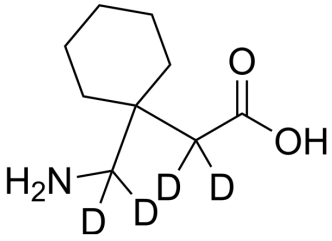
Gabapentin-d_4

Cat. No.:	HY-A0057S
CAS No.:	1185039-20-6
Molecular Formula:	$C_9H_{13}D_4NO_2$
Molecular Weight:	175.26
Target:	Calcium Channel
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Gabapentin-d_4 is the deuterium labeled Gabapentin. Gabapentin (Neurontin) is a pharmaceutical agent, specifically a GABA analog. It was originally developed to treat epilepsy, and currently is also used to relieve neuropathic pain.
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]. Pan CF, et al. Inhibitory mechanisms of gabapentin, an antiseizure drug, on platelet aggregation. J Pharm Pharmacol. 2007 Sep;59(9):1255-61.

[3]. Gee NS, et al. The novel anticonvulsant drug, gabapentin (Neurontin), binds to the alpha2delta subunit of a calcium channel. J Biol Chem. 1996 Mar 8;271(10):5768-76.

[4]. Abdel-Salam OM, et al. The effect of gabapentin on oxidative stress in a model of toxic demyelination in rat brain. J Basic Clin Physiol Pharmacol. 2012;23(2):61-8.

[5]. Yang JL, et al. Gabapentin reduces CX3CL1 signaling and blocks spinal microglial activation in monoarthritic rats. Mol Brain. 2012 May 30;5:18.

[6]. Zand L, et al. Gabapentin toxicity in patients with chronic kidney disease: a preventable cause of morbidity. Am J Med. 2010 Apr;123(4):367-73.

[7]. Hung TY, et al. Gabapentin toxicity: an important cause of altered consciousness in patients with uraemia. BMJ Case Rep. 2009;2009. pii: bcr11.2008.1268.

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

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