Certificate of Analysis

Product Name: **JWH 133** **Catalog No.: 1343** **Batch No.: 7**

CAS Number: 259869-55-1

IUPAC Name: (6a*R*,10a*R*)-3-(1,1-Dimethylbutyl)-6a,7,10,10a-tetrahydro-6,6,9-trimethyl-6*H*-dibenzo[*b*,*d*]pyran

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{32}O.¼H_2O$

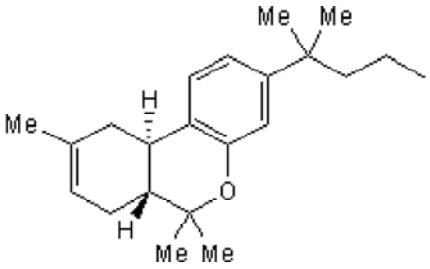
Batch Molecular Weight: 316.99

Physical Appearance: White solid

Solubility: ethanol to 100 mM
DMSO to 50 mM with gentle warming

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.25 (Ethyl acetate:Petroleum ether [98:2])

HPLC: Shows 98.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: $[\alpha]_D$ = -191.9 (Concentration = 1, Solvent = Chloroform)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	83.36	10.33	
Found	83.46	10.34	0.1

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Description:

Potent CB_2 selective agonist (K_i = 3.4 nM). Approx. 200-fold selective over CB_1 receptors. Active in vivo, reducing spasticity in a murine model of multiple sclerosis. Activity also enhances the release of IL-10 by LPS/IFN-γ-stimulated macrophages and results in downregulation of the IL-12 subunit p40. Water Soluble Emulsion also available.

Physical and Chemical Properties:

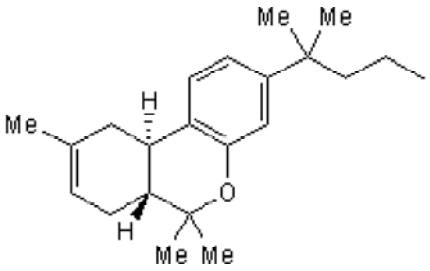
Batch Molecular Formula: $C_{22}H_{32}O.¼H_2O$

Batch Molecular Weight: 316.99

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 100 mM
DMSO to 50 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Correa *et al* (2005) Activation of cannabinoid CB_2 receptor negatively regulates IL-12p40 production in murine macrophages: role of IL-10 and ERK1/2 kinase signaling. Br.J.Pharmacol. ***145*** 441. PMID: 15821753.

Baker *et al* (2000) Cannabinoids control spasticity and tremor in a multiple sclerosis model. Nature ***404*** 84. PMID: 10716447.

Huffman *et al* (1999) 3-(1'-Dimethylbutyl)-1-deoxy-Δ8-THC and related compounds: synthesis of selective ligands for the CB_2 receptor. Bioorg.Med.Chem. ***7*** 2905. PMID: 10658595.

Pertwee (1999) Pharmacology of cannabinoid receptor ligands. Curr.Med.Chem. ***6*** 635. PMID: 10469884.