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SEA0400

Catalog No: tcsc1068

Available Sizes

Size: 2mg

Size: 5mg

Size: 10mg

Size: 50mg

Specifications

CAS No:
223104-29-8

Formula:
$C_{21}H_{19}F_2NO_3$

Pathway:
Membrane Transporter/Ion Channel

Target:
Na+/Ca2+ Exchanger

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 32 mg/mL (86.17 mM)

Observed Molecular Weight:
371.38

Product Description

SEA0400 is a novel and selective inhibitor of the Na^+-Ca^{2+} exchanger (**NCX**), inhibiting Na^+-dependent Ca^{2+} uptake in cultured

neurons, astrocytes, and microglia with **IC_{50}**s of from 5 to 33 nM.

IC50 & Target: IC50: 5-33 nM (NCX)

In Vitro: SEA0400 inhibits Na^+-dependent $^{45}Ca^{2+}$ uptake in cultured neurons, astrocytes, and microglia. IC_{50} values of SEA0400 are 33 nM (neurons), 5.0 nM (astrocytes), and 8.3 nM (microglia)[1]. SEA0400 prevents sodium nitroprusside (SNP) to increase ERK and p38 MAPK phosphorylation, and production of reactive oxygen species (ROS) in an extracellular Ca^{2+}-dependent manner[2].

In Vivo: SEA0400 (3 mg/kg + 3 mg/kg/h for 2 h, i.v.) attenuates the infarct volume in the cerebral cortex and striatum, does not affect the mean the regional cortical blood flow in anesthetized rats[1]. SEA0400 protects against the dopaminergic neurotoxicity (determined by dopamine levels in the midbrain and striatum, tyrosine hydroxylase immunoreactivity in the substantia nigra and striatum, striatal dopamine release, and motor deficits) in MPTP-treated C57BL/6J mice[3].