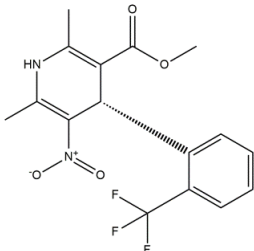


# (S)-(-)-Bay K 8644

**ALTERNATE NAMES:** (S)-(-)-BAY K 8644; (-)-(S)-BayK8644; (-)-BAY-k-8644; methyl (4S)-2,6-dimethyl-5-nitro-4-[2-(trifluoromethyl)phenyl]-1,4-dihydropyridine-3-carboxylate

**CATALOG #:** B3011-1 1 mg  
B3011-5 5 mg

**STRUCTURE:**



**MOLECULAR FORMULA:** C<sub>16</sub>H<sub>15</sub>F<sub>3</sub>N<sub>2</sub>O<sub>4</sub>

**MOLECULAR WEIGHT:** 356.3

**CAS NUMBER:** 98625-26-4

**APPEARANCE:** Yellow solid

**PURITY:** >98%

**SOLUBILITY:** ~20 mg/ml in DMSO and DMF

**DESCRIPTION:** (S)-(-)-Bay K 8644 is a L-type Ca channel agonist while R-(+)-Bay K8644 is an antagonist. (S)-(-)-Bay K 8644 causes a left shift in the Q1 (activation charge) vs. V activation curve at nanomolar concentrations in guinea-pig ventricular myocytes. The (-)-enantiomer has vasoconstricting and positive inotropic properties. (-)-Bay K 8644 also enhances the force of contraction and prolongs the action potential duration measured at 50% of repolarization in guinea-pig papillary muscles at normal resting potential. (-)-S-BAY K 8644 impairs rotarod and motor activity with an ED<sub>50</sub> value of 0.5 mg/kg in mice. It enables reprogramming of Oct4/Klf4-transduced mouse embryonic fibroblasts.

**STORAGE TEMPERATURE:** -20°C. Protect from air. Store under desiccating conditions.

**HANDLING:** Do not take internally. Wear gloves and mask when handling the product! Avoid contact by all modes of exposure.

**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. *Journal of Membrane Biology* 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. *European Journal of Pharmacology* 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).

**RELATED PRODUCTS:**

Thapsigargin (Cat. No. 1558)  
 Ionomycin (free acid) (Cat. No. 1565)  
 Amlodipine besylate (Cat. No. 2378)  
 (+)-Bay K 8644 (Cat. No. 1682)  
 Dantrolene sodium (Cat. No. 2491)

**DISCLAIMER:** **FOR RESEARCH USE ONLY! Not to be used on humans.**