

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

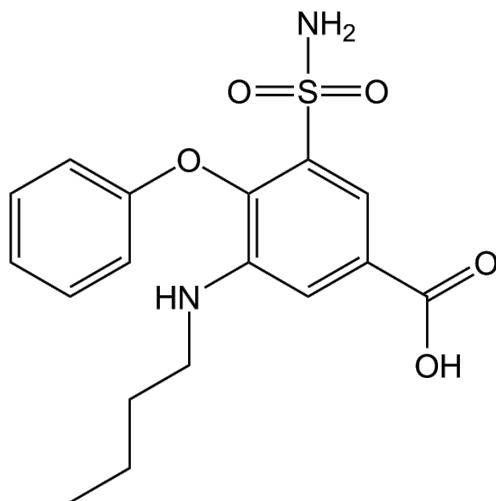
Formula $C_{17}H_{20}N_2O_5S$ M.Wt 364.42

Solubility $\geq 18.221\text{mg/mL}$ 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 $\text{Na}^{+}\text{-K}^{+}\text{-Cl}^{-}$ cotransporter 1 (NKCC1) inhibitor, weakly inhibits NKCC2, with IC_{50} s of 0.68 and $4.0\text{ }\mu\text{M}$ 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]. Sandström PE. Evidence for diabetogenic action of bumetanide in mice. *Eur J Pharmacol*. 1988 May 20;150(1-2):35-41.

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