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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PBOX 6

Cat. No.: HY-U00446

CAS No.: 290814-68-5

Molecular Formula: $C_{25}H_{20}N_2O_3$

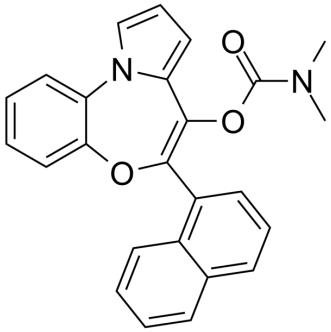
Molecular Weight: 396.44

Target: Apoptosis; Microtubule/Tubulin

Pathway: Apoptosis; Cell Cycle/DNA Damage; Cytoskeleton

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (84.07 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5224 mL	12.6122 mL	25.2245 mL
	5 mM	0.5045 mL	2.5224 mL	5.0449 mL
	10 mM	0.2522 mL	1.2612 mL	2.5224 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.31 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

PBOX 6 is a pyrrolo-1,5-benzoxazepine (PBOX) compound, acts as a microtubule-depolymerizing agent and an apoptotic agent.

IC_{50} & Target

Apoptosis[1], Microtubule[3]

In Vitro

PBOX 6 is a potent apoptotic PBOX, but does not elicit a general toxic effect in a rat R2C Leydig cell line. PBOX 6 (0-25 μM, 16 h) results in dose- and time-dependent induction of apoptosis, and also causes DNA fragmentation at 10 μM in HL-60 cells. PBOX 6 (10 μM) induces apoptosis through activation of caspase 3-like proteases in HL-60 cells. PBOX 6 (10 μM) induces apoptosis and exerts an accumulation of cytochromec in the cytosol, but this effect is not triggered by oxidative stress, and is independent of peripheral-type benzodiazepine receptor (PBR) and NF-κB[1]. PBOX 6 (25 μM) induces apoptosis in MCF-7 cells through activation of caspase-7[2]. PBOX 6 (10 μM) induces the redistribution of cypA from the nucleus to the cytosol of the cell in K562 cells. PBOX 6 (10 μM) induces nucleocytoplasmic redistribution of cypA and pin1 through a JNK-dependent

manner, also dependent on upstream activation of a trypsin-like serine protease, and this effect correlates with G2/M arrest in K562 cells[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]

Cells are seeded at a density of 3×10^5 cells/mL and following treatment with the indicated compound (including PBOX 6), an aliquot (100 µL) is cytocentrifuged onto glass slides precoated with poly(l-lysine). They are then stained with the RapiDiff kit (eosin/methylene blue). The degree of apoptosis and necrosis is determined by counting 300 cells under a light microscope. At least three fields of view per slide, with an average of 100 cells per field, are counted and the percentage of apoptosis and necrosis is determined. Apoptotic cells are characterized by cell shrinkage, membrane blebbing, and nuclear condensation and fragmentation, whereas necrotic cells are identified by cell swelling and loss of cell membrane[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Zisterer DM, et al. Pyrrolo-1,5-benzoxazepines induce apoptosis in HL-60, Jurkat, and Hut-78 cells: a new class of apoptotic agents. J Pharmacol Exp Ther. 2000 Apr;293(1):48-59.

[2]. Mc Gee MM, et al. Caspase-3 is not essential for DNA fragmentation in MCF-7 cells during apoptosis induced by the pyrrolo-1,5-benzoxazepine, PBOX-6. FEBS Lett. 2002 Mar 27;515(1-3):66-70.

[3]. Bane FT, et al. The microtubule-targeting agents, PBOX-6 [pyrrolobenzoxazepine 7-[(dimethylcarbamoyl)oxy]-6-(2-naphthyl)pyrrolo-[2,1-d] (1,5)-benzoxazepine] and paclitaxel, induce nucleocytoplasmic redistribution of the peptidyl-prolyl isomerases, cycloph

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