

Product Name: YM 022

Catalog No.: 1408

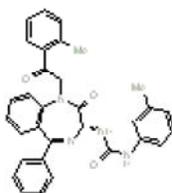
Batch No.: 1

CAS Number: 145084-28-2

IUPAC Name: (R)-N-[2,3-Dihydro-1-[2-(2-methylphenyl)-2-oxoethyl]-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl]-N'-(3-methylphenyl)-urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₃₂ H ₂₈ N ₄ O ₃
Batch Molecular Weight:	516.6
Physical Appearance:	White solid
Solubility:	DMSO to 100 mM ethanol to 10 mM
Storage:	Store at RT
Batch Molecular Structure:	



2. ANALYTICAL DATA

TLC:	R _f = 0.27 (Ethyl acetate:Petroleum ether [1:2])
Melting Point:	Between 192 - 194°C
HPLC:	Shows 99.0% purity
Chiral HPLC:	Shows 99.0% purity
¹H NMR:	Consistent with structure
¹³C NMR:	Consistent with structure
Optical Rotation:	[α] _D = +123 (Concentration = .99, Solvent = Dichloromethane)
Microanalysis:	
	Carbon Hydrogen Nitrogen
	Theoretical 74.4 5.46 10.85
	Found 74.3 5.45 10.81

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

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Description:

YM 022 is an extremely potent and highly selective non-peptide CCK₂ silent antagonist (K_i values are 68 pM and 63 nM at CCK₂ and CCK₁ receptors respectively). Acts in vivo to potently inhibit gastrin-induced gastric acid secretion and histidine decarboxylase activation with a long duration of action.

Physical and Chemical Properties:

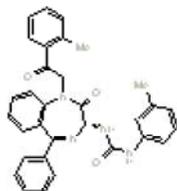
Batch Molecular Formula: C₃₂H₂₈N₄O₃

Batch Molecular Weight: 516.6

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 10 mM

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. Our standard recommendations are:

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.

References:

Kitano et al (2000) Long-lasting cholecystokinin₂ receptor blockade after a single subcutaneous injection of YF476 or YM022. Br.J.Pharmacol. **130** 699. PMID: 10821801.

Beinborn et al (1998) Small synthetic ligands of the cholecystokinin-B/gastrin receptor can mimic the function of endogenous peptide hormones. Yale J.Biol.Med. **71** 337. PMID: 10461364.

Nishida et al (1994) Pharmacological profile of (R)-1-[2,3-dihydro-1-(2'-methylphenacyl)-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl]-3-(3-methylphenyl)urea (YM022), a new potent and selective gastrin/cholecystokinin-B receptor antagonist, in vitro J.Pharmacol.Exp.Ther. **269** 725. PMID: 7910212.

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