

Product Name: JZL 184

Catalog No.: 3836

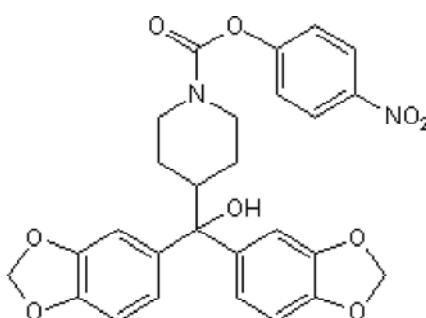
Batch No.: 4

CAS Number: 1101854-58-3

IUPAC Name: 4-[Bis(1,3-benzodioxol-5-yl)hydroxymethyl]-1-piperidinecarboxylic acid 4-nitrophenyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₇H₂₄N₂O₉
Batch Molecular Weight: 520.49
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.1% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.3	4.65	5.38
Found	62.34	4.67	5.43

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and selective MAGL inhibitor. Blocks hydrolysis of the endocannabinoid 2-arachidonyl glycerol (2-AG) in vivo in the mouse brain (IC₅₀ = 8 nM). Potentiates depolarization-induced suppression of excitability in cerebellar Purkinje neurons. Exhibits >300-fold selectivity for MAGL over FAAH in vitro. Attenuates nociception in neuropathic and inflammatory pain models. Also reduces free fatty acid levels in primary tumors.

Physical and Chemical Properties:

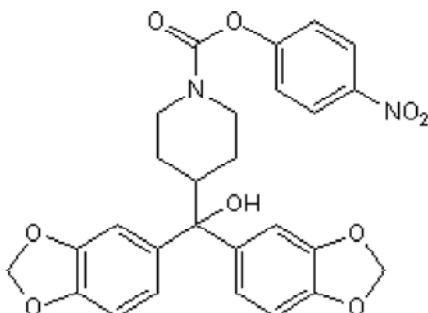
Batch Molecular Formula: C₂₇H₂₄N₂O₉

Batch Molecular Weight: 520.49

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Kinsey et al (2013) Repeated low-dose administration of the monoacylglycerol lipase inhibitor JZL184 retains cannabinoid receptor type 1-mediated antinociceptive and gastroprotective effects. *J.Pharmacol.Exp.Ther.* **345** 492. PMID: 23412396.

Zhang et al (2012) Dysregulated lipid metabolism in cancer. *World J.Biol.Chem.* **3** 167. PMID: 22937213.

Long et al (2009) Selective blockade of 2-arachidonylglycerol hydrolysis produces cannabinoid behavioral effects. *Nat.Chem.Biol.* **5** 37. PMID: 19029917.

Pan et al (2009) Blockade of 2-arachidonylglycerol hydrolysis by selective monoacylglycerol lipase inhibitor 4-nitrophenyl 4-(dibenzo[d][1,3]dioxol-5-yl(hydroxy)methyl)piperidine-1-carboxylate (JZL184) enhances retrograde endocannabinoid signaling. *J.Pharm.Exp.Ther.* **331** 591. PMID: 19666749.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM

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.

Licensing Information:

Sold under license from The Scripps Research Institute.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956