

Product Data Sheet

Product Name: Temozolomide-d3

Cat. No.: GC48141

Chemical Properties

Cas. No. 208107-14-6

SMILES O=C(N(C([2H])([2H])[2H])N=N1)N2C1=C(C(N)=O)N=C2

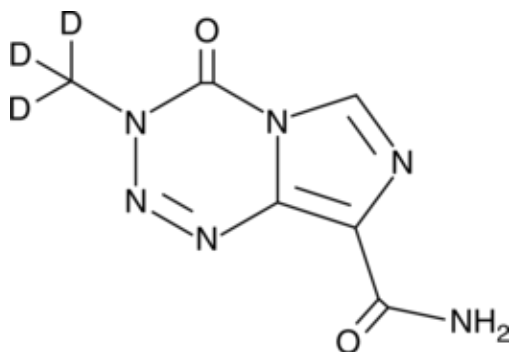
Formula C₆H₃D₃N₆O₂ M.Wt 197.2

Solubility DMF: 5 mg/ml, DMSO: 5 mg/ml, PBS (pH 7.2): 0.33 mg/ml Storage Store at 2°C to 8°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Temozolomide-d₃ (TMZ-d₃) contains three deuterium atoms located on the methyl group. It is intended for use as an internal standard for the quantification of temozolomide by GC- or LC-MS. TMZ is an imidazotetrazine that is converted to a compound capable of alkylating DNA, thus interfering with DNA replication and leading to cytotoxicity in proliferating cells.¹ TMZ is rapidly and completely absorbed from the gastrointestinal tract after oral administration and readily crosses the blood-brain barrier.¹ Formulations containing TMZ are effective in a variety of types of cancer, including aggressive brain cancers.^{1,2,3}

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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1. Marchesi, F., Turriziani, M., Tortorelli, G., et al. Triazene compounds: Mechanism of action and related DNA repair systems *Pharmacol. Res.* 56(4)275-287(2007)
2. Khan, O.A., Ranson, M., Michael, M., et al. A phase II trial of lomeguatrib and temozolomide in metastatic colorectal cancer *Br. J. Cancer* 98(10)1614-1618(2008)
3. Daniel, R.A., Rozanska, A.L., Mulligan, E.A., et al. Central nervous system penetration and enhancement of temozolomide activity in childhood medulloblastoma models by poly(ADP-ribose) polymerase inhibitor AG-014699 *Br. J. Cancer* 103(10)1588-1596(2010)

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