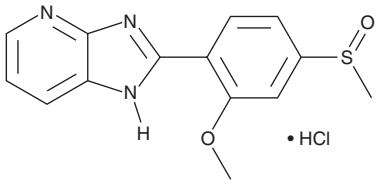
PRODUCT INFORMATION

Sulmazole (hydrochloride)

Item No. 45128

CAS Registry No.:	53930-42-0
Formal Name:	2-[2-methoxy-4-(methylsulfinyl)phenyl]-3H-Imidazo[4,5-b]pyridine, monohydrochloride
Synonyms:	AR-L 115BS, Sumazol
MF:	$C_{14}H_{13}N_3O_2S \bullet HCl$
FW:	323.8
Purity:	≥98%
Supplied as:	A 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

Sulmazole is supplied as a solid. A stock solution may be made by dissolving the sulmazole in the solvent of choice, which should be purged with an inert gas. Sulmazole is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in ethanol.

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 sulmazole can be prepared by directly dissolving the solid in aqueous buffers. Sulmazole is sparingly soluble (1-10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Sulmazole is a cardiotonic agent.[1,2] It increases cAMP accumulation *via* antagonism of the adenosine A_1 receptor (IC_{50} = 78.1 µM), inhibition of phosphodiesterase (PDE), and reduction of G_i-mediated inhibition of adenylate cyclase in rat adipocyte membranes.[1] Sulmazole also selectively inhibits PDE5 over PDE3 (IC_{50}s = 21 and 150 µM, respectively) in a cell-free assay.[2] It restores cardiac output, the force of right ventricular contraction, and heart rate, and decreases right atrial pressure in a dog heart-lung preparation model of pentobarbital-induced depressed cardiac function.[3]

References

1. Parsons, W.J., Ramkumar, V., and Stiles, G.L. The new cardiotonic agent sulmazole is an A_1 adenosine receptor antagonist and functionally blocks the inhibitory regulator, G_i. *Mol. Pharmacol.* **33(4),** 441-448 (1988).
2. Coates, W.J., Connolly, B., Dhanak, D., *et al.* Cyclic nucleotide phosphodiesterase inhibition by imidazopyridines: Analogues of sulmazole and isomazole as inhibitors of the cGMP specific phosphodiesterase. *J. Med. Chem.* **36(10),** 1387-1392 (1993).
3. Morita, T., Satoh, K., and Taira, N. Improvement of cardiac performance by AR-L 115 BS, a new cardiotonic drug, in the experimental failing dog heart. *Jpn. Heart J.* **25(3),** 439-445 (1984).

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