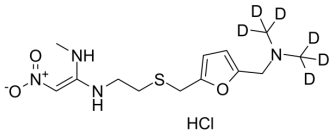
Ranitidine-d6 hydrochloride

Cat. No.:	HY-B0281AS
CAS No.:	1185238-09-8
Molecular Formula:	$C_{13}H_{17}D_6ClN_4O_3S$
Molecular Weight:	356.9
Target:	Histamine Receptor; Cytochrome P450; Bacterial
Pathway:	GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Metabolic Enzyme/Protease; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ranitidine-d6 hydrochloride is the deuterium labeled Ranitidine hydrochloride. Ranitidine hydrochloride is a potent, selective and orally active histamine H2-receptor antagonist with an IC_{50} of 3.3 μM that inhibits gastric secretion. Ranitidine hydrochloride is a weak inhibitor of CYP2C19 and CYP2C9[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]. Antonio Francesco Ciccaglione, et al. Pylera® plus ranitidine vs Pylera® plus esomeprazole in first-line treatment of Helicobacter pylori infection: Two pilot studies. Helicobacter. 2019 Oct;24(5):e12606.

[3]. Herling, A.W., et al., Inhibition of 14C-aminopyrine accumulation in isolated rabbit gastric glands by the H2-receptor antagonist HOE 760 (TZU-0460). Agents Actions, 1987. 20(1-2): p. 35-9.

[4]. Leucuta, A., et al., A pharmacokinetic interaction study between omeprazole and the H2-receptor antagonist ranitidine. Drug Metabol Drug Interact, 2004. 20(4): p. 273-81.

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