

Product Name: AM 251

Catalog No.: 1117

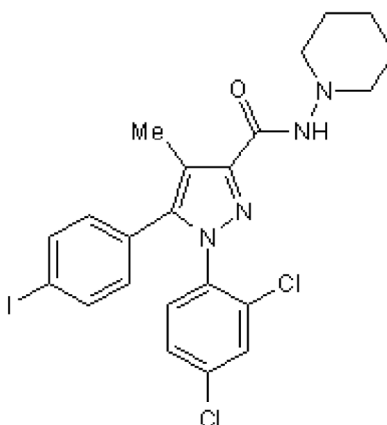
Batch No.: 18

CAS Number: 183232-66-8

IUPAC Name: *N*-(Piperidin-1-yl)-5-(4-iodophenyl)-1-(2,4-dichlorophenyl)-4-methyl-1*H*-pyrazole-3-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₁Cl₂IN₄O
Batch Molecular Weight: 555.24
Physical Appearance: White solid
Solubility: ethanol to 25 mM
DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.43 (Ethyl acetate:Petroleum ether [1:1])
HPLC: Shows 99.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 47.59 | 3.81 | 10.09 |
| Found | 47.52 | 3.85 | 9.99 |

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

AM 251 is a potent CB₁ receptor antagonist (IC₅₀ = 8 nM, K_i = 7.49 nM) that displays 306-fold selectivity over CB₂ receptors. Also potent GPR55 agonist (EC₅₀ = 39 nM) and μ-opioid receptor antagonist (K_i = 251 nM). Fluorescent Form also available.

Physical and Chemical Properties:

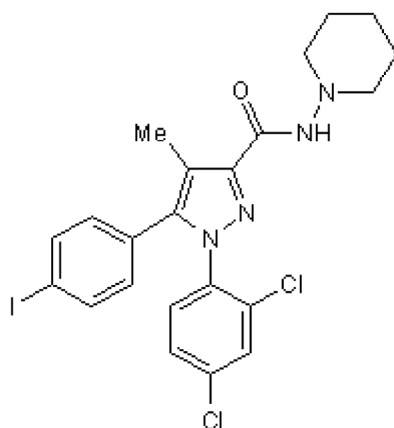
Batch Molecular Formula: C₂₂H₂₁Cl₂IN₄O

Batch Molecular Weight: 555.24

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at RT

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

ethanol to 25 mM

DMSO to 100 mM

When purchased as a 1mg unit, this product is supplied in lyophilized form. It may appear as a solid, gel or film and be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

Other Information:

INFORMATION FOR CUSTOMERS IN THE UK ONLY

This product is a Schedule 1 Home Office controlled substance and customers in the UK are required to hold the relevant licence or be exempt from restrictions in order to purchase and possess this material.

References:

Ellermann *et al* (2020) Endocannabinoids inhibit the induction of virulence in enteric pathogens. *Cell* **183** 650. PMID: 33031742.

Seely *et al* (2012) AM-251 and rimon. act as direct antagonists at mu-opioid receptors: implications for opioid/cannabinoid interaction studies. *Neuropharmacology* **63** 905. PMID: 22771770.

Ryberg *et al* (2007) The orphan receptor GPR55 is a novel cannabinoid receptor. *Br.J.Pharmacol.* **152** 1092. PMID: 17876302.

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