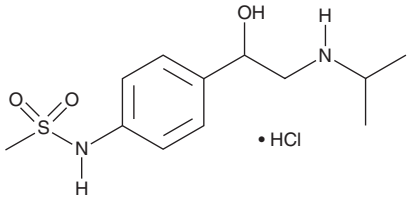
PRODUCT INFORMATION

Sotalol (hydrochloride)

Item No. 16136

CAS Registry No.: 959-24-0
Formal Name: N-[4-[1-hydroxy-2-[(1-methylethyl)amino] ethyl]phenyl]-methanesulfonamide, monohydrochloride
Synonyms: MJ1999, (±)-Sotalol, DL-Sotalol
MF: $C_{12}H_{20}N_2O_3S \bullet HCl$
FW: 308.8
Purity: ≥98%
UV/Vis.: λ_{max}: 230 nm
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

Sotalol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the sotalol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Sotalol (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of sotalol (hydrochloride) in these solvents is approximately 20 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 sotalol (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of sotalol (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Sotalol is a non-selective antagonist of β-adrenergic receptors (β-ARs; IC_{50}s = 8.9 and 5.2 µM for β1- and β2-ARs, respectively) and a class III antiarrhythmic agent.[1,2] It decreases delayed outward potassium currents (IK) in guinea pig ventricular cells and prolongs action potential duration in electrically stimulated isolated guinea pig papillary muscles when used at a concentration of 100 µM.[3] Sotalol decreases heart rate and increases blood pressure and the cardiac functional refractory period (FRP) in a canine model of ventricular tachycardia induced by programmed electrical stimulation (PES).[1] Formulations containing sotalol have been used in the treatment of ventricular arrhythmias and maintenance of normal sinus rhythm in patients with atrial fibrillation or flutter (AFIB/AFL).

References

1. Lis, R., Morgan, T.K., Jr., Marisca, A.J., *et al. J. Med. Chem.* **33(10),** 2883-2891 (1990).
2. Antonaccio, M.J. and Gomoll, A. *Am. J. Cardiol.* **65(2),** 12A-21A (1990).
3. Komeichi, K., Tohse, N., Nakaya, H., *et al. Eur. J. Pharm.* **187(3)**, 313-322 (1990).

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