

SR59230A hydrochloride

Chemical Properties

CAS No. : 1135278-41-9

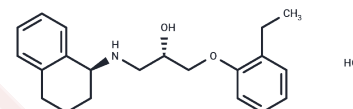
Formula: C₂₁H₂₈ClNO₂

Molecular Weight: 361.91

Store at low temperature

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	SR59230A hydrochloride (SR59230A HCl) is a blood-brain permeable, selective and highly potent β 3-adrenergic receptor antagonist that inhibits ultradian brown adipose tissue thermogenesis and interrupts associated paroxysmal brain and body heating.
Targets(IC50)	Adrenergic Receptor
In vitro	SR59230A hydrochloride (100 nM-50 μ M; 24 hours) can reduce cell viability in a dose-dependent manner in Neuro-2A, BE(2)C and SK-N-BE(2) NB cell lines. [1]
In vivo	MDMA (20 mg/kg) caused a slow rise in body temperature, reaching a maximum temperature increase of 1.8°C at 130 min post-injection. SR59230A hydrochloride (0.5 mg/kg) was able to slightly but significantly alleviate the slow rise in body temperature induced by MDMA. SR59230A hydrochloride (5 mg/kg) exhibited a significant and pronounced early hypothermic response to MDMA. [2]

Solubility Information

Solubility	DMSO: 200 mg/mL (552.62 mM),Sonication is recommended. H ₂ O: 1 mg/mL (2.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (13.82 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7631 mL	13.8156 mL	27.6312 mL
5 mM	0.5526 mL	2.7631 mL	5.5262 mL
10 mM	0.2763 mL	1.3816 mL	2.7631 mL
50 mM	0.0553 mL	0.2763 mL	0.5526 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Bruno G, et al. β 3-adrenoreceptor blockade reduces tumor growth and increases neuronal differentiation in neuroblastoma via SK2/S1P2 modulation. *Oncogene*. 2020 Jan;39(2):368-384.
- Bexis S, et al. Role of alpha 1- and beta 3-adrenoceptors in the modulation by SR59230A of the effects of MDMA on body temperature in the mouse. *Br J Pharmacol*. 2009 Sep;158(1):259-66.
- Nisoli E, et al. Functional studies of the first selective beta 3-adrenergic receptor antagonist SR 59230A in rat brown adipocytes. *Mol Pharmacol*. 1996 Jan;49(1):7-14.
- Bexis S, et al. Role of alpha 1- and beta 3-adrenoceptors in the modulation by SR59230A of the effects of MDMA on body temperature in the mouse. *Br J Pharmacol*. 2009 Sep;158(1):259-66.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481