

Product Data Sheet

Product Name: kb NB 142-70

Cat. No.: GC11319

Chemical Properties

Cas. No. 1233533-04-4

Chemical Name 9-hydroxy-3,4-dihydro-2H-[1]benzothiolo[2,3-f][1,4]thiazepin-5-one

SMILES C1CSC2=C(C(=O)N1)SC3=C2C=C(C=C3)O

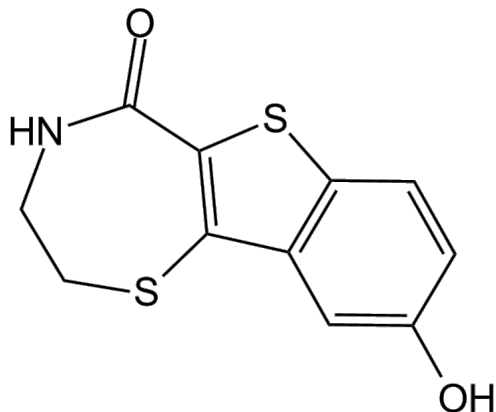
Formula $C_{11}H_9NO_2S_2$ M.Wt 251.32

Solubility ≥ 12.9 mg/mL in DMSO, ≥ 8.05 mg/mL in EtOH with ultrasonic and warming
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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Cell experiment: Briefly, PC3 cells are treated with kb NB 142-70 at 10 μ M concentration for 48 h, and then fixed in 70% ice-cold ethanol overnight and labeled with propidium iodide. The labeled cells are analyzed using a FACScan Benchtop Cytometer[1].

References:

- [1]. Lavalley CR, et al. Novel protein kinase D inhibitors cause potent arrest in prostate cancer cell growth and motility. BMC Chem Biol. 2010 May 5;10:5.
- [2]. James Sinnott-Smith, et al. Protein kinase D1 mediates class IIa histone deacetylase phosphorylation and nuclear extrusion in intestinal epithelial cells: role in mitogenic signaling. Am J Physiol Cell Physiol. 2014 May 15; 306(10): C961-C971.

Background

kb NB 142-70 is a potent PKD inhibitor, with IC₅₀s of 28.3, 58.7 and 53.2 nM for PKD1, PKD2, and PKD3, respectively. kb NB 142-70 also has antitumor activity.

kb NB 142-70 is a potent PKD inhibitor, with IC₅₀s of 28.3, 58.7 and 53.2 nM for PKD1, PKD2, and PKD3, respectively. kb NB 142-70 also inhibits Ser916 phosphorylation of PKD1 (IC₅₀, 2.2 $\pm$ 0.6 μ M) in LNCaP cells. Moreover, kb NB 142-70 is cytotoxic against PC3 cells with an EC₅₀ of 8.025 μ M[1]. kb NB 142-70 (0-5 μ M) concentration-dependently prevents ANG II-induced phosphorylation of HDAC4 at Ser246 and Ser632, HDAC5 at Ser259 and Ser498, and HDAC7 at Ser155 in IEC-18 cells. In addition, kb NB 142-70 (3.5 μ M) also suppresses HDAC4, HDAC5, and HDAC7 phosphorylation in IEC-18 cells stimulated with ANG II for 0-240 min or with vasopressin, lysophosphatidic acid (LPA), or phorbol 12,13-dibutyrate (PDBu)[2].

References:

- [1]. Lavalley CR, et al. Novel protein kinase D inhibitors cause potent arrest in prostate cancer cell growth and motility. BMC Chem Biol. 2010 May 5;10:5.
- [2]. James Sinnott-Smith, et al. Protein kinase D1 mediates class IIa histone deacetylase phosphorylation and nuclear extrusion in intestinal epithelial cells: role in mitogenic signaling. Am J Physiol Cell Physiol. 2014 May 15; 306(10): C961-C971.

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