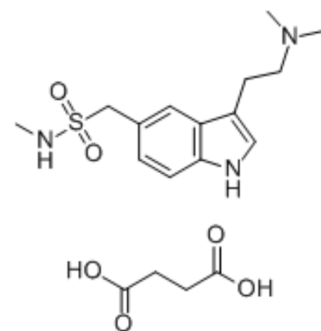


Sumatriptan succinate

Cat. No.:	HY-B0121
CAS No.:	103628-48-4
Molecular Formula:	C ₁₈ H ₂₇ N ₃ O ₆ S
Molecular Weight:	413
Target:	5-HT Receptor
Pathway:	GPCR/G Protein; 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

H₂O : ≥ 100 mg/mL (242.13 mM)
 DMSO : 50 mg/mL (121.07 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4213 mL	12.1065 mL	24.2131 mL
	5 mM	0.4843 mL	2.4213 mL	4.8426 mL
	10 mM	0.2421 mL	1.2107 mL	2.4213 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (242.13 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (6.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.05 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sumatriptan succinate (GR 43175) is an orally active 5-HT₁ receptor agonist with IC₅₀s of 7.3 nM, 9.3 nM and 17.8 nM for 5-HT_{1D}, 5-HT_{1B} and 5-HT_{1F} receptors, respectively. Sumatriptan succinate can be used for migraine headache research^{[1][2][3][4]}.

IC₅₀ & Target

5-HT _{1D} Receptor 7.3 nM (IC ₅₀)	5-HT _{1B} Receptor 9.3 nM (IC ₅₀)	5-HT _{1F} Receptor 17.8 nM (IC ₅₀)	5-HT _{1D} Receptor 17 nM (Ki)
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	5-HT _{1B} Receptor 27 nM (Ki)	5-HT _{1A} Receptor 100 nM (Ki)
In Vivo	Sumatriptan (600 µg/kg, i.p. or 0.06 µg in 5 µL, i.t.) reverses nitroglycerin-induced thermal hypersensitivity in mice ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

CUSTOMER VALIDATION

- Personalized Medicine Universe. 2019 May.

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REFERENCES

- [1]. Razzaque Z, et al. Vasoconstriction in human isolated middle meningeal arteries: determining the contribution of 5-HT_{1B}- and 5-HT_{1F}-receptor activation. *Br J Clin Pharmacol.* 1999 Jan;47(1):75-82.
- [2]. Bates EA, et al. Sumatriptan alleviates nitroglycerin-induced mechanical and thermal allodynia in mice. *Cephalalgia.* 2010 Feb;30(2):170-8.
- [3]. S J Peroutka, et al. Sumatriptan (GR 43175) interacts selectively with 5-HT_{1B} and 5-HT_{1D} binding sites. *Eur J Pharmacol.* 1989 Apr 12;163(1):133-6.
- [4]. K L Dechant, et al. Sumatriptan. A review of its pharmacodynamic and pharmacokinetic properties, and therapeutic efficacy in the acute treatment of migraine and cluster headache. *Drugs.* 1992 May;43(5):776-98.

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

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