

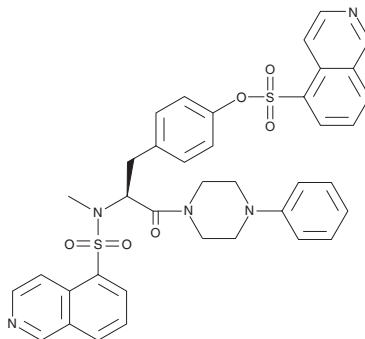
Product Information



KN-62

Item No. 13318

CAS Registry No.: 127191-97-3
Formal Name: 4-[(2S)-2-[(5-isoquinolinesulfonyl)methylamino]-3-oxo-3-(4-phenyl-1-piperazinyl)propyl]phenyl ester, 5-isoquinolinesulfonic acid
MF: C₃₈H₃₅N₅O₆S₂
FW: 721.9
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that KN-62 be stored as supplied at -20°C. It should be stable for at least two years.

KN-62 is supplied as a crystalline solid. A stock solution may be made by dissolving the KN-62 in an organic solvent purged with an inert gas. KN-62 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of KN-62 is approximately 1 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

KN-62 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, KN-62 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. KN-62 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

KN-62 is a selective, cell permeable inhibitor of calcium/calmodulin-dependent kinase II (CaMKII; IC₅₀ = 900 nM).¹ It does not affect the activity of several other kinases when tested at 10 μM.² KN-62 also acts as a non-competitive antagonist of the purinergic receptor P2RX7 (IC₅₀ = 15 nM).³

References

1. Tokunitsu, H., Chijiwa, T., Hagiwara, M., *et al.* KN-62, 1-[N,O-bis(5-isoquinolinesulfonyl)-N-methyl-L-tyrosyl]-4-phenylpiperazine, a specific inhibitor of Ca²⁺/calmodulin-dependent protein kinase II. *J. Biol. Chem.* **265**(8), 4315-4320 (1990).
2. Davis, S.P., Reddy, H., Caivano, M., *et al.* Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem J.* **351**, 95-105 (2000).
3. Chessell, I.P., Michel, A.D., and Humphrey, P.P.A. Effects of antagonists at the human recombinant P2X7 receptor. *Brit. J. Pharmacol.* **124**, 1314-1320 (1998).

Related Products

KN-92 (hydrochloride) - Item No. 9000890 • HDBA - Item No. 10010329 • CaMKII Monoclonal Antibody (Clone 6G9) - Item No. 10011437 • CaMKII (phospho-Thr²⁸⁶/Thr²⁸⁷) Monoclonal Antibody (Clone 22B1) - Item No. 10011438

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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