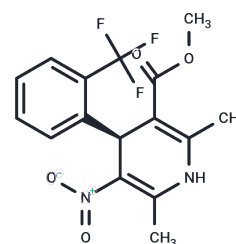


(S)-(-)-Bay-K-8644

Chemical Properties

CAS No. : 98625-26-4
 Formula: C₁₆H₁₅F₃N₂O₄
 Molecular Weight: 356.3
 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	(S)-(-)-Bay-K-8644 ((S)-(-)-Bay K 8644) is an agonist of L-type Ca ²⁺ channels, activating Ba ²⁺ currents with an EC ₅₀ of 32 nM.
Targets(IC ₅₀)	Calcium Channel
In vitro	The Ca ²⁺ channel activity is enhanced by 3–30 μM (S)-(-)-Bay-K-8644 an agonist of L-type Ca ²⁺ channels [1]. FPL 64176 (300 nM) causes a sustained contraction of rat tail artery strips. This contractile response is inhibited by approximately 70% by (S)-(-)-Bay-K-8644 (EC ₅₀ : 14 nM). (S)-(-)-Bay-K-8644 (100 nM) increases whole-cell Ca ²⁺ currents in A7r5 smooth muscle cells but effectively blocks further stimulation by 1 μM FPL 64176 [2]. (S)-(-)-Bay-K-8644 can prevent the inhibitory actions of two distinct cyclic nucleotide pathways on IBa in gastric myocytes of the guinea pig antrum [3].

Solubility Information

Solubility	H ₂ O: < 0.1 mg/mL (insoluble), Sonication and heating to 60°C are recommended. DMSO: 120 mg/mL (336.79 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

- 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.
- Rampe D, et al. Functional interactions between two Ca²⁺ channel activators, (S)-Bay K 8644 and FPL 64176, in smooth muscle. *Mol Pharmacol.* 1992 Apr;41(4):599-602.
- Mironov SL, et al. L-type Ca²⁺ channels in inspiratory neurones of mice and their modulation by hypoxia. *J Physiol.* 1998 Oct 1;512 (Pt 1):75-87.

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