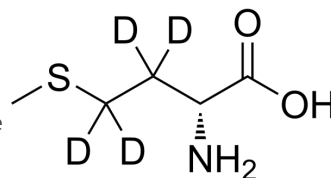


Methionine-d₄

Cat. No.:	HY-13694S1		
Molecular Formula:	C ₅ H ₇ D ₄ NO ₂ S		
Molecular Weight:	153.24		
Target:	GABA Receptor; Endogenous Metabolite		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Methionine-d ₄ is the deuterium labeled Methionine. Methionine (MRX-1024; D-Methionine) is an effective chemoprotective agent which can also inhibit the neuronal activity through GABAA receptor activation.
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]. Hinduja S, et al. D-methionine protects against cisplatin-induced neurotoxicity in the hippocampus of the adult rat. *Neurotox Res.* 2015 Apr;27(3):199-204.
- [3]. Sooriyaarachchi M, et al. Chemoprotection by D-methionine against cisplatin-induced side-effects: insight from in vitro studies using human plasma. *Metallomics.* 2014 Mar;6(3):532-41.
- [4]. Wu C, et al. Antioxidants L-carnitine and D-methionine modulate neuronal activity through GABAergic inhibition. *J Neural Transm (Vienna).* 2014 Jul;121(7):683-93.

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

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