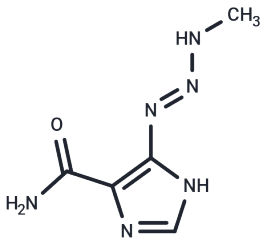
Data Sheet (Cat.No.T35688)

TargetMol

MTIC

Chemical Properties



CAS No. : 3413-72-7

Formula: C5H8N6O

Molecular Weight: 168.16

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	MTIC is the active metabolite of Temozolomide (TMZ) with anticancer and antitumor activity and is used in the study of melanoma.3'-Sialyllactose (3'-SL) sodium is a prebiotic with anti-inflammatory activity.
Targets(IC50)	Drug Metabolite
In vivo	MTIC was quantified in plasma of cancer patients (n=12) within 0.25-12 h after oral administration of temozolomide at 150 mg/m2. The mean maximum plasma concentration (Cmax) was 211 ng/ml which was observed at a mean Tmax of 1.88 h post dose. MTIC disappeared rapidly from plasma with an apparent in vivo half-life (t1/2) of 1.9 h similar to that of temozolomide[1].

Solubility Information

Solubility	DMSO: 20 mg/mL (118.93 mM),Sonication is recommended. Methanol: Slightly soluble,Heating is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.9467 mL	29.7336 mL	59.4672 mL
5 mM	1.1893 mL	5.9467 mL	11.8934 mL
10 mM	0.5947 mL	2.9734 mL	5.9467 mL
50 mM	0.1189 mL	0.5947 mL	1.1893 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Kim HK, et al. High-performance liquid chromatographic determination and stability of 5-(3-methyltriazen-1-yl)-imidazo-4-carboximide, the biologically active product of the antitumor agent temozolomide, in human plasma. J Chromatogr B Biomed Sci Appl. 1997 Dec 5;703(1-2):225-33.

Ramalho MJ, et al. Biophysical interaction of temozolomide and its active metabolite with biomembrane models: The relevance of drug-membrane interaction for Glioblastoma Multiforme therapy. Eur J Pharm Biopharm. 2019; 136:156-163.

Tsang, L.L.H., Quarterman, C.P., Gescher, A., et al. Comparison of the cytotoxicity in vitro of temozolomide and dacarbazine, prodrugs of 3-methyl-(triazen-1-yl)imidazole-4-carboxamide. Cancer Chemother. Pharmacol. 27(5), 342-346 (1991).

Beal, D.D., Skibba, J.L., Croft, W.A., et al. Carcinogenicity of the antineoplastic agent, 5-(3,3-dimethyl-1-triazeno)-imidazole-4-carboxamide, and its metabolites in rats. J. Natl. Cancer Inst. 54(4), 951-957 (1975).

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