

**Product Name:** KN 93

**Catalog No.:** 1278

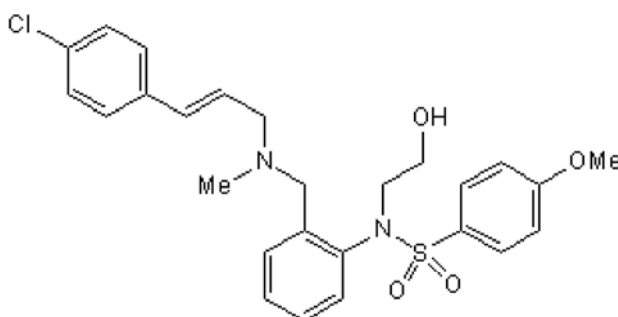
**Batch No.:** 3

CAS Number: 139298-40-1

IUPAC Name: *N*-[2-[[[3-(4-Chlorophenyl)-2-propenyl]methylamino]methyl]phenyl]-*N*-(2-hydroxyethyl)-4-methoxybenzenesulphonamide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>26</sub>H<sub>29</sub>ClN<sub>2</sub>O<sub>4</sub>S·¼H<sub>2</sub>O  
**Batch Molecular Weight:** 505.54  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM with gentle warming  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.9% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	61.77	5.88	5.54
Found	61.77	5.93	5.47

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

Potent, cell permeable inhibitor of CaM kinase II ( $IC_{50}$  = 0.37  $\mu$ M). Also a direct extracellular open channel blocker of voltage-gated potassium channels ( $IC_{50}$  = 307 nM for  $K_v1.5$ ) and abolishes IKr in ventricular myocytes ( $IC_{50}$  = 102.6 nM) independently of CaM kinase II inhibition. Water soluble form and Negative Control also available.

**Physical and Chemical Properties:**

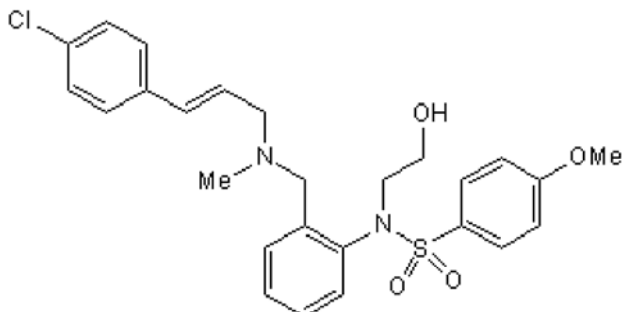
Batch Molecular Formula:  $C_{26}H_{29}ClN_2O_4S \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 505.54

Physical Appearance: White solid

**Minimum Purity:**  $\geq 98\%$

**Batch Molecular Structure:**



**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 mM with gentle warming

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Hegy** *et al* (2015) KN-93 inhibits IKr in mammalian cardiomyocytes. *J.Mol.Cell.Cardiol.* **89** 173. PMID: 26463508.

**Rezazadeh** *et al* (2006) KN-93 (2-[*N*-(2-Hydroxyethyl)]-*N*-(4-methoxybenzenesulfonyl)]-amino-*N*-(4-chlorocinnamyl)-*N*-methylbenzylamine), a calcium/calmodulin-dependent protein kinase II inhibitor, is a direct extracellular blocker of voltage-gated *J.Pharmacol.Exp.Ther.* **317** 292. PMID: 16368898.

**Patel** *et al* (1999) Calcium/calmodulin-dependent phosphorylation and activation of human Cdc25-C at the  $G_2/M$  phase transition in HeLa cells. *J.Biol.Chem.* **274** 7958. PMID: 10075693.

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**bio-techne.com**

info@bio-techne.com

techsupport@bio-techne.com

**North America**

Tel: (800) 343 7475

**China**

info.cn@bio-techne.com

Tel: +86 (21) 52380373

**Europe Middle East Africa**

Tel: +44 (0)1235 529449

**Rest of World**

www.tocris.com/distributors

Tel:+1 612 379 2956