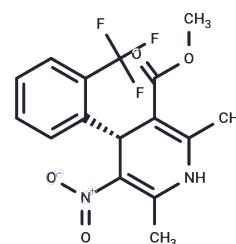


(R)-(+)-Bay-K-8644

Chemical Properties

CAS No. : 98791-67-4
 Formula: C₁₆H₁₅F₃N₂O₄
 Molecular Weight: 356.3
 Storage: Store at low temperature
 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	(R)-(+)-Bay-K-8644 is a Ca ²⁺ channel and dihydropyridine agonist that inhibits Ba ²⁺ currents (IBa), induces central respiratory depression in cats, and inhibits platelet activation through competitive antagonism of thromboxane A ₂ -prostaglandin H ₂ receptors.
Targets(IC ₅₀)	Calcium Channel,PPAR
In vitro	(R)-(+)-Bay-K-8644, a component of the racemic mixture Bay K 8644, is a well-known L-type Ca ²⁺ channel agonist but functions as an inhibitor of Ba ²⁺ currents (IBa) with an IC ₅₀ of 975 nM. At a concentration of 0.5 μM, it reduces IBa to 71±10% of the control level, demonstrating its efficacy in inhibiting Ba ²⁺ currents. Notably, this compound acts as a calcium channel inhibitor, crucial for modulating calcium channel activity [2].

Solubility Information

Solubility	DMSO: 100 mg/mL (280.66 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: 4 mg/mL (11.23 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	2.8066 mL	14.0331 mL	28.0662 mL
5 mM	0.5613 mL	2.8066 mL	5.6132 mL
10 mM	0.2807 mL	1.4033 mL	2.8066 mL
50 mM	0.0561 mL	0.2807 mL	0.5613 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

Sidaway P, et al. L-type Ca²⁺ channel sparklets revealed by TIRF microscopy in mouse urinary bladder smooth muscle. PLoS One. 2014 Apr 3;9(4):e93803.

Zhu HL, et al. Antagonistic actions of S(-)-Bay K 8644 on cyclic nucleotide-induced inhibition of voltage-dependent Ba(2+) currents in guinea pig gastric antrum. Naunyn Schmiedebergs Arch Pharmacol. 2008 Dec;378(6):609-15.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

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