

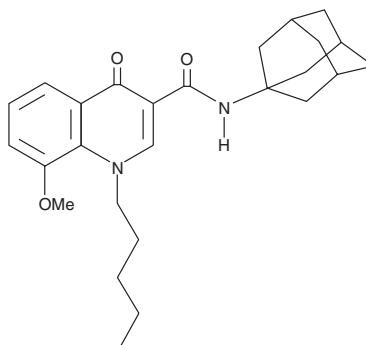
PRODUCT INFORMATION



4-Quinolone-3-Carboxamide CB₂ Ligand

Item No. 11093

CAS Registry No.: 1314230-69-7
Formal Name: 1,4-dihydro-8-methoxy-4-oxo-1-pentyl-N-tricyclo[3.3.1.1^{3,7}]dec-1-yl-3-quinolinecarboxamide
Synonym: 4Q3C CB₂ Ligand
MF: C₂₆H₃₄N₂O₃
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 CB₂ ligand is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-quinolone-3-carboxamide CB₂ ligand in the solvent of choice, which should be purged with an inert gas. 4-Quinolone-3-carboxamide CB₂ ligand is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 4-quinolone-3-carboxamide CB₂ ligand in ethanol is approximately 30 mg/ml and approximately 3 mg/ml in DMSO and DMF.

4-Quinolone-3-carboxamide CB₂ ligand is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-quinolone-3-carboxamide CB₂ ligand should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 4-Quinolone-3-carboxamide CB₂ 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 CB₁ and peripheral CB₂ receptors. The CB₂ receptor has emerged as a pharmacotherapeutic target for treating osteoporosis, as well as for eliciting antinociceptive effects in various models of pain. 4Q3C CB₂ Ligand is a selective, high-affinity ligand of the CB₂ receptor, displaying a K_i value of 0.6 nM (K_i >10,000 nM for CB₁) *in vitro*. At a dose of 6 mg/kg, 4Q3C CB₂ ligand exhibits antinociceptive activity in a formalin test of nocifensive response in mice. This analgesic affect is not significantly reversed by the CB₂ antagonist AM630 (Item No. 10006974), which suggests 4Q3C CB₂ 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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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