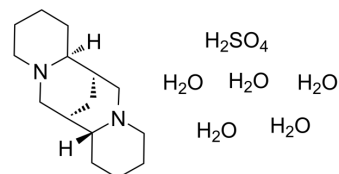


## (+)-Sparteine sulfate pentahydrate

Cat. No.:	HY-B1304A
Molecular Formula:	C <sub>15</sub> H <sub>38</sub> N <sub>2</sub> O <sub>9</sub> S
Molecular Weight:	422.54
Target:	nAChR
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (78.88 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	2.3666 mL	11.8332 mL	23.6664 mL
				5 mM	0.4733 mL	2.3666 mL	4.7333 mL
				10 mM	0.2367 mL	1.1833 mL	2.3666 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 (5.92 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.92 mM); Clear solution						
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.92 mM); Clear solution						

### BIOLOGICAL ACTIVITY

Description	(+)-sparteine (sulfate pentahydrate) is a ganglionic blocking agent. (+)-Sparteine competitively blocks nicotinic ACh receptor in the neurons <sup>[1]</sup> .
IC <sub>50</sub> & Target	nAChR <sup>[1]</sup>
In Vitro	(+)-Sparteine (2 μM) (sulfate pentahydrate) reduces the ACh-induced current caused by activation of nicotinic ACh receptors (AChRs) in a voltage-independent manner at membrane potentials of -50 mV to +30 mV, whereas its blocking effect increased at more negative membrane potentials. (+)-sparteine (5 μM and 10 μM) (sulfate pentahydrate) reduces the amplitude of the excitatory postsynaptic currents (EPSC) and the time constant of the EPSC decay <sup>[1]</sup> .

---

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

---

## REFERENCES

---

[1]. Voitenko S, et al. Effect of (+)-sparteine on nicotinic acetylcholine receptors in the neurons of rat superior cervical ganglion.

---

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

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