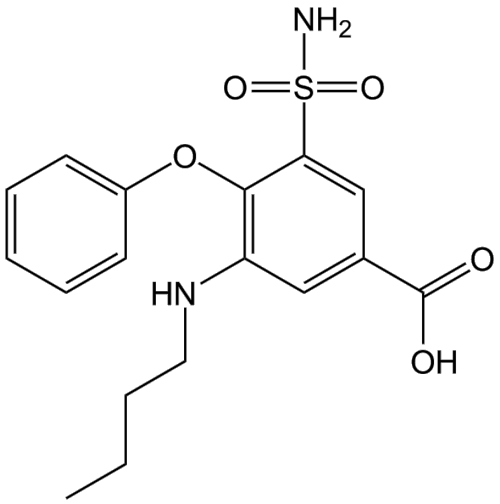
Product Data Sheet

Product Name: Bumetanide
Cat. No.: GC15524

Chemical Properties

Cas. No.	28395-03-1		
Chemical Name	3-(butylamino)-4-phenoxy-5-sulfamoylbenzoic acid		
SMILES	CCCCNC1=C(C(=CC(=C1)C(=O)O)S(=O)(=O)N)OC2=CC=CC=C2		
Formula	$C_{17}H_{20}N_2O_5S$	M.Wt	364.42
Solubility	≥ 18.221mg/mL in DMSO	Storage	4°C, protect from light
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 (Ro 10-6338;PF 1593) is a selective Na+-K+-Cl- cotransporter 1 (NKCC1) inhibitor, weakly inhibits NKCC2, with IC50s of 0.68 and 4.0 μM for hNKCC1A and hNKCC2A, respectively[4].

References:

Caution: Product has not been fully validated for medical applications. For research use only.
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[1]. Frelin C, et al. Biochemical characterization of the Na+/K+/Cl- co-transport in chick cardiac cells. Biochem Biophys Res Commun. 1986 Jan 14;134(1):326-31.
[2]. Lykke K, et al. The search for NKCC1-selective drugs for the treatment of epilepsy: Structure-function relationship of bumetanide and various bumetanide derivatives in inhibiting the human cation-chloride cotransporter NKCC1A. Epilepsy Behav. 2016 Jun;59:42-9.
[3]. Bourrit A, et al. Basic characterization of an ouabain-resistant, bumetanide-sensitive K+ carrier-mediated transport system in J774.2 mouse macrophage-like cell line and in variants deficient in adenylate cyclase and cAMP-dependent protein kinase activities. Biochim Biophys Acta. 1985 Jul 11;817(1):85-94.
[4]. Sandstr m PE. Evidence for diabetogenic action of bumetanide in mice. Eur J Pharmacol. 1988 May 20;150(1-2):35-41.

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