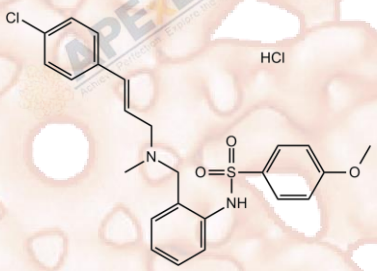
Product Data Sheet

KN-92 hydrochloride



Cat. No.:	A3530
CAS No.:	1431698-47-3
Formula:	C24H26Cl2N2O3S
M.Wt:	493.45
Synonyms:	KN 92 hydrochloride;KN92 hydrochloride
Target:	Membrane Transporter/Ion Channel
Pathway:	P2X purinergic receptor
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

≥24.65 mg/mL in DMSO; insoluble in H2O; ≥11.73 mg/mL in EtOH with gentle warming and ultrasonic

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.0265 mL	10.1327 mL	20.2655 mL
5 mM	0.4053 mL	2.0265 mL	4.0531 mL
10 mM	0.2027 mL	1.0133 mL	2.0265 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Inactive derivative of KN-93,control compound
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	NIH 3T3 fibroblasts
Preparation method：	The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	72 h, 4-24 μM

	Applications:	KN-92 is an inactive derivative of KN-93. KN-92 is usually used as a control in studies to elucidate the effect of KN-93. KN-93 inhibits fibroblast CaMK-II activity and cell growth, whereas KN-92 had no effect on CaMK-II activity or cell growth.
In Vivo	**Animal experiment**	
	Animal models:	AC3-I and AC3-C transgenic mice
	Dosage form:	20 μmol/kg, intraperitoneal
	Applications:	Treatment with KN-93 in WT mice resulted in a dose-dependent improvement in left ventricular function compared to WT mice treated with KN-92. Surviving myocytes from infarcted wild-type mice without treatment or treated with control drug KN-92 exhibited severely disordered Ca2+ homeostasis. In contrast, Ca2+ homeostasis was preserved after myocardial infarction in wild-type mice treated with KN-93.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Tombes R M, Grant S, Westin E H, et al. G1 cell cycle arrest and apoptosis are induced in NIH 3T3 cells by KN-93, an inhibitor of CaMK-II (the multifunctional Ca2+/CaM kinase)[J]. Cell growth & differentiation: the molecular biology journal of the American Association for Cancer Research, 1995, 6(9): 1063.

[2]. Zhang R, Khoo M S C, Wu Y, et al. Calmodulin kinase II inhibition protects against structural heart disease[J]. Nature medicine, 2005, 11(4): 409-417.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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