

Certificate of Analysis

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Product Name: Temozolomide

Catalog No.: 2706

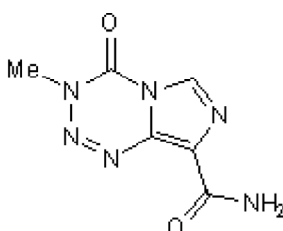
Batch No.: 3

CAS Number: 85622-93-1

IUPAC Name: 3,4-Dihydro-3-methyl-4-oxoimidazo[5,1-d]-1,2,3,5-tetrazine-8-carboxamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₆H₆N₆O₂
Batch Molecular Weight: 194.15
Physical Appearance: Off White solid
Solubility: DMSO to 50 mM
Storage: Store at -20°C
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	37.12	3.12	43.29
Found	37.28	2.99	43.15

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

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Description:

Temozolomide is a DNA methylating, chemotherapeutic agent. Displays antitumor activity against a board spectrum of tumors, including leukemias, lymphomas and solid tumors (IC₅₀ = 5.0 µM for cytotoxicity against mouse TLX5 lymphoma cells). Induces autophagy in malignant glioma cells. Exhibits enhanced activity when used in combination with CHC (Cat No. 5029).

Physical and Chemical Properties:

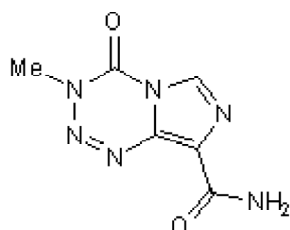
Batch Molecular Formula: C₆H₆N₆O₂.

Batch Molecular Weight: 194.15

Physical Appearance: Off White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 50 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. *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.

References:

Kanzawa *et al* (2004) Role of autophagy in temozolomide-induced cytotoxicity for malignant glioma cells. *Cell Death Differ.* **11** 448. PMID: 14713959.

Bodell *et al* (2003) Formation of DNA adducts and induction of *lacI* mutations in big blue rat-2 cells treated with temozolomide: implications for the treatment of low-grade adult and pediatric tumors. *Cancer Epidemiol.Biomarkers Prevent.* **12** 545. PMID: 12815001.

Clark *et al* (1995) Antitumor imidazotetraazines. 32. Synthesis of novel imidazotetrazinones and related bicyclic heterocycles to probe the mode of action of the antitumor drug temozol. *J.Med.Chem.* **38** 1493. PMID: 7739008.

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