

Product Data Sheet

Product Name: KB-130015

Cat. No.: GC48432

Chemical Properties

Cas. No. 147030-48-6

SMILES O=C(COC1=C(C=C(CC2=C(C)OC3=C2C=CC=C3)C=C1I)I)O

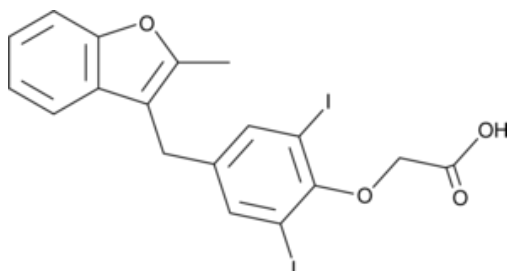
Formula C₁₈H₁₄I₂O₄ M.Wt 548.1

Solubility DMSO: 10 mg/ml, Ethanol: 10 mg/ml Storage -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

KB-130015 is an antiarrhythmic agent and a derivative of amiodarone.¹ It inhibits potassium currents induced by acetylcholine or adenosine in isolated guinea pig atrial myocytes (IC₅₀s = 0.82 and 0.57 μM, respectively).² KB-130015 activates or inhibits the voltage-gated potassium channel human-ether-a-go-go (hERG), also known as K_v11.1, in HEK293 cells in a voltage-dependent manner.³ It activates large-conductance calcium-activated potassium (BK_{Ca}) channels in HEK293

Caution: Product has not been fully validated for medical applications. For research use only.

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cells expressing the BK_{Ca} subunit Slo1 ($EC_{50} = 20.2 \mu\text{M}$).⁴ KB-130015 (40 mg/kg) prolongs the duration of electrically stimulated action potentials in guinea pig papillary muscle *ex vivo*.¹ It is also an antagonist of human thyroid hormone receptor α (TR α) and TR β (IC_{50} s = 2.2 and 4.1 μM , respectively, in reporter assays).

1. Carlsson, B., Singh, B.N., Temciuc, M., et al. Synthesis and preliminary characterization of a novel antiarrhythmic compound (KB130015) with an improved toxicity profile compared with amiodarone. *J. Med. Chem.* 45(3)623-630(2002) 2. Brandts, B., Borchard, R., Macianskiene, R., et al. Inhibition of G protein-coupled and ATP-sensitive potassium currents by 2-methyl-3-(3,5-diiodo-4-carboxymethoxybenzyl)benzofuran (KB130015), an amiodarone derivative. *J. Pharmacol. Exp. Ther.* 308(1)134-142(2004) 3. Gessner, G., Macianskiene, R., Starkus, J.G., et al. The amiodarone derivative KB130015 activates hERG1 potassium channels via a novel mechanism. *Eur. J. Pharmacol.* 632(1-3)52-59(2010) 4. Gessner, G., Heller, R., Hoshi, T., et al. The amiodarone derivative 2-methyl-3-(3,5-diiodo-4-carboxymethoxybenzyl)benzofuran (KB130015) opens large-conductance Ca²⁺-activated K⁺ channels and relaxes vascular smooth muscle. *Eur. J. Pharmacol.* 555(2-3)185-193(2007)

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