Furosemide-d_5

Cat. No.: HY-B0135S

CAS No.: 1189482-35-6

Molecular Formula: $C_{12}H_6D_5ClN_2O_5S$

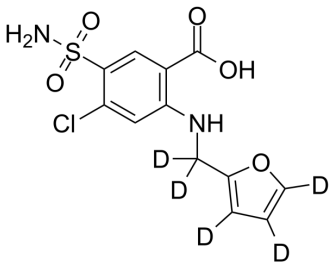
Molecular Weight: 335.77

Target: NKCC; GABA Receptor

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (297.82 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9782 mL	14.8911 mL	29.7823 mL
	5 mM	0.5956 mL	2.9782 mL	5.9565 mL
	10 mM	0.2978 mL	1.4891 mL	2.9782 mL

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

BIOLOGICAL ACTIVITY

Description

Furosemide-d_5 is the deuterium labeled Furosemide. Furosemide is a potent and orally active inhibitor of Na+/K+/2Cl- (NKCC) cotransporter, NKCC1 and NKCC2[1]. Furosemide is also a GABAA receptors antagonist and displays 100-fold selectivity for α6-containing receptors than α1-containing receptors. Furosemide acts as a loop diuretic and used for the study of congestive heart failure, hypertension and edema[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

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[5]. Atsushi Shiozaki , et al. Furosemide sodium, a blocker of Na+/K+/2Cl- cotransporter, diminishes proliferation of poorly differentiated human gastric cancer cells by affecting G0/G1 state. J Physiol Sci. 2006 Dec;56(6):401-6.

[6]. Yuliya V Kucherenko, et al.Inhibitory effect of Furosemide sodium on non-selective voltage-independent cation channels in human erythrocytes.Cell Physiol Biochem. 2012;30(4):863-75.

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