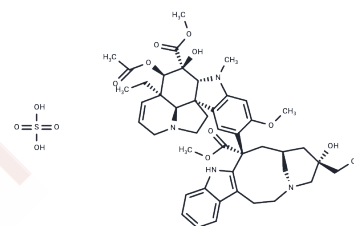


## Vinblastine sulfate

## Chemical Properties

CAS No. :	143-67-9
Formula:	C <sub>46</sub> H <sub>58</sub> N <sub>4</sub> O <sub>9</sub> ·H <sub>2</sub> SO <sub>4</sub>
Molecular Weight:	909.06
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Vinblastine sulfate (Vincalukoblastine sulfate salt) can inhibit the formation of microtubule, it also inhibits nAChR (IC <sub>50</sub> =8.9 μM).
Targets(IC <sub>50</sub> )	Microtubule Associated, AChR, Autophagy
In vitro	The average terminal half-lives of Vinblastine is 14.3 h. When incubated in freshly isolated rat hepatocytes, VLB penetrates rapidly and intensely into the cells, probably through a passive diffusion mechanism followed by tight cellular binding[3]. Vinblastine inhibits the angiogenic response induced by adrenomedullin and is also positive for mitotic slippage, causing micronuclei in mononucleate cells with cytokinesis block[4]. Vinblastine gives significant increase in micronucleated mononucleated cells at concentrations that produced approximately 50% cell death and cytostasis or less as calculated using RPD, RICC and RCC[2].
In vivo	Vinblastine, a widely used anticancer drug, has undesired side effects [6]. A combination of VBL and RAP at very low doses achieves a satisfactory antiangiogenic effect against human HCC in vivo [4]. The clinically relevant dose of vinblastine inhibits tubulin palmitoylation in CEM cells (effect on depalmitoylation of tubulin) in vivo [5].
Kinase Assay	Cell based receptor autophosphorylation assays: Autophosphorylation of PDGFR family kinase assays are cell-based enzyme-linked immunosorbent (ELISA) assays using CHO cells expressing wild-type PDGFRβ, chimeric protein PDGFRβ/c-Kit, and PDGFRβ/Flt3 which contain the extracellular and transmembrane domains of PDGFRβ and the cytoplasmic domain of c-Kit, and Flt-3. Cells are grown to confluency in 96-well microtiter plates under standard tissue culture conditions, followed by serum starvation for 16 hours. Briefly, quiescent cells are incubated at 37 °C with increasing concentrations of Tundutinib for 30 minutes followed by the addition of 8 nM PDGF-BB for 10 minutes. Cells are lysed in 100 mM Tris, pH 7.5, 750 mM NaCl, 0.5% Triton X-100, 10 mM sodium pyrophosphate, 50 mM NaF, 10 μg/mL aprotinin, 10 μg/mL leupeptin, 1 mM phenylmethylsulfonyl fluoride, 1 mM sodium vanadate, and the lysate is cleared by centrifugation at 15,000 g for 5 minutes. Clarified lysates are transferred into a second microtiter plate in which the wells are previously coated with 500 ng/well of 1B5B11 anti-PDGFRβ mAb and then incubated for 2 hours at room temperature. After washing three times with binding buffer (0.3% gelatin, 25 mM HEPES, pH 7.5, 100 mM NaCl, 0.01% Tween 20), 250 ng/mL of rabbit polyclonal anti-phosphotyrosine antibody is added and

## A DRUG SCREENING EXPERT

Kinase Assay	plates are incubated at 37 °C for 60 minutes. Subsequently, each well is washed three times with binding buffer and incubated with 1 µg/mL of horseradish peroxidase-conjugated anti-rabbit antibody at 37 °C for 60 minutes. Wells are washed prior to adding 2,2'-azino-bis(3-ethylbenzthiazoline-6-sulfonic acid), and the rate of substrate formation is monitored at 650 nm.
Cell Research	Six-well treatment plates are set up that contained 5 × 10 <sup>4</sup> cells/mL in each well, suspended in 3 mL culture medium, and these are treated with vinblastine for 3 h followed by 21 h growth. (Only for Reference)

### Solubility Information

Solubility	DMSO: 242 mg/mL (266.21 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (5.5 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	1.100 mL	5.5002 mL	11.0004 mL
5 mM	0.220 mL	1.100 mL	2.2001 mL
10 mM	0.110 mL	0.550 mL	1.100 mL
50 mM	0.022 mL	0.110 mL	0.220 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

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