Product Data Sheet

Product Name: Sulamserod (RS-100302)
Cat. No.: GC34033

Chemical Properties

Cas. No.	219757-90-1		
SMILES	CS(=O)(NCCN1CCC(CCC(C2=C3OCCOC3=C(N)C(Cl)=C2)=O)CC1)=O		
Formula	$C_{19}H_{28}ClN_3O_5S$	M.Wt	445.96
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Sulamserod (RS-100302)		

Protocol

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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Animal experiment:

After completion of baseline electrophysiological measurements and induction of sustained AFL or AF, the 5-HT4 receptor antagonist RS-100302 is administered in a dose of 30 μg/kg over 10 minutes. This dose of RS-100302 is previously determined to maximally inhibit 5-HT-induced tachycardia in pigs. After completion of drug infusion, each animal is monitored for 20 minutes to observe arrhythmia response. If AFL or AF does not terminate spontaneously within 20 minutes after completion of drug infusion, sinus rhythm is restored by burst pacing or DC cardioversion, respectively. Electrophysiological measurements are then repeated as during control, and a venous blood sample is drawn for plasma levels of RS-100302. Attempts are then made to reinduce AFL or AF as performed at control. Reinduced arrhythmias are defined as sustained if lasting >10 minutes, nonsustained if lasting >30 seconds but <10 minutes, or none if lasting <30 seconds. Sustained arrhythmias are terminated after 10 minutes by burst pacing or DC cardioversion. Cisapride is then administered at a dose of 0.1 mg/kg over 10 minutes, after which electrophysiological measurements are repeated. Attempts are again made to reinduce AFL or AF, and the same definitions as those used after RS-100302 infusion regarding sustained, nonsustained, or no arrhythmias are applied. The study is then terminated, and animals are euthanized by an overdose of pentobarbital (150 mg/kg)[1].

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References:

[1]. Rahme MM, et al. Electrophysiological and antiarrhythmic effects of the atrial selective 5-HT(4) receptor antagonist RS-100302 in experimental atrial flutter and fibrillation. Circulation. 1999 Nov 9;100(19):2010-7.

Background

Sulamserod is a 5-HT4 receptor antagonist, with antiarrhythmic activities.

Sulamserod (30 mg/kg) prolongs mean ERP (11568 versus 14667 ms, P,0.01) and wavelength (8.360.9 versus 9.960.8 cm, P,0.01), reduces dispersion of ERP (1565 versus 861 ms, P,0.01), and minimally slows conduction velocity (7264 versus 6765 cm/s, P,0.01) in pigs. Sulamserod produces no ventricular electrophysiological effects. Sulamserod terminates atrial flutter in 6 of 8 animals and atrial fibrillation in 8 of 9 animals and prevents reinduction of sustained tachycardia in all animals[1].

[1]. Rahme MM, et al. Electrophysiological and antiarrhythmic effects of the atrial selective 5-HT(4) receptor antagonist RS-100302 in experimental atrial flutter and fibrillation. Circulation. 1999 Nov 9;100(19):2010-7.

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