SR-31747

Cat. No.: HY-13751

CAS No.: 132173-07-0

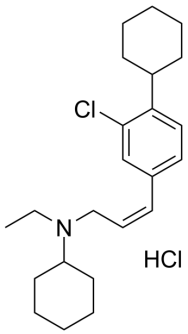
Molecular Formula: $C_{23}H_{35}Cl_2N$

Molecular Weight: 396.44

Target: Sigma Receptor

Pathway: 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 : 15.62 mg/mL (39.40 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5224 mL	12.6122 mL	25.2245 mL
	5 mM	0.5045 mL	2.5224 mL	5.0449 mL
	10 mM	0.2522 mL	1.2612 mL	2.5224 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: ≥ 1.56 mg/mL (3.94 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 1.56 mg/mL (3.94 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.56 mg/mL (3.94 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SR-31747 is a sigma ligand with immunosuppressive and anti-inflammatory properties. SR-31747 blocks cell proliferation by inhibiting sterol isomerase[1][2].

IC_{50} & Target

Sigma ligand[1]

In Vitro

SR-31747 blocks the proliferation of lymphocytes at a concentration of 10 nM. SR-31747 is capable of inhibiting T-cell proliferation when added as late as 24 h after activation. SR-31747 arrests proliferation in yeast cells in a dose-dependent manner[2].

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

In Vivo	In vivo, SR-31747 dramatically blocks lipopolysaccharide-induced production of IL-1, IL-6 and TNF-α in a dose-dependent manner (ED_{50}, 2 mg/kg). SR-31747 probably abrogated monokine production through an indirect mechanism that involves endogenous corticosteroids. This conclusion was supported by in vivo experiments that shows that: 1) ablation of corticosteroids by use of Mifepristone or adrenalectomy suppress the effect of SR-31747; 2) administration of SR-31747 induces an enhancement of the corticosterone level. SR-31747 improves the survival of animals with endotoxinic shock as a result of monokine inhibition[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Derocq JM, et al. In vivo inhibition of endotoxin-induced pro-inflammatory cytokines production by the sigma ligand SR 31747. J Pharmacol Exp Ther. 1995 Jan;272(1):224-30.

[2]. Silve S, et al. The immunosuppressant SR 31747 blocks cell proliferation by inhibiting a steroid isomerase in Saccharomyces cerevisiae. Mol Cell Biol. 1996 Jun;16(6):2719-27.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

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