



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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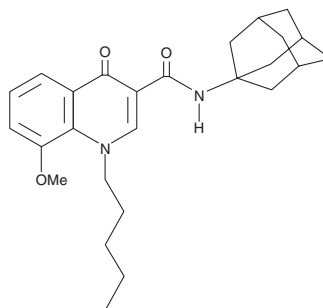
# PRODUCT INFORMATION



## 4-Quinolone-3-Carboxamide CB<sub>2</sub> Ligand

Item No. 11093

<b>CAS Registry No.:</b>	1314230-69-7
<b>Formal Name:</b>	1,4-dihydro-8-methoxy-4-oxo-1-pentyl-N-tricyclo[3.3.1.1 <sup>3,7</sup> ]dec-1-yl-3-quinolinecarboxamide
<b>Synonym:</b>	4Q3C CB <sub>2</sub> Ligand
<b>MF:</b>	C <sub>26</sub> H <sub>34</sub> N <sub>2</sub> O <sub>3</sub>
<b>FW:</b>	422.6
<b>Purity:</b>	≥98%
<b>UV/Vis.:</b>	λ <sub>max</sub> : 230, 323 nm
<b>Supplied as:</b>	A crystalline solid
<b>Storage:</b>	-20°C
<b>Stability:</b>	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



### Laboratory Procedures

4-Quinolone-3-carboxamide CB<sub>2</sub> ligand (4Q3C CB<sub>2</sub> ligand) is supplied as a crystalline solid. A stock solution may be made by dissolving the 4Q3C CB<sub>2</sub> ligand in the solvent of choice. 4Q3C CB<sub>2</sub> Ligand is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 4Q3C CB<sub>2</sub> ligand in ethanol is approximately 30 mg/ml and approximately 3 mg/ml in DMSO and DMF.

4Q3C CB<sub>2</sub> Ligand is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4Q3C CB<sub>2</sub> ligand should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 4Q3C CB<sub>2</sub> 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<sub>1</sub> and peripheral CB<sub>2</sub> receptors. The CB<sub>2</sub> receptor has emerged as a pharmacotherapeutic target for treating osteoporosis, as well as for eliciting antinociceptive effects in various models of pain. 4Q3C CB<sub>2</sub> Ligand is a selective, high-affinity ligand of the CB<sub>2</sub> receptor, displaying a K<sub>i</sub> value of 0.6 nM (K<sub>i</sub> >10,000 nM for CB<sub>1</sub>) *in vitro*. At a dose of 6 mg/kg, 4Q3C CB<sub>2</sub> ligand exhibits antinociceptive activity in a formalin test of nocifensive response in mice. This analgesic affect is not significantly reversed by the CB<sub>2</sub> antagonist AM630 (Item No. 10006974), which suggests 4Q3C CB<sub>2</sub> ligand may behave as an inverse agonist.<sup>1</sup>

### References

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**, 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.

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