Product Specification Sheet

Product Name  
Stemolecule™ R(+)Bay K 8644

Description  
Stemolecule R(+)Bay K 8644 is an L-type Ca^{2+} channel activator^{1,2}. This molecule has recently been demonstrated to enhance reprogramming efficiency. When only two transcription factors (Oct4 and Klf4) are introduced into mouse embryonic fibroblasts (MEFs), and when used in combination with a histone methyltransferase G9a inhibitor BIX01294, R(+)Bay K 8644 enhances the efficiency of iP5 cell generation significantly^{3}.

Catalog Number  
04-0013

Size  
5 mg

Alternate Name  
(4R)-1,4-dihydro-2,6-dimethyl-5-nitro-4-[2-trifluoromethyl)phenyl]-3-pyridinecarboxylic acid methyl ester

Chemical Formula  
C_{16}H_{15}F_{3}N_{2}O_{4}^{1/2} \cdot \text{H}_{2}\text{O}

Molecular Weight  
356.31

CAS Number  
98791-67-4

Purity  
Greater than 99% by HPLC analysis

Formulation  
Yellow solid

Solubility  
For a 10 mM concentrated stock solution of R(+)Bay K 8644, reconstitute the compound by adding 1.4 ml of DMSO to the entire contents of the vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes. For cell culture, the media should be prewarmed prior to adding the reconstituted compound. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%. This molecule is soluble in DMSO at 100 mM.

Storage and Stability  
Store powder at 4°C protected from light. Following reconstitution, store aliquots at -20°C. Stock solutions are stable for 6 months when stored as directed.

Quality Control  
The purity of R(+)Bay K 8644 was determined by HPLC analysis. The accurate mass was determined by mass spectrometry. Cellular toxicity of R(+)Bay K 8644 was tested on mouse embryonic stem cells.

References  

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