

Certificate of Analysis

www.tocris.com

Product Name: Pyrimethamine

CAS Number: 58-14-0

IUPAC Name: 5-(4-Chlorophenyl)-6-ethyl-2,4-pyrimidinediamine

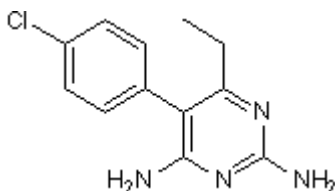
Catalog No.: 3918

Batch No.: 1

EC Number: 200-364-2

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₃ClN₄
Batch Molecular Weight: 248.71
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 10 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.95	5.27	22.53
Found	57.8	5.24	22.52

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

Product Name: Pyrimethamine

CAS Number: 58-14-0

IUPAC Name: 5-(4-Chlorophenyl)-6-ethyl-2,4-pyrimidinediamine

Catalog No.: 3918

EC Number: 200-364-2

Batch No.: 1

Description:

Potent inhibitor of multidrug and toxin extrusion (MATE) transporters (K_i values are 46 and 77 nM for human MATE2-K-HEK293 and MATE1-HEK293 cells respectively). Also inhibits dihydrofolate reductase (DHFR) and STAT3. Decreases proliferation of human autosomal dominant polycystic kidney disease cells.

Physical and Chemical Properties:

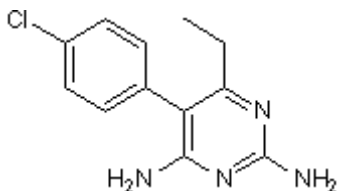
Batch Molecular Formula: $C_{12}H_{13}ClN_4$

Batch Molecular Weight: 248.71

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:

Takakura et al (2011) Pyrimethamine inhibits adult polycystic kidney disease by modulating STAT signaling pathways. *Hum.Mol.Genet.* **20** 4143. PMID: 21821671.

Ito et al (2010) Potent and specific inhibition of mMate1-mediated efflux of type I organic cations in the liver and kidney by pyrimethamine. *J.Pharmacol.Exp.Ther.* **333** 341. PMID: 20065018.

Zimmerman et al (1987) Competitive inhibition of folate absorption by dihydrofolate reductase inhibitors, trimethoprim and pyrimethamine. *Am.J.Clin.Nutr.* **46** 518. PMID: 3630970.

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

bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956