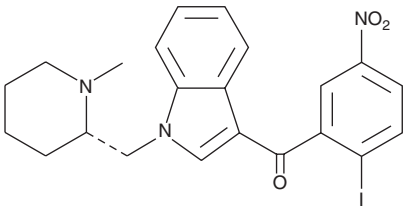
PRODUCT INFORMATION

(S)-AM1241

Item No. 10490

CAS Registry No.:	444912-53-2
Formal Name:	(2-iodo-5-nitrophenyl)[1-[[(2S)-1-methyl-2-piperidinyl]methyl]-1H-indol-3-yl]-methanone
Synonym:	(-)-AM1241
MF:	$C_{22}H_{22}IN_3O_3$
FW:	503.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 251, 310 nm
Supplied as:	A 10 mg/ml solution in acetonitrile
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

(S)-AM1241 is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of (S)-AM1241 in these solvents is approximately 5, 10, and 25 mg/ml, respectively.

(S)-AM1241 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the DMF solution of (S)-AM1241 should be diluted with the aqueous buffer of choice. (S)-AM1241 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method.

Description

(S)-AM1241 binds to cannabinoid (CB) receptors and is selective for the CB_2 over the CB_1 receptor (K_is = 658 and >10,000 nM, respectively, in a membrane assay using human receptors).[1] (S)-1241 acts as an agonist at human, rat, and mouse CB_2 receptors but shows greater activity at human CB_2 (EC_{50} = 131 nM) than at rat and mouse CB_2 receptors (EC_{50} = 785 and 2,000 nM, respectively). Similar to the racemate AM1241 (Item No. 10010118), (S)-AM1241 produces antinociception to thermal, but not mechanical, pain in rats.[2] The pain-reducing effect of (S)-AM1241 is blocked by the CB_2-specific inhibitor SR 144528 (Item No. 9000491) but not by either the CB_1-selective inhibitor rimonabant (Item No. 9000484) or the opioid receptor blocker naloxone (Item No. 15594 | ISO60191).

References

1. Bingham, B., Jones, P.G., Uveges, A.J., *et al.* Species-specific *in vitro* pharmacological effects of the cannabinoid receptor 2 (CB_2) selective ligand AM1241 and its resolved enantiomers. *Br. J. Pharmacol.* **151(7)**, 1061-1070 (2007).
2. Rahn, E.J., Zvonok, A.M., Makriyannis, A., *et al.* Antinociceptive effects of racemic AM1241 and its chirally synthesized enantiomers: Lack of dependence upon opioid receptor activation. *AAPS J.* **12(2)**, 147-157 (2010).

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