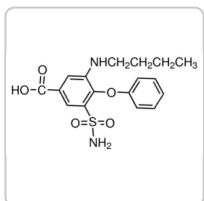


Type in Product Names, Product Numbers, or CAS Numbers to see suggestions.



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[↓ SDS](#)

[🔍 COO/COA](#)

[📄 Specification Sheet](#)

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B3023 ▶ **Sigma-Aldrich®**

Bumetanide

≥98%

Synonym(s):

3-(Aminosulfonyl)-5-(butylamino)-4-phenoxybenzoic acid

Empirical Formula (Hill Notation):

C₁₇H₂₀N₂O₅S

CAS Number: **28395-03-1**

Molecular Weight: 364.42

EC Number: **249-004-6**

MDL number: **MFCD00078949**

PubChem Substance ID: **24278265**

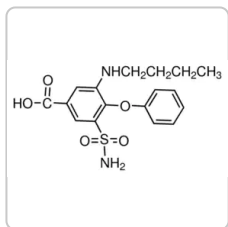
NACRES: NA.77

SKU	Pack Size	Availability	Price	Quantity		
B3023-250MG	250 MG	✔ Only 3 left in stock (more on the way) Details...	€171.00	— +		i
B3023-1G	1 G	✔ Estimated to ship on October 28, 2022	€219.00	— +		i

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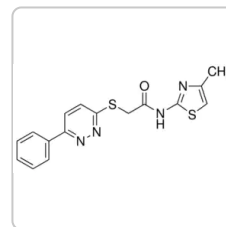
RECOMMENDED PRODUCTS



USP

1078303**Bumetanide**

United States Pharmacopeia (USP) Reference Standard

[View Price and Availability](#)

Sigma-Aldrich

V3890**VU0240551**

≥98% (HPLC)

[View Price and Availability](#)

PROPERTIES

Quality Level

100

assay

≥98%

form

powder

originator

Roche

SMILES string

CCCCNc1cc(cc(c1Oc2ccccc2)S(N)(=O)=O)C(=O)O

InChI

1S/C17H20N2O5S/c1-2-3-9-19-14-10-12(17(20)21)11-15(25(18,22)23)16(14)24-13-7-5-4-6-8-13/h4-8,10-11,19H,2-3,9H2,1H3,(H,20,21)(H2,18,22,23)

InChI key

MAEIEVLCKWDQJH-UHFFFAOYSA-N

Looking for similar products? Visit [Product Comparison Guide](#)

DESCRIPTION

Biochem/physiol Actions

Inhibitor of $\text{Na}^+/\text{K}^+/\text{Cl}^-$ cotransporter.

Features and Benefits

This compound is a featured product for ADME Tox research. [Click here](#) to discover more featured ADME Tox products. Learn more about bioactive small molecules for other areas of research at sigma.com/discover-bsm.

This compound was developed by [Roche](#). To browse the list of other pharma-developed compounds and Approved Drugs/Drug Candidates, [click here](#).

Other Notes

Tandem Mass Spectrometry data independently generated by Scripps Center for Metabolomics is available to view or download in PDF. [B3023.pdf](#) Tested metabolites are featured on Scripps Center for Metabolomics METLIN Metabolite Database. To learn more, visit sigma.com/metlin.

SAFETY INFORMATION

Storage Class Code

WGK

Flash Point(F)

Flash Point(C)

13 - Non Combustible Solids

WGK 3

Not applicable

Not applicable

**Personal Protective
Equipment**

dust mask type N95 (US),

Eyeshields, Gloves

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

How to enter Lot Number (COA)**Search****Certificate of Origin**

Enter Lot Number to search for Certificate of Origin (COO).

Lot Number

e.g. 023J5431

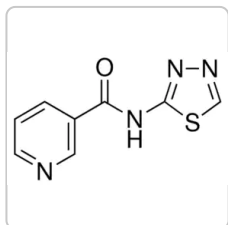
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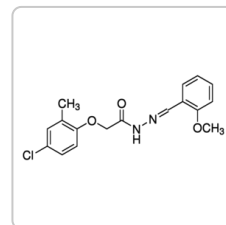
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≥98% (HPLC)

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PEER REVIEWED PAPERS

[Cation-chloride cotransporters NKCC1 and KCC2 as potential targets for novel antiepileptic and antiepileptogenic treatments.](#)

Wolfgang Löscher et al.*Neuropharmacology, 69, 62-74 (2012-06-19)*

In cortical and hippocampal neurons, cation-chloride cotransporters (CCCs) control the reversal potential (EGABA) of GABAA receptor-mediated current and voltage responses and, consequently, they modulate the efficacy of GABAergic inhibition. Two members of the CCC family, KCC2 (the major neuron-

specific K-Cl

Stimulation of cutaneous low threshold mechanoreceptors in mice after intracolonic capsaicin increases spinal c-Fos labeling in an NKCC1-dependent fashion.

Mark H Pitcher et al.

The journal of pain : official journal of the American Pain Society, 14(1), 57-65 (2012-12-04)

Stimulation of peripheral nociceptors results in increased c-Fos labeling in spinal cord regions associated with nociceptive processing. Accordingly, intracolonic capsaicin, which generates robust secondary (referred) allodynia on the abdomen of mice, also causes an increased spinal c-Fos labeling. In naïve

Bicarbonate-dependent chloride transport drives fluid secretion by the human airway epithelial cell line Calu-3.

Jiajie Shan et al.

The Journal of physiology, 590(21), 5273-5297 (2012-07-11)

Anion and fluid secretion are both defective in cystic fibrosis (CF); however, the transport mechanisms are not well understood. In this study, Cl(-) and HCO₃(-) secretion was measured using genetically matched CF transmembrane conductance regulator (CFTR)-deficient and CFTR-expressing cell lines

Genetic and pharmacological modulation of giant depolarizing potentials in the neonatal hippocampus associates with increased seizure susceptibility.

Ernesto Vargas et al.

The Journal of physiology, 591(1), 57-65 (2012-09-26)

The expression of Na(+)-K(+)-2Cl(-) cotransporter (NKCC1) is responsible for high intracellular Cl(-) resulting in the excitatory action of GABA(A) receptor activation in the developing brain. Giant depolarizing potentials (GDPs) are spontaneous network oscillations that involve GABA(A) receptors and are thought

Screening for Efficacious Anticonvulsants and Neuroprotectants in Delayed Treatment Models of Organophosphate-induced Status Epilepticus.

Bryan S Barker et al.

Neuroscience, 425, 280-300 (2019-11-30)

Organophosphorus (OP) compounds are deadly chemicals that exert their intoxicating effects through the irreversible inhibition of acetylcholinesterase (AChE). In addition to an excess of peripheral ailments, OP intoxication induces status epilepticus (SE) which if left untreated may lead to permanent

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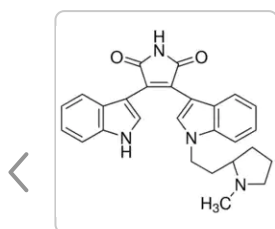
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Discover Bioactive Small Molecules for ADME/Tox

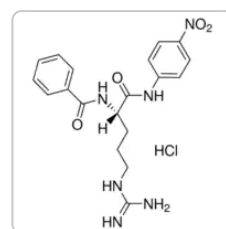
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≥97% (Mixture of 2 isomers)

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Sigma-Aldrich

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≥99% (TLC), suitable for substrate for trypsin

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