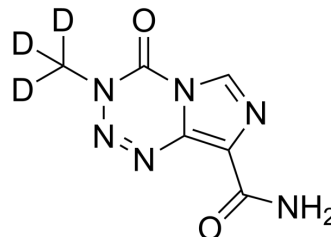


Temozolomide-d₃

Cat. No.:	HY-17364S		
CAS No.:	208107-14-6		
Molecular Formula:	C ₆ H ₃ D ₃ N ₆ O ₂		
Molecular Weight:	197.17		
Target:	Autophagy; DNA Alkylator/Crosslinker; Apoptosis		
Pathway:	Autophagy; Cell Cycle/DNA Damage; Apoptosis		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description

Temozolomide-d₃ is the deuterium labeled Temozolomide. Temozolomide (NSC 362856) is an oral active DNA alkylating agent that crosses the blood-brain barrier. Temozolomide is also a proautophagic and proapoptotic agent. Temozolomide is effective against tumor cells that are characterized by low levels of O6-alkylguanine DNA alkyltransferase (OGAT) and a functional mismatch repair system. Temozolomide has antitumor and antiangiogenic effects[1][2].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.
- [2]. Tentori L, et al. Combined treatment with temozolomide and poly(ADP-ribose) polymerase inhibitor enhances survival of mice bearing hematologic malignancy at the central nervous system site. *Blood*. 2002 Mar 15;99(6):2241-4.
- [3]. Perazzoli G, et al. Temozolomide Resistance in Glioblastoma Cell Lines: Implication of MGMT, MMR, P-Glycoprotein and CD133 Expression. *PLoS One*. 2015 Oct 8;10(10):e0140131.
- [4]. Mathieu V, et al. Combining Anti-Human VEGF with temozolomide increases the antitumor efficacy of temozolomide in a human glioblastoma orthotopic xenograft model. *Neoplasia*. 2008 Dec;10(12):1383-92.

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

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