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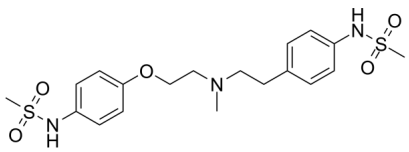
Certificate of Analysis

Catalog Number	BP15998
Product Name	Dofetilide

Physical and Chemical Properties

Synonyms	UK 68789, UK-68798, Tikosyn
CAS No.	115256-11-6
Chemical Formula	C19H27N3O5S2
Molecular Weight	441.56
Solubility	DMSO: 44.2 mg/mL (100 mM)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	Dofetilide is a sulfonamide class III antiarrhythmic agent and potassium channel blocker. Dofetilide selectively blocks cardiac ion channels of the rapid component of the delayed rectifier potassium current Ikr. This antiarrhythmic agent prolongs cardiac action potential duration and effective refractory period due to delayed repolarization without affecting conduction velocity. This results in a normal sinus rhythm. Dofetilide is used in the treatment of atrial fibrillation and flutter.
In vitro	Dofetilide blocks HERG currents in excised macro patches of Xenopus oocytes. Dofetilide (1 μM) reduces the amplitude of IKr to 61% of control currents in guinea pig cardiomyocytes, as measured by 200-ms test pulses and analysis of the deactivating tail currents of IKr. Dofetilide increases apico-basal disparity of repolarization, due to a more marked increase of ERPs in the apex than in the base in the intact canine heart.
In vivo	Dofetilide (100 mg/kg, i.v.) does not suppress automaticity arrhythmias induced by two-stage coronary ligation and epinephrine or the coronary ligation and reperfusion arrhythmias, but suppresses the reentry arrhythmia induced by PES in dogs with old myocardial infarction (MI). Dofetilide also shows antiarrhythmic effect in some dogs with digitalis arrhythmia. Dofetilide increases QT interval and shows negative chronotropic effect like that of other class III drugs, but is different in antiarrhythmic profiles from those of other class III agents such as D-sotalol, E-4031, and MS-551 in that it does not prevent the occurrence of ventricular fibrillation (VF) immediately after coronary reperfusion and has some antiarrhythmic effects on digitalis arrhythmia. Dofetilide causes increased resorptions and the same stage-dependent malformations in Sprague-Dawley rats.

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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