
Product Data Sheet

Product Name: Amiodarone

Cat. No.: GC35322

Chemical Properties

Cas. No. 1951-25-3

SMILES CCCCC1=C(C(C2=CC(I)=C(OCCN(CC)CC)C(I)=C2)=O)C3=C(O1)C=CC=C3Formula C₂₅H₂₉I₂NO₃ M.Wt 645.31

Solubility Soluble in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure **Background**

Amiodarone (NSC 85442, Amiodar, Amiodarone hydrochloride, Nexterone) HCl is a sodium/potassium-ATPase inhibitor and an autophagy activator, used to treat various types of cardiac dysrhythmias.

Amiodarone possesses an inhibitory effect on the fast sodium channel as well as on the slow calcium channel. Amiodarone also has non-competitive antisympathetic effects, and modulates thyroid function and phospholipid metabolism. Amiodarone penetrates deeply into the lipid matrix of the membrane, and is released from cardiac tissues very slowly when washed out. Amiodarone (44–88 μM) depresses V_{max} of guinea pig papillary muscle without affecting the resting membrane potential, and that this V_{max} inhibition is enhanced in a frequency- or use-dependent manner like Class I antiarrhythmic drugs. Amiodarone (50–88 μM) is also found to suppress the depolarization-induced spontaneous action potentials (abnormal automaticity) in ventricular muscles and in Purkinje fibers. [1]

Amiodarone (1.25–25 mg/kg) results in a decrease in sinus rate, a prolongation of effective and functional refractory periods of the atrioventricular node, and a frequency-

Caution: Product has not been fully validated for medical applications. For research use only.

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dependent conduction delay in the atrioventricular node and in the ventricle of anesthetized dogs. Amiodarone (50 mg/kg/day, i.p. for 3–4 weeks) results in significant decreases in the current density of i_K and i_{to} in ventricular cells without affecting i_{Ca} and i_{K1} densities in rabbit. Amiodarone (AM) inhibits intracellular conversion from thyroxine (T4) to triiodothyronine (T3) via 5'-deiodination (5'DI) without affecting intracellular conversion from T4 to reverse T3 (rT3). [1]

[1] Kodama I, et al. Cardiovasc Res, 1997, 35(1), 13-29.

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