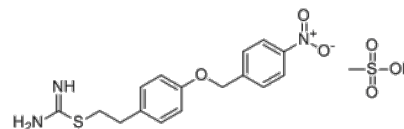


Product Name : KB-R7943
Cat. No. : PC-73274
CAS No. : 182004-65-5
Molecular Formula : C₁₇H₂₁N₃O₆S₂
Molecular Weight : 427.490
Target : Sodium-calcium Exchanger (NCX)
Solubility : 10 mM in DMSO



Biological Activity

KB-R7943 (No.7943) is a selective inhibitor of Na⁺/Ca²⁺ exchanger (**NCX**), 3-fold more inhibitory to NCX3 than to NCX1 or NCX2.

KB-R7943 inhibits Na⁺-dependent 45Ca²⁺ uptake and Na⁺-dependent [Ca²⁺]_i increase in cardiomyocytes, smooth muscle cells, and NCX1-transfected fibroblasts with IC₅₀ of 1.2-2.4 μM.

KB-R7943 is much less potent in inhibiting Na⁺-dependent 45Ca²⁺ efflux and Na⁺-induced [Ca²⁺]_i decline (IC₅₀>30 μM).

KB-R7943 inhibited Na⁺-dependent 45Ca²⁺ uptake and Na⁺-dependent 45Ca²⁺ efflux in n cardiac sarcolemmal preparations with IC₅₀ of 5.4-13 μM.

KB-R7943 markedly inhibited Ca²⁺ overloading into cardiomyocytes under the Ca²⁺ paradox conditions.

References

Iwamoto T, et al. *J Biol Chem.* 1996 Sep 13;271(37):22391-7.

Watano T, et al. *Br J Pharmacol.* 1996 Oct;119(3):555-63.

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

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