

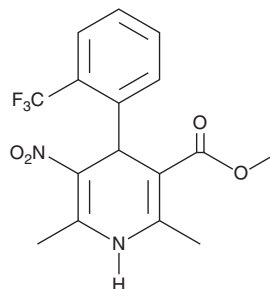
# PRODUCT INFORMATION



## (±)-BAY-K-8644

Item No. 21479

**CAS Registry No.:** 71145-03-4  
**Formal Name:** 1,4-dihydro-2,6-dimethyl-5-nitro-4-[2-(trifluoromethyl)phenyl]-3-pyridinecarboxylic acid, methyl ester  
**Synonym:** SQ 28,873  
**MF:** C<sub>16</sub>H<sub>15</sub>F<sub>3</sub>N<sub>2</sub>O<sub>4</sub>  
**FW:** 356.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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

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

(±)-BAY-K-8644 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (±)-BAY-K-8644 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (±)-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 is a racemic mixture composed of two optical isomers, (R)-(+)-BAY-K-8644 (Item No. 15263) and (S)-(-)-BAY-K-8644 (Item No. 19988). (±)-BAY-K-8644 has similar effects as (S)-(-)-BAY-K-8644, which activates voltage-sensitive L-type calcium channels.<sup>1,2</sup> (±)-BAY-K-8644 and (S)-(-)-BAY-K-8644 also demonstrate vasoconstrictive and positive inotropic effects *in vivo* as well as behavioral effects, including deficits to motor function.<sup>3,4</sup>

### References

- Schreibmayer, W., Tripathi, O., and Tritthart, H.A. Kinetic modulation of guinea-pig cardiac L-type calcium channels by fendiline and reversal of the effects of Bay K 8644. *Br. J. Pharmacol.* **106(1)**, 151-156 (1992).
- Kanmura, Y., Itoh, T., and Kuriyama, H. Agonist actions of Bay K 8644, a dihydropyridine derivative, on the voltage-dependent calcium influx in smooth muscle cells of the rabbit mesenteric artery. *J. Pharmacol. Exp. Ther.* **231(3)**, 717-723 (1984).
- 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).
- 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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