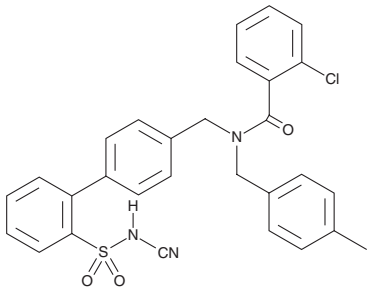
PRODUCT INFORMATION

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:	$C_{29}H_{24}ClN_3O_3S$
FW:	530.0
Purity:	≥95%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid



Laboratory Procedures

For long term storage, we suggest that S0859 be stored as supplied at -20°C. It should be stable for at least two years.

S0859 is supplied as a crystalline solid. A stock solution may be made by dissolving the S0859 in the solvent of choice. S0859 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of S0859 in these solvents is approximately 50, 30, and 10 mg/ml.

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**, 972-982 (2008).
2. Yamamoto, T., Swietach, P., Rossini, A., *et al. J. Physiol.* **562.2**, 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. Orlowski, A., Vargas, L.A., Aiello, E.A., *et al. Am. J. Physiol. Renal Physiol.* **305**, F1765-F1774 (2013).
6. Giambelluca, M.S., Ciancio, M.C., Orlowski, 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.

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