

Certificate of Analysis

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Product Name: YM 976

Catalog No.: 1821

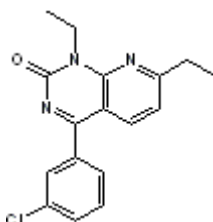
Batch No.: 3

CAS Number: 191219-80-4

IUPAC Name: 4-(3-Chlorophenyl)-1,7-diethylpyrido[2,3-d]pyrimidin-2(1H)-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₆ClN₃O
Batch Molecular Weight: 313.79
Physical Appearance: Pale yellow solid
Solubility: ethanol to 100 mM
 DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.35 (Ethyl acetate:Petroleum ether [1:1])
HPLC: Shows >98.3% purity
¹H NMR: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	65.07	5.14	13.39
Found	64.94	5.17	13.37

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

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Description:

Orally active PDE4 inhibitor (IC₅₀ = 2.2 nM). Low emetogenic activity, suggested to be due to poor brain penetration.

Physical and Chemical Properties:

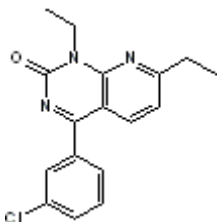
Batch Molecular Formula: C₁₇H₁₆ClN₃O

Batch Molecular Weight: 313.79

Physical Appearance: Pale yellow solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

ethanol to 100 mM

DMSO to 100 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:

Aoki et al (2000) A novel phosphodiesterase type 4 inhibitor, YM976 (4-(3-chlorophenyl)-1,7-diethylpyrido[2,3-d]pyrimidin-2(1H)-one), with little emetogenic activity. *J.Pharmacol.Exp.Ther.* **295** 255. PMID: 10991987.

Aoki et al (2001) Studies on mechanisms of low emetogenicity of YM976, a novel phosphodiesterase type 4 inhibitor. *J.Pharmacol.Exp.Ther.* **298** 1142. PMID: 11504812.

Moriuchi et al (2003) Relaxant effect of YM976, a novel phosphodiesterase 4 inhibitor, on bovine tracheal smooth muscle. *Eur.J.Pharmacol.* **470** 57. PMID: 12787831.

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