

Product Name: KN 93 phosphate

Catalog No.: 5215

Batch No.: 2

CAS Number: 1188890-41-6

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₆H₂₉ClN₂O₄S.H₃PO₄.H₂O

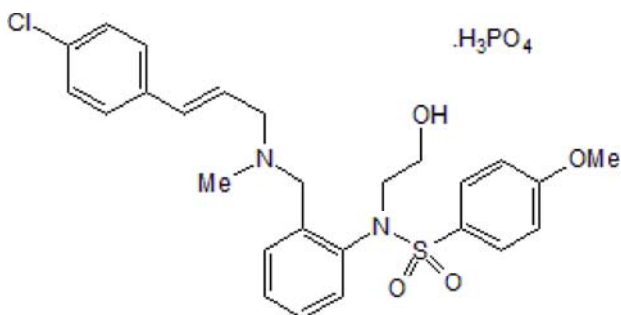
Batch Molecular Weight: 617.05

Physical Appearance: White solid

Solubility: water to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	50.61	5.55	4.54
Found	50.74	5.39	4.48

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Description:

CaM kinase II inhibitor; water soluble version of KN 93 (Cat. No. 1278).

Physical and Chemical Properties:

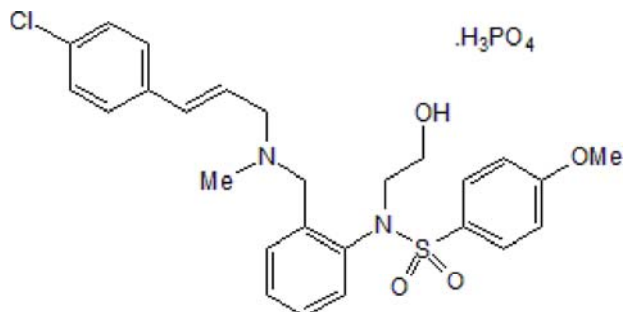
Batch Molecular Formula: C₂₆H₂₉ClN₂O₄S.H₃PO₄.H₂O

Batch Molecular Weight: 617.05

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 10 mM

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:

Bruno et al (2010) Microwave-assisted synthesis of KN-93, a potent and selective inhibitor of Ca²⁺/Calmodulin-dependent protein kinase II. *Synthesis* **24** 4193.

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 potassium channels. *J.Pharmacol.Exp.Ther.* **317** 292. PMID: 16368898.

Anderson et al (1998) KN-93, an inhibitor of multifunctional Ca²⁺/calmodulin-dependent protein kinase, decreases early afterdepolarizations in rabbit heart. *J.Pharmacol.Exp.Ther.* **287** 996. PMID: 9864285.

Sumi et al (1991) The newly synthesized selective Ca²⁺/calmodulin dependent protein kinase II inhibitor KN-93 reduces dopamine content in PC12h cells. *Biochem.Biophys.Res.Comm.* **181** 968. PMID: 1662507.

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