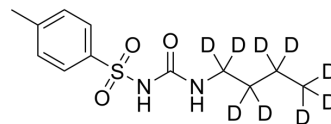


Tolbutamide-d₉

Cat. No.:	HY-B0401S		
CAS No.:	1219794-57-6		
Molecular Formula:	C ₁₂ H ₉ D ₉ N ₂ O ₃ S		
Molecular Weight:	279.4		
Target:	Autophagy; Potassium Channel		
Pathway:	Autophagy; Membrane Transporter/Ion Channel		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : ≥ 30 mg/mL (107.37 mM)
 DMF : ≥ 30 mg/mL (107.37 mM)
 DMSO : ≥ 30 mg/mL (107.37 mM)
 Ethanol:PBS (pH 7.2) (1:1) : ≥ 0.14 mg/mL (0.50 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		1 mg	5 mg	10 mg
	Concentration	Mass			
	1 mM		3.5791 mL	17.8955 mL	35.7910 mL
	5 mM		0.7158 mL	3.5791 mL	7.1582 mL
	10 mM		0.3579 mL	1.7895 mL	3.5791 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Tolbutamide-d₉ is the deuterium labeled Tolbutamide. Tolbutamide is a first generation potassium channel blocker, sulfonylurea oral hypoglycemic agent.

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]. Wray, H.L. and A.W. Harris, Adenosine 3', 5'-monophosphate-dependent protein kinase in adipose tissue: inhibition by tolbutamide. *Biochem Biophys Res Commun*, 1973. 53(1): p. 291-4.

[3]. Sanchez-Alvarez, R., et al., Tolbutamide reduces glioma cell proliferation by increasing connexin43, which promotes the up-regulation of p21 and p27 and subsequent changes in retinoblastoma phosphorylation. *Glia*, 2006. 54(2): p. 125-34.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA