

Product Name: (±)-Bay K 8644

Catalog No.: 1544

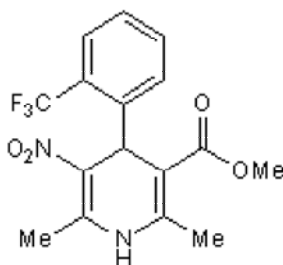
Batch No.: 5

CAS Number: 71145-03-4

IUPAC Name: 1,4-Dihydro-2,6-dimethyl-5-nitro-4-[2-(trifluoromethyl)phenyl]-3-pyridinecarboxylic acid, methyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₆H₁₅F₃N₂O₄
Batch Molecular Weight: 356.3
Physical Appearance: Yellow solid
Solubility: ethanol to 100 mM
DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.4 (CH₂Cl₂/MeOH/NH₄OH (90:9:1))
HPLC: Shows 99% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.94	4.24	7.86
Found	53.9	4.39	7.69

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

L-type Ca²⁺ channel activator (EC₅₀ = 17.3 nM). Has positive inotropic, vasoconstrictive and behavioral effects in vivo. In combination with BIX-01294 (Cat. No. 3364), helps generate induced pluripotent stem cells (iPSCs) from mouse embryonic fibroblasts (MEFs). Inhibits autophagy. (S)-(-)-Enantiomer and (R)-(+)-Enantiomer also available.

Physical and Chemical Properties:

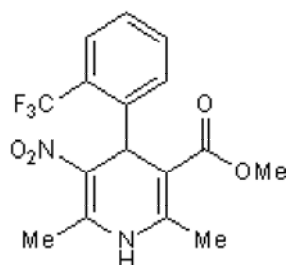
Batch Molecular Formula: C₁₆H₁₅F₃N₂O₄

Batch Molecular Weight: 356.3

Physical Appearance: Yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 100 mM

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Sarkar et al (2009) Rapamycin and mTOR-independent autophagy inducers ameliorate toxicity of polyglutamine-expanded huntingtin and related proteinopathies. *Cell Death Differ.* **16** 46. PMID: 18636076.

Shi et al (2008) Induction of pluripotent stem cells from mouse embryonic fibroblasts by Oct4 and Klf4 with small-molecule compounds. *Cell Stem Cell* **3** 568. PMID: 18983970.

Bourson et al (1989) Central and peripheral effects of the dihydropyridine calcium channel activator BAY K 8644 in the rat. *Eur.J.Pharmacol.* **160** 339. PMID: 2469593.

Greenberg et al (1984) Calcium channel 'agonist' BAY K 8644 inhibits calcium antagonist binding to brain and PC12 cell membranes. *Brain Res.* **305** 365. PMID: 6204725.

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