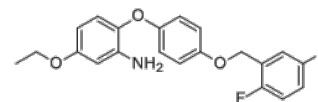


Product Name : SEA 0400
Cat. No. : PC-73275
CAS No. : 223104-29-8
Molecular Formula : C₂₁H₁₉F₂NO₃
Molecular Weight : 371.384
Target : Sodium-calcium Exchanger (NCX)
Solubility : 10 mM in DMSO



Biological Activity

SEA0400 is a potent and selective Na⁽⁺⁾/Ca⁽²⁺⁾ exchanger (NCX) inhibitor, inhibits Na⁽⁺⁾-dependent Ca⁽²⁺⁾ uptake in cultured neurons, astrocytes, and microglia with IC₅₀ of 5-33 nM.

SEA0400 is more potent than KB-R7943.

SEA0400 is NCX selective, does not affect the activities of the Na⁽⁺⁾/H⁽⁺⁾ exchanger, Na⁽⁺⁾,K⁽⁺⁾-ATPase, Ca⁽²⁺⁾-ATPase.

SEA0400 preferentially inhibits (45)Ca⁽²⁺⁾ uptake by NCX1 compared with inhibitions by NCX2, NCX3, and NCKX2.

SEA0400 also selectively blocked outward exchange currents from NCX1 transfectants.

SEA0400 protected against hypoxia/reoxygenation-induced cell damage in tubular cells expressing wild-type NCX1.

SEA0400 attenuated dose- dependently paradoxical Ca⁽²⁺⁾ challenge-induced production of reactive oxygen species, DNA ladder formation, and nuclear condensation in cultured astrocyte.

SEA0400 reduced infarct volumes after a transient middle cerebral artery occlusion in rat cerebral cortex and striatum.

References

Takahiro Iwamoto, et al. J Biol Chem. 2004 Feb 27;279(9):7544-53.

T Matsuda, et al. J Pharmacol Exp Ther. 2001 Jul;298(1):249-56.

Caution: Product has not been fully validated for medical applications. Lab Use Only!

E-mail: tech@probechem.com