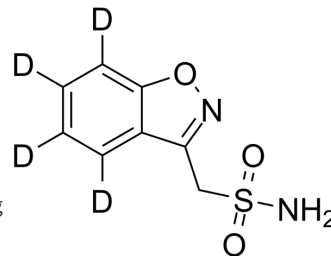


Zonisamide-d4

Cat. No.:	HY-B0124S
CAS No.:	1020720-04-0
Molecular Formula:	C ₈ H ₄ D ₄ N ₂ O ₃ S
Molecular Weight:	216.25
Target:	Carbonic Anhydrase; Calcium Channel; Sodium Channel
Pathway:	Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Zonisamide-d4 (AD 810-d4) is the deuterium labeled Zonisamide. Zonisamide (AD 810) is an inhibitor of zinc enzyme carbonic anhydrase (CA), with K _i s of 35.2 nM and 20.6 nM for human mitochondrial isozyme hCA II and hCA V, respectively. Zonisamide has antiepileptic activity. Zonisamide can be used for the research for epilepsy, seizures and Parkinson's disease [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]. Peters DH, et al. Zonisamide. A review of its pharmacodynamic and pharmacokinetic properties, and therapeutic potential in epilepsy. *Drugs.* 1993 May;45(5):760-87.
- [3]. Giuseppina De Simone, et al. Carbonic anhydrase inhibitors. Zonisamide is an effective inhibitor of the cytosolic isozyme II and mitochondrial isozyme V: solution and X-ray crystallographic studies. *Bioorg Med Chem Lett.* 2005 May 2;15(9):2315-20.

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

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