

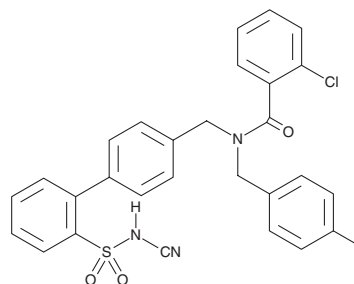
PRODUCT INFORMATION



S0859

Item No. 18497

CAS Registry No.: 1019331-10-2
Formal Name: 2-chloro-N-[[2'-[(cyanoamino)sulfonyl][1,1'-biphenyl]-4-yl]methyl]-N-[(4-methylphenyl)methyl]-benzamide
MF: C₂₉H₂₄ClN₃O₃S
FW: 530.0
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

S0859 is supplied as a crystalline solid. A stock solution may be made by dissolving the S0859 in the solvent of choice, which should be purged with an inert gas. S0859 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of S0859 in ethanol and DMF is approximately 50 mg/ml and approximately 30 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of S0859 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of S0859 in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

S0859 is an N-cyanosulphonamide that blocks the sodium/bicarbonate cotransporter (NBC, also known as SLC4A7), which regulates intracellular pH, particularly in myocytes.¹ It inhibits intracellular pH recovery in myocytes with a K_i value of 1.7 μM, with full inhibition occurring at ~30 μM.¹ S0859 does not affect other exchange proteins or enzymes that might regulate intracellular pH. It prevents changes in pH associated with depolarization and hyperpolarization of ventricular myocytes from rabbit, rat, and guinea pig.² S0859 has also been used to study the role of NBC in coronary endothelial cells, cancer cells, embryonic kidney cells, and neutrophils.³⁻⁶

References

1. Ch'en, F.F.T., Villafuerte, F.C., Swietach, P., *et al. Br. J. Pharmacol.* **153(5)**, 972-982 (2008).
2. Yamamoto, T., Swietach, P., Rossini, A., *et al. J. Physiol.* **562(Pt 2)**, 455-475 (2005).
3. Kumar, S., Flacke, J.P., Kostin, S., *et al. Cardiovasc. Res.* **89(2)**, 392-400 (2011).
4. Lauritzen, G., Stock, C.M., Lemarie, J., *et al. Cancer Lett.* **317(2)**, 172-183 (2012).
5. Orłowski, A., Vargas, L.A., Aiello, E.A., *et al. Am. J. Physiol. Renal Physiol.* **305(12)**, F1765-F1774 (2013).
6. Giambelluca, M.S., Ciancio, M.C., Orłowski, A., *et al. Cell Physiol. Biochem.* **33(4)**, 982-990 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/05/2025

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM