Product Data Sheet

Product Name: PEPA
CAS No.: 141286-78-4
Cat. No.: HY-12509
MWt: 402.44
Formula: C16H16F2N2O4S2
Purity: >98%
Solubility: DMSO

Mechanisms: Pathways: Membrane Transporter/Ion Channel; Target: AMPAR
Pathways: Neuronal Signaling; Target: AMPAR

Biological Activity:
PEPA is an allosteric modulator of AMPA receptors; binds to the GluA2o and GluA3o LBDs and can be utilized as an indicator of AMPA receptor heterogeneity.
IC50 value:
Target: AMPAR modulator

In vitro: PEPA dose-dependently potentiated AMPA-induced increase of [Ca2+]i. In 90% (72 out of 80) of the cells in which cyclothiazide acts, PEPA potentiated the increased [Ca2+]i induced by AMPA with pronounced cell-to-cell variation in rat hippocampal cultures [1]. PEPA bound to the binding domains of the GluA2 and GluA3 flop isoforms of AMPA receptors [2]. Coapplication of AMPA with PEPA protected hippocampal CA1 neurons from brain ischemia-induced death. Coapplication of AMPA with PEPA could prevent downregulated expression of GluR2 subunit caused by ischemia and increase BDNF expression via Lyn-ERK1/2-CREB signaling [4].

In vivo: PEPA (3, 10, 30mg/kg body weight) or vehicle...

References:

Caution: Not fully tested. For research purposes only

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