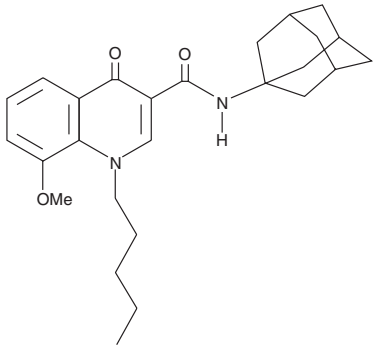
PRODUCT INFORMATION

4-Quinolone-3-Carboxamide CB_2 Ligand

Item No. 11093

CAS Registry No.:	1314230-69-7
Formal Name:	1,4-dihydro-8-methoxy-4-oxo-1-pentyl-N-tricyclo[3.3.1.13,7]dec-1-yl-3-quinolinecarboxamide
Synonym:	4Q3C CB_2 Ligand
MF:	$C_{26}H_{34}N_2O_3$
FW:	422.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 230, 323 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

4-Quinolone-3-carboxamide CB_2 ligand is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-quinolone-3-carboxamide CB_2 ligand in the solvent of choice, which should be purged with an inert gas. 4-Quinolone-3-carboxamide CB_2 ligand is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 4-quinolone-3-carboxamide CB_2 ligand in ethanol is approximately 30 mg/ml and approximately 3 mg/ml in DMSO and DMF.

4-Quinolone-3-carboxamide CB_2 ligand is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-quinolone-3-carboxamide CB_2 ligand should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 4-Quinolone-3-carboxamide CB_2 ligand has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cannabinoids (CBs) and their synthetic analogs produce biochemical and pharmacological effects by interacting with the central CB_1 and peripheral CB_2 receptors. The CB_2 receptor has emerged as a pharmacotherapeutic target for treating osteoporosis, as well as for eliciting antinociceptive effects in various models of pain. 4Q3C CB_2 Ligand is a selective, high-affinity ligand of the CB_2 receptor, displaying a K_i value of 0.6 nM (K_i >10,000 nM for CB_1) *in vitro*. At a dose of 6 mg/kg, 4Q3C CB_2 ligand exhibits antinociceptive activity in a formalin test of nocifensive response in mice. This analgesic affect is not significantly reversed by the CB_2 antagonist AM630 (Item No. 10006974), which suggests 4Q3C CB_2 ligand may behave as an inverse agonist.[1]

Reference

1. Pasquini, S., De Rosa, M., Pedani, V., *et al*. Investigations on the 4-quinolone-3-carboxylic acid motif. 4. Identification of new potent and selective ligands for the cannabinoid type 2 receptor with diverse substitution patterns and antihyperalgesic effects in mice. *J. Med. Chem.* **54(15)**, 5444-5453 (2011).

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