Dofetilide

Cat. No.: HY-B0232

CAS No.: 115256-11-6

Molecular Formula: $C_{19}H_{27}N_3O_5S_2$

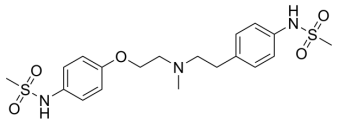
Molecular Weight: 441.56

Target: Potassium Channel

Pathway: Membrane Transporter/Ion Channel

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (226.47 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.2647 mL	11.3235 mL	22.6470 mL
5 mM	0.4529 mL	2.2647 mL	4.5294 mL
10 mM	0.2265 mL	1.1323 mL	2.2647 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (5.66 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.66 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.66 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dofetilide (UK 68789), as a class III antiarrhythmic agent, is an orally active, potent and specific IKr blocker. Dofetilide can be used for the research of cardiovascular disease[1][2].

IC_{50} & Target

IKr[1]

In Vivo

Dofetilide (3~100 μg/kg; i.v.) increases repolarisation time via a selective prolongation of activation repolarisation interval,

activation time being unchanged[2].

Dofetilide is metabolized by CYP3A4 to a mixture of inactive polar metabolites that are then excreted by the kidney[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Adult beagle dogs (13-15 kg)[2]
Dosage:	3~100 μg/kg
Administration:	I.v.
Result:	Increased repolarisation time via a selective prolongation of activation repolarisation interval, activation time being unchanged.

CUSTOMER VALIDATION

- Comput Struct Biotechnol J. 2023 Jul 7, 21, 3490-3502.
- Eur J Pharm Sci. 2023 May 22;106475.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Mounsey JP, et al. Cardiovascular drugs. Dofetilide. Circulation. 2000;102(21):2665-2670.

[2]. Gwilt M, et al. Dofetilide, a new class III antiarrhythmic agent, reduces pacing induced heterogeneity of repolarisation in vivo. Cardiovasc Res. 1992;26(11):1102-1108.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA