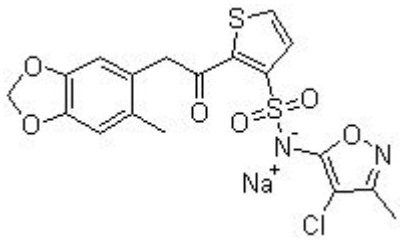
Product Introduction

Sitaxentan sodium

Sitaxentan sodium is a selective **endothelin A receptor (ETA)** antagonist with **IC50** and K_I of 1.4 nM and 0.43 nM, respectively, exhibits 7000-fold selectivity over ETB. Phase 3.

Technical Data:

Molecular Weight (MW):	476.89	
Formula:	$C_{18}H_{14}ClN_2O_6S_2.Na$	
Solubility (25°C) * <1 mg/ml means slightly soluble or insoluble:	DMSO 40 mg/mL	
	Water <1 mg/mL	
	Ethanol 20 mg/mL	
Purity:	>98%	
Storage:	3 years -20℃Powder	
	6 months-80℃in DMSO	
CAS No.:	210421-74-2	

Biological Activity

Sitaxentan sodium inhibits ET-1-induced stimulation of phosphoinositide turnover with a K_i of 0.69 nM and a pA2 of 8.0. [1]

Sitaxentan sodium has a serum half-life in the rat and the dog of 6 hours - 7 hours and 60−100% oral bioavailability. Orally administered Sitaxentan sodium is rapidly absorbed in both the rat and the dog with a $t_{1/2}$(abs) of 0.7 hours and 0.3 hours, respectively. Peak plasma concentrations occurred between 2 hours and 3 hours postdosing in the rat and between 45 minutes and 90 minutes in the dog. [1] The pulmonary

vasoconstrictor response to acute hypoxia (10% O_2 for 90 minutes) is prevented with Sitaxentan sodium (5 mg/kg infused i.v. 10 minutes prior to the onset of hypoxia). Sitaxentan sodium delivered i.v. 50 minutes after the onset of hypoxia reverses the established pulmonary vasoconstriction. Sitaxsentan blocks increased plasma endothelin levels. Sitaxsentan dose dependently (10 mg/kg and 50 mg/kg per day in the drinking water) attenuates right ventricular systolic pressure, right heart hypertrophy, and pulmonary vascular remodeling observed 3 weeks after a single subcutaneous injection of monocrotaline. [2] Systemic administration of the ETA receptor antagonist Sitaxentan sodium significantly attenuates cerebral vasospasm after subarachnoid hemorrhage (SAH). [3] Sitaxentan sodium reduces the development of hypoxic pulmonary vasoconstriction (HPV) in the pig. In addition, bolus injection of Sitaxentan sodium reverses already established HPV. [4]

References

[1] Wu C, et al. J Med Chem. 1997, 40(11), 1690-1697.
[2] Tilton RG, et al. Pulm Pharmacol Ther. 2000, 13(2), 87-97.
[3] Wanebo JE, et al. Neurosurgery. 1998, 43(6), 1409-1417.
[4] Holm P. Scand Cardiovasc J Suppl. 1997, 46, 1-40.