# Data Sheet

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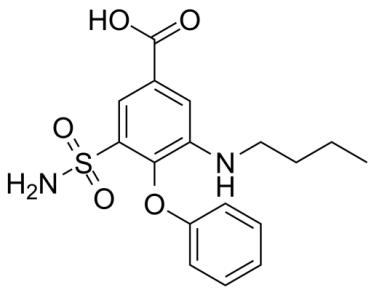
| **Product Name:** | Bumetanide |
| **Cat. No.:** | CS-1821 |
| **CAS No.:** | 28395-03-1 |
| **Molecular Formula:** | C17H20N2O5S |
| **Molecular Weight:** | 364.42 |
| **Target:** | NKCC |
| **Pathway:** | Membrane Transporter/Ion Channel |
| **Solubility:** | DMSO : ≥ 100 mg/mL (274.41 mM); H2O : < 0.1 mg/mL (insoluble) |



## BIOLOGICAL ACTIVITY:

Bumetanide (Ro 10-6338;PF 1593) is a selective $Na^+$-$K^+$-$Cl^-$ cotransporter 1 (**NKCC1**) inhibitor, weakly inhibits NKCC2, with **$IC_{50}$**s of 0.68 and 4.0 μM for hNKCC1A and hNKCC2A, respectively[4].

## References:

[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]. 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.

[3]. Sandstr?m PE. Evidence for diabetogenic action of bumetanide in mice. Eur J Pharmacol. 1988 May 20;150(1-2):35-41.

[4]. 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.

## CAIndexNames:

Benzoic acid, 3-(aminosulfonyl)-5-(butylamino)-4-phenoxy-

## SMILES:

O=C(O)C1=CC(NCCCC)=C(OC2=CC=CC=C2)C(S(=O)(N)=O)=C1



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