

Product Data Sheet

Product Name: Bumetanide-d5

Cat. No.: GC46957

Chemical Properties

Cas. No. 1216739-35-3

SMILES CCCCNC1=C(OC2=C([2H])C([2H])=C([2H])C([2H])=C2[2H])C(S(N)(=O)=O)=CC(C(O)=O)=C1

Formula C₁₇H₁₅D₅N₂O₅S

M.Wt 369.4

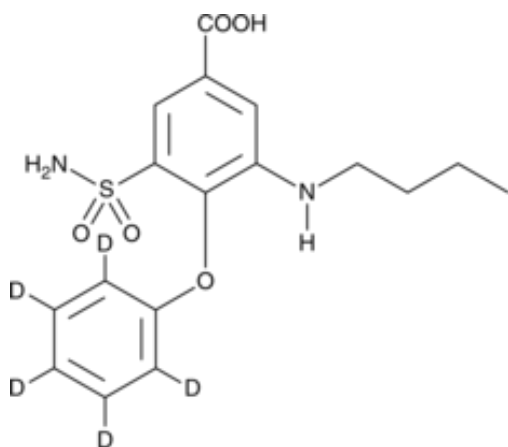
Solubility DMF: 33 mg/ml, DMSO: 25 mg/ml, Ethanol: 14 mg/ml

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Bumetanide-d₅ is intended for use as an internal standard for the quantification of bumetanide by GC- or LC-MS. Bumetanide is a loop diuretic with good absorption and pharmacodynamic properties.^{1,2} It acts as an inhibitor of the Na⁺K⁺Cl cotransporter 1 (NKCC1) and the kidney-specific NKCC2 (K_is = 0.5 and 59 μM for human and rabbit NKCC1, respectively).^{3,4} Bumetanide also inhibits several isoforms of carbonic anhydrase.⁵

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

1.Ramsay, L.E., McInnes, G.T., Hettiarachchi, J., et al.Bumetanide and frusemide: A comparison of dose-response curves in healthy menBr. J. Clin. Pharmacol.5(3)243-247(1978) 2.Marcantonio, L.A., Auld, W.H.R., Murdoch, W.R., et al.The pharmacokinetics and pharmacodynamics of the diuretic bumetanide in hepatic and renal diseaseBr. J. Clin. Pharmacol.15(2)245-252(1983) 3.Horster, M.Embryonic epithelial membrane transportersAm. J. Physiol. Renal Physiol.279(6)982-996(2000) 4.Gillen, C.M., Brill, S., Payne, J.A., 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 familyJ. Biol. Chem.271(27)16237-16244(1996) 5.Temperini, C., Cecchi, A., Scozzafava, A., et al.Carbonic anhydrase inhibitors. Interaction of indapamide and related diuretics with 12 mammalian isozymes and X-ray crystallographic studies for the indapamide-isozyme II adductBioorg. Med. Chem. Lett.18(8)2567-2573(2008)

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA