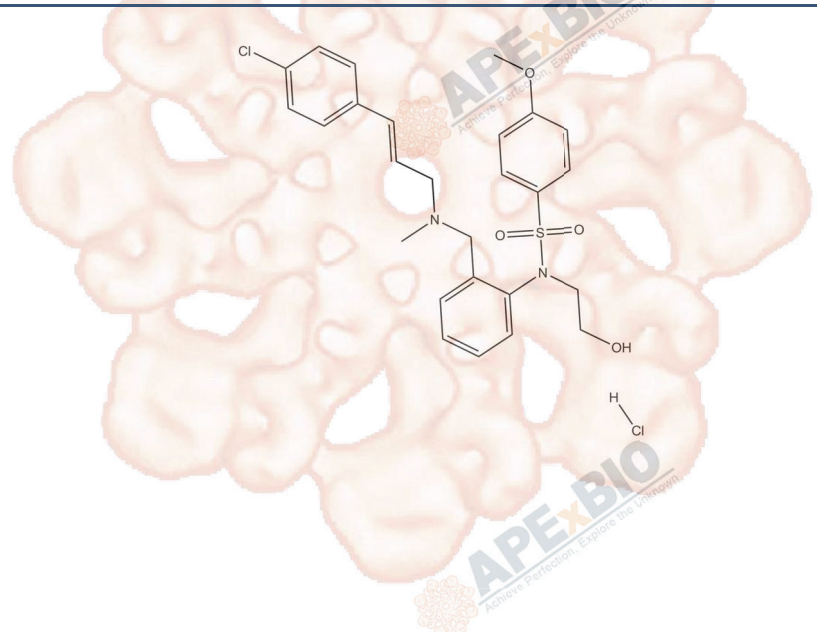


# Product Data Sheet

## KN-93 hydrochloride

<b>Cat. No.:</b>	B1306
<b>CAS No.:</b>	1956426-56-4
<b>Formula:</b>	C <sub>26</sub> H <sub>30</sub> Cl <sub>2</sub> N <sub>2</sub> O <sub>4</sub> S
<b>M.Wt:</b>	537.5
<b>Synonyms:</b>	
<b>Target:</b>	Others
<b>Pathway:</b>	CaM kinase II
<b>Storage:</b>	Store at -20°C



### Solvent & Solubility

≥ 26.9mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Mass		1mg	5mg	10mg
	Solvent	Concentration			
	1 mM		1.8605 mL	9.3023 mL	18.6047 mL
	5 mM		0.3721 mL	1.8605 mL	3.7209 mL
	10 mM		0.1860 mL	0.9302 mL	1.8605 mL

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

### Biological Activity

Shortsummary

CaMK II inhibitor

IC<sub>50</sub> & 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: 24-72 h, 24 μM

Applications: KN-93 is an inhibitor of Ca<sup>2+</sup>/calmodulin-dependent protein kinase II

(CaMK-II). It inhibits fibroblast CaMK-II activity and cell growth in a dose-dependent manner, reversibly arrests cells in G1 and induces apoptosis.

#### Animal experiment

Animal models: 8-24-week-old CaMKIV TG mice

Dosage form: 10 to 30  $\mu\text{mol/kg}$  IP

Applications: KN-93 significantly suppressed isoproterenol-induced arrhythmias in CaMKIV TG mice compared with isoproterenol-treated WT mice, indicating CaMKII is a proarrhythmic molecule in the mouse model of cardiac hypertrophy.

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.

In Vivo

## Product Citations

See more customer validations on [www.apexbt.com](http://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  $\text{Ca}^{2+}$ /CaM kinase)[J]. Cell growth & differentiation: the molecular biology journal of the American Association for Cancer Research, 1995, 6(9): 1063.

[2]. Wu Y, Temple J, Zhang R, et al. Calmodulin kinase II and arrhythmias in a mouse model of cardiac hypertrophy[J]. Circulation, 2002, 106(10): 1288-1293.

## 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 APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term 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.

# APEX BIO Technology

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