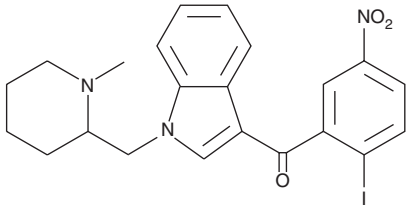
PRODUCT INFORMATION

AM1241

Item No. 10010118

CAS Registry No.:	444912-48-5
Formal Name:	(2-iodo-5-nitrophenyl)-(1-(1-methylpiperidin-2-ylmethyl)-1H-indol-3-yl)methanone
MF:	$C_{22}H_{22}IN_3O_3$
FW:	503.3
Purity:	≥97%
UV/Vis.:	λ_{max}: 251, 310 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

AM1241 is supplied as a crystalline solid. A stock solution may be made by dissolving the AM1241 in the solvent of choice. AM1241 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of AM1241 in these solvents is approximately 5, 10, and 25 mg/ml, respectively.

AM1241 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AM1241 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. AM1241 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

AM1241 is a cannabinoid (CB) receptor agonist that is selective for CB_2 over CB_1 with K_i values of 7.1 and 580 nM for human recombinant receptors transfected into HEK and CHO cells, respectively, in a radioligand binding assay.[1,2] It is considered a protean agonist as it has neutral antagonist and partial agonist activity, depending on the assay utilized.[1] It is also acts in a species-dependent manner *in vitro*, acting as an agonist at human CB_2 receptors (EC_{50} = 190 nM) but an inverse agonist at rat and mouse CB_2 receptors (EC_{50}s = 216 and 463 nM, respectively).[3] AM1241 produces antinociception to thermal stimuli in rat hindpaw. The antinociceptive actions of AM1241 were blocked by the CB_2 receptor-selective antagonist AM630 (Item No. 10006974) but not by the CB_1 receptor-selective antagonist AM251 (Item No. 71670). AM1241 is neuroprotective, preventing HIV-1 glycoprotein Gp120-induced apoptosis in primary human and murine neural progenitor cells and increasing cell survival and differentiation. It increases hippocampal neurogenesis and decreases astro- and gliogenesis in GFAP/Gp120 transgenic mice when administered at a dose of 10 mg/kg daily for ten days.[4] AM1241 also delays motor impairment in a murine model of amytrophic lateral sclerosis (ALS).[5]

References

1. Yao, B.B., Mukherjee, S., Fan, Y., *et al. Br. J. Pharmacol.* **149(2)**, 145-154 (2006).
2. Malan, T.P., Jr., Ibrahim, M.M., Deng, H., *et al. Pain* **93(3)**, 239-245 (2001).
3. Bingham, B., Jones, P.G., Uveges, A.J., *et al. Br. J. Pharmacol.* **151(7)**, 1061-1070 (2007).
4. Abraham, H.K., Jiang, S., Fu, Y., *et al. Br. J. Pharmacol.* **171(2)**, 468-479 (2014).
5. Kim, K., Moore, D.H., Makriyannis, A., *et al. Eur. J. Pharmacol.* **542(1-3)**, 100-105 (2006).

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