

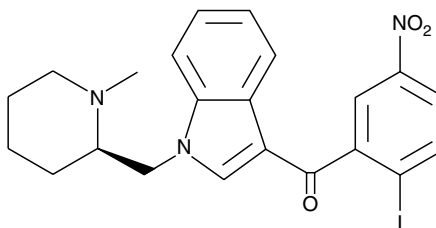
# Product Information



## (R)-AM1241

Item No. 10491

**CAS Registry No.:** 444912-51-0  
**Formal Name:** (2-iodo-5-nitrophenyl)[1-[(2R)-1-methyl-2-piperidinyl]methyl]-1H-indol-3-yl]methanone  
**Synonym:** (+)-AM1241  
**MF:** C<sub>22</sub>H<sub>22</sub>IN<sub>3</sub>O<sub>3</sub>  
**FW:** 503.3  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that (R)-AM1241 be stored as supplied at -20°C. It should be stable for at least two years.

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

(R)-AM1241 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (R)-AM1241 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (R)-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.

(R)-AM1241 avidly binds the peripheral cannabinoid receptor (CB<sub>2</sub>) (K<sub>i</sub> = 15 nM) with over 100-fold selectivity over central cannabinoid receptor (CB<sub>1</sub>).<sup>1</sup> Like the racemate AM1241 (Item No. 10010118), (R)-AM1241 is an agonist of human CB<sub>2</sub>, but an inverse agonist of rat and mouse CB<sub>2</sub>. In rats, (R)-AM1241 produces antinociception to thermal, but not mechanical pain.<sup>2</sup> The pain-reducing effect of (R)-AM1241 is blocked by the CB<sub>2</sub>-specific inhibitor SR 144528, but not by either the CB<sub>1</sub>-selective inhibitor rimonabant or the opioid receptor blocker naloxone.<sup>2</sup>

### References

1. Bingham, B., Jones, P.G., Uveges, A.J., *et al.* Species-specific *in vitro* pharmacological effects of the cannabinoid receptor 2 (CB<sub>2</sub>) selective ligand AM1241 and its resolved enantiomers. *Br. J. Pharmacol.* **151**, 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).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/10491](http://www.caymanchem.com/catalog/10491)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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