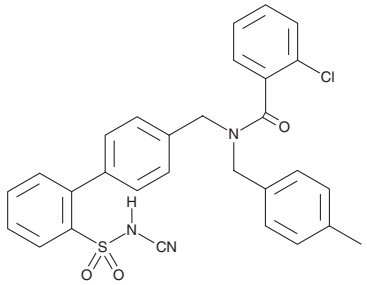
PRODUCT INFORMATION

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%
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

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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).
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