

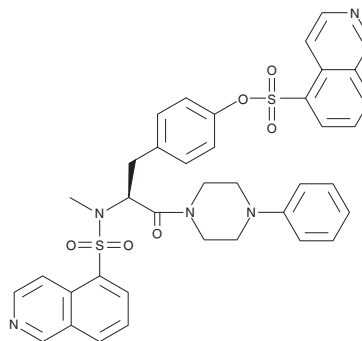
PRODUCT INFORMATION



KN-62

Item No. 13318

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



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

KN-62 is supplied as a crystalline solid. A stock solution may be made by dissolving the KN-62 in the solvent of choice, which should be 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 in these solvents is approximately 1 mg/ml in ethanol and 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.

Description

KN-62 is a selective, cell permeable inhibitor of Ca²⁺/calmodulin-dependent kinase type 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. Davies, S.P., Reddy, H., Caivano, M., *et al.* Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem. J.* **351**(1), 95-105 (2000).
3. Chessell, I.P., Michel, A.D., and Humphrey, P.P.A. Effects of antagonists at the human recombinant P2X₇ receptor. *Br. J. Pharmacol.* **124**(6), 1314-1320 (1998).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM