

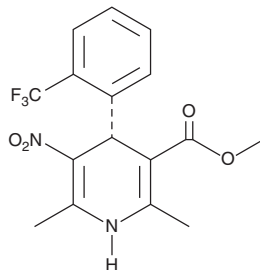
PRODUCT INFORMATION



(R)-(+)-BAY-K-8644

Item No. 15263

CAS Registry No.: 98791-67-4
Formal Name: (4R)-1,4-dihydro-2,6-dimethyl-5-nitro-4-[2-(trifluoromethyl)phenyl]-3-pyridinecarboxylic acid, methyl ester
Synonyms: NI 105, R 4407
MF: C₁₆H₁₅F₃N₂O₄
FW: 356.3
Purity: ≥95%
UV/Vis.: λ_{max}: 237, 273, 406 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

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

(R)-(+)-BAY-K-8644 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (R)-(+)-BAY-K-8644 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (R)-(+)-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

BAY-K-8644, originally described as a modulator of potential operated calcium channels, exists as two enantiomers that have opposite actions.¹⁻³ (R)-(+)-BAY-K-8644 is an L-type channel blocker that has negative inotropic and vasodilatory effects at 1 μM.³⁻⁵ Intracerebroventricular administration of this enantiomer has no effect on motor function in mice, whereas (S)-(-)-BAY-K-8644 impairs rotarod and motor activity, an effect that is blocked by (R)-(+)-BAY-K-8644.²

References

1. Yamamoto, H., Hwang, O., and Van Breemen, C. Bay K8644 differentiates between potential and receptor operated Ca²⁺ channels. *Eur. J. Pharmacol.* **102(3-4)**, 555-557 (1984).
2. 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).
3. 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).
4. 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).
5. 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).

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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