

Product Name: Dipyridamole

Catalog No.: 0691

Batch No.: 4

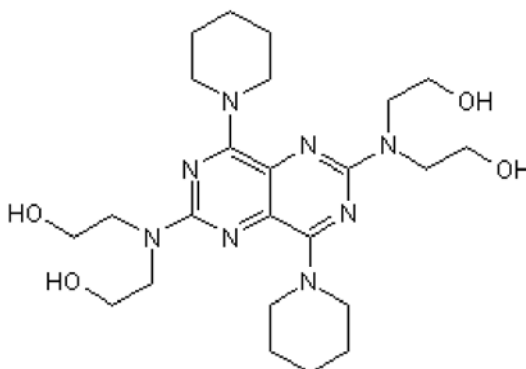
CAS Number: 58-32-2

EC Number: 200-374-7

IUPAC Name: 2,6-bis(Diethanolamino)-4,8-dipiperidinopyrimido[5,4-d]pyrimidine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₄H₄₀N₈O₄
Batch Molecular Weight: 504.63
Physical Appearance: Yellow solid
Solubility: DMSO to 100 mM
 ethanol to 10 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.12	7.99	22.21
Found	57.01	7.97	22.15

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

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Description:

Coronary vasodilator; adenosine transport inhibitor. Phosphodiesterase inhibitor (IC₅₀ values are 0.37, 0.38, 0.45, 0.9 and 4.5 μM for PDE11, 6, 10, 5 and 8 respectively). Inhibits ENT1 and ENT2 (IC₅₀ = 144.8 nM and K_i = 8.18 nM for ENT1).

Physical and Chemical Properties:

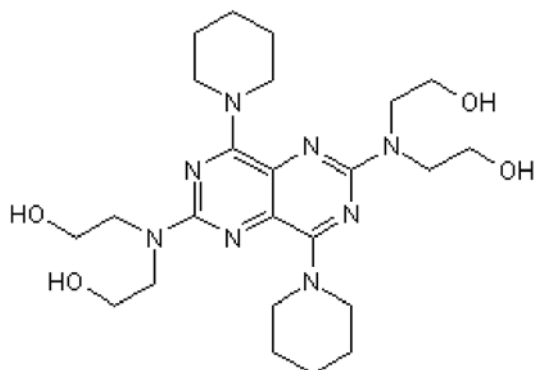
Batch Molecular Formula: C₂₄H₄₀N₈O₄

Batch Molecular Weight: 504.63

Physical Appearance: Yellow 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:

Lin and Buolamwini et al (2007) Synthesis, flow cytometric evaluation, and identification of highly potent dipyrid. analogues as equilibrative nucleoside transporter 1 inhibitors. *J.Med.Chem.* **50** 3906. PMID: 17636949.

Fujishige et al (1999) Cloning and characterization of a novel human phosphodiesterase that hydrolyzes both cAMP and cGMP (PDE10A). *J.Biol.Chem.* **274** 18438. PMID: 10373451.

Meester et al (1998) Pharmacological analysis of the activity of the adenosine uptake inhibitor, dipyridamole, on the sinoatrial and atrioventricular nodes of the guinea-pig. *Br.J.Pharmacol.* **124** 729. PMID: 9690865.

Soderling et al (1998) Cloning and characterization of a cAMP-specific cyclic nucleotide phosphodiesterase. *Proc.Natl.Acad.Sci.U.S.A.* **95** 8991. PMID: 9671792.

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