FW: 362.5
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

KM 233 is supplied as a crystalline solid. A stock solution may be made by dissolving the KM 233 in the solvent of choice. KM 233 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of KM 233 in ethanol is approximately 3 mg/ml and approximately 20 mg/ml in DMSO and DMF.

KM 233 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, KM 233 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. KM 233 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Because selective activation of peripheral cannabinoid (CB_2) receptors in rat C-6 glioma cells has been shown to induce apoptosis through enhanced ceramide synthesis *de novo*, CB_2 agonists present potential as anti glioma agents.[1] KM 233 is a Δ^8-tetrahydrocannabinol analog with a dimethyl substitution that exhibits high binding affinity for both the CB_1 and CB_2 receptors with 13-fold selectivity for the CB_2 receptor (K_is = 12.3 and 0.91 nM, respectively).[2] Demonstrating good lipophilicity and ability to penetrate the blood brain barrier, KM 233 inhibits human U87 glioma cell proliferation *in vitro* with an IC_{50} value of 1.4 µM and significantly reduces U87 glioma tumor size *in vivo* at a dose of 2 mg/kg in a SCID mouse xenograft side-pocket model.[3]

References

1. Sánchez, C., de Ceballos, M.L., Gomez de Pulgar, T., *et al*. Inhibition of glioma growth *in vivo* by selective activation of the CB_2 cannabinoid receptor. *Cancer Res*. **61(15)**, 5784-5789 (2001).
2. Krishnamurthy, M., Ferreira, A.M., and Moore, B.M.II. Synthesis and testing of novel phenyl substituted side-chain analogues of classical cannabinoids. *Bioorg. Med. Chem. Lett*. **13**, 3487-3490 (2003).
3. Duntsch, C., Divi, M.K., Jones, T., *et al*. Safety and efficacy of a novel cannabinoid chemotherapeutic, KM-233, for the treatment of high-grade glioma. *J. Neurooncol*. **77**, 143-152 (2006).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM