

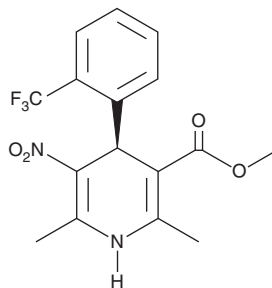
PRODUCT INFORMATION



(S)-(-)-BAY-K-8644

Item No. 19988

CAS Registry No.: 98625-26-4
Formal Name: (4S)-1,4-dihydro-2,6-dimethyl-5-nitro-4-[2-(trifluoromethyl)phenyl]-3-pyridinecarboxylic acid, methyl ester
MF: C₁₆H₁₅F₃N₂O₄
FW: 356.3
Purity: ≥98%
UV/Vis.: λ_{max}: 236, 272, 404 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(S)-(-)-BAY-K-8644 is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-(-)-BAY-K-8644 in the solvent of choice, which should be purged with an inert gas. (S)-(-)-BAY-K-8644 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (S)-(-)-BAY-K-8644 in these solvents is approximately 50 mg/ml.

(S)-(-)-BAY-K-8644 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (S)-(-)-BAY-K-8644 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (S)-(-)-BAY-K-8644 has a solubility of approximately 0.1 mg/ml in a 1:9 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(S)-(-)-BAY-K-8644 is an activator of voltage-sensitive L-type calcium channels.^{1,2} It demonstrates vasoconstrictive and positive inotropic effects *in vivo* as well as behavioral effects, including deficits to motor function.^{3,4} When combined with BIX01294 (Item No. 13124), (S)-(-)-BAY-K-8644 can enable reprogramming of mouse embryonic fibroblasts after transduction with Oct4/Klf4.⁵

References

1. Ravens, U. and Schöpfer, H.P. Opposite cardiac actions of the enantiomers of Bay K 8644 at different membrane potentials in guinea-pig papillary muscles. *Naunyn Schmiedebergs Arch. Pharmacol.* **341(3)**, 232-239 (1990).
2. Artigas, P., Ferreira, G., Reyes, N., *et al.* Effects of the enantiomers of BayK 8644 on the charge movement of L-type Ca channels in guinea-pig ventricular myocytes. *J. Membr. Biol.* **193(3)**, 215-227 (2003).
3. Franckowiak, G., Bechem, M., Schramm, M., *et al.* The optical isomers of the 1,4-dihydropyridine Bay K 8644 show opposite effects on Ca channels. *Eur. J. Pharmacol.* **114(2)**, 223-226 (1985).
4. O'Neill, S.K. and Bolger, G.T. Enantiomer selectivity and the development of tolerance to the behavioral effects of the calcium channel activator BAY K 8644. *Brain Res. Bull.* **21(6)**, 865-872 (1988).
5. Shi, Y., Desponts, C., Do, J.T., *et al.* Induction of pluripotent stem cells from mouse embryonic fibroblasts by Oct4 and Klf4 with small-molecule compounds. *Cell Stem Cell* **3(5)**, 568-574 (2008).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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