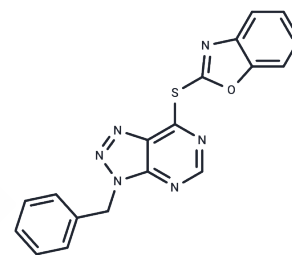


VAS2870

Chemical Properties

CAS No. : 722456-31-7
Formula: C₁₈H₁₂N₆O₅
Molecular Weight: 360.39
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.



Biological Description

Description	VAS2870 is an inhibitor of NADPH oxidase (NOX).
Targets(IC50)	NADPH
In vitro	VAS2870 effectively inhibits the growth and proliferation of FaO rat hepatoma cells and various human hepatocellular carcinoma (HCC) cell lines, while also enhancing TGF- β -mediated apoptosis in these cells. It suppresses the activation of NADPH oxidase and the production of intracellular ROS induced by PDGF-BB, without affecting DNA synthesis. Preincubation with VAS2870 at concentrations of 10 and 20 μ M completely prevents PDGF-mediated NADPH oxidase activation and ROS production, although it does not interfere with PDGF-induced cell cycle progression. However, VAS2870 does effectively eliminate PDGF-dependent chemotaxis of VSMC, achieving 100% inhibition at 10 μ M. Additionally, VAS2870 dose-dependently reduces autocrine cell number increases in FaO rat hepatoma cells, and at 25 mM, it almost completely blocks ROS production and thymidine incorporation.

Solubility Information

Solubility	DMSO: 83.3 mg/mL (231.14 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (9.16 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7748 mL	13.8739 mL	27.7477 mL
5 mM	0.555 mL	2.7748 mL	5.5495 mL
10 mM	0.2775 mL	1.3874 mL	2.7748 mL
50 mM	0.0555 mL	0.2775 mL	0.555 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

ten Freyhaus H, et al. Novel Nox inhibitor VAS2870 attenuates PDGF-dependent smooth muscle cell chemotaxis, but not proliferation. *Cardiovasc Res.* 2006 Jul 15;71(2):331-41.

Tao L, Liu Z, Li X, et al. Oleanonic acid ameliorates mutant A β precursor protein-induced oxidative stress, autophagy deficits, ferroptosis, mitochondrial damage, and ER stress in vitro. *Biochimica et Biophysica Acta (BBA)-Molecular Basis of Disease.* 2024: 167459.

Sancho P, et al. The NADPH oxidase inhibitor VAS2870 impairs cell growth and enhances TGF- β -induced apoptosis of liver tumor cells. *Biochem Pharmacol.* 2011 Apr 1;81(7):917-24.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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