

Furosemide-D5

Chemical Properties

CAS No. : 1189482-35-6

Formula: C₁₂H₁₁ClN₂O₅S

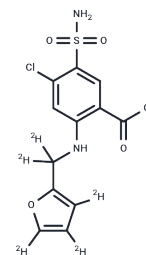
Molecular Weight: 335.78

Storage:

Store at low temperature, Keep away from direct sunlight

Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Furosemide-D5 is a deuterium marker for Furosemide (T0837) and can be used in isotope tracer experiments. Furosemide is a potent and orally active inhibitor of Na ⁺ /K ⁺ /2Cl ⁻ (NKCC), NKCC1, and NKCC2 cotransporter proteins and GABA _A receptor antagonist and is used as diuretic reagent, congestive heart failure, hypertension and edema.
Targets(IC50)	Others, GABA Receptor, Na-K-Cl cotransporter

Solubility Information

Solubility	DMSO: 80 mg/mL (238.25 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9781 mL	14.8907 mL	29.7814 mL
5 mM	0.5956 mL	2.9781 mL	5.9563 mL
10 mM	0.2978 mL	1.4891 mL	2.9781 mL
50 mM	0.0596 mL	0.2978 mL	0.5956 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- C M Gillen, et al. Molecular cloning and functional expression of the K-Cl cotransporter from rabbit, rat, and human. A new member of the cation-chloride cotransporter family. *J Biol Chem*. 1996 Jul 5;271(27):16237-44.
- S A Thompson, et al. Residues in transmembrane domains I and II determine gamma-aminobutyric acid type AA receptor subtype-selective antagonism by Furosemide sodium. *Mol Pharmacol*. 1999 Jun;55(6):993-9.
- Shin Hye Kim, et al. Novel Peptide Vaccine GV1001 Rescues Hearing in Kanamycin/Furosemide sodium-Treated Mice. *Front Cell Neurosci*. 2018 Jan 19;12:3.
- 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.
- 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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