Data Sheet (Cat.No.TQ0144)

TargetMol
A DRUG SCREENING EXPERT

(S)-(-)-Bay K 8644

Chemical Properties

CAS No.:	98625-26-4
Formula:	C16H15F3N2O4
Molecular Weight:	356.3
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	(S)-(-)-Bay-K-8644 is an agonist of L-type Ca2+ channel. It activates Ba2+ currents (IBa) (EC50: 32 nM).
In vitro	(±)-Bay K 8644, a conventional racemic mixture of Bay K 8644, is widely used as an L-type Ca2+ channel agonist. Each optical isomer possesses opposite effects on IBa (R(+)-Bay K 8644 as an antagonist and (S)-(-)-Bay-K-8644 as an agonist. (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 [1]. The Ca2+ channel activity is enhanced by 3–30 μM (S)-(-)-Bay-K-8644 an agonist of L-type Ca2+ channels [2]. 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 (EC50: 14 nM). (S)-(-)-Bay-K-8644 (100 nM) increases whole-cell Ca2+ currents in A7r5 smooth muscle cells but effectively blocks further stimulation by 1 μM FPL 64176 [3].

Solubility Information

Solubility	DMSO: 300 mg/mL (841.98 mM) Water: Insoluble (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.807 mL	14.033 mL	28.066 mL
5 mM	0.561 mL	2.807 mL	5.613 mL
10 mM	0.281 mL	1.403 mL	2.807 mL
50 mM	0.056 mL	0.281 mL	0.561 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. 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.

2. 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.

3. 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.

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