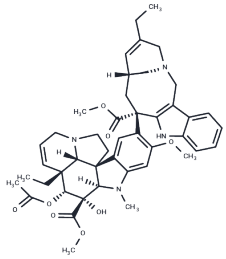
Data Sheet (Cat.No.T0190)

TargetMol

Vinorelbine

Chemical Properties



CAS No. : 71486-22-1

Formula: C45H54N4O8

Molecular Weight: 778.93

Storage: Store at low temperature,Keep away from direct sunlight
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	Vinorelbine (KW-2307 base) is a semisynthetic vinca alkaloid. Vinorelbine binds to tubulin and prevents the formation of the mitotic spindle, resulting in the arrest of tumor cell growth in metaphase.
Targets(IC50)	Microtubule Associated,Autophagy
In vitro	Vinorelbine (0.5-5 nM) inhibits cell proliferation by 50% (IC50) at 1.25 nM, with no cells in anaphase at 8 nM[1]. It time-dependently induces p53 and p21WAF1/CIP1 expression in androgen-dependent (AD) and -independent (AI) prostate cancer cell lines and stimulates reporter genes in a concentration-dependent manner[2].
In vivo	After vinorelbine treatment, the initial neutropenic episode occurred after the first administration in four dogs, the second in one dog, and the sixth in another dog [3]. In tumor-bearing cats, vinorelbine is tolerated at a weekly interval with a maximum tolerated dose (MTD) of 11.5 mg/m2 [4].
Kinase Assay	Reverse transcriptase assays: Reverse transcriptase assays are carried out in a reaction mixture (50 µL) containing 50 mM Tris-HCl (pH 7.5), 5 mM DTT, 100 mM potassium chloride, 0.01% Triton X-100 or NP40, 10 µg/ml (dT)15.(A)n as template primer and [3H] deoxythymidine triphospahate. The reaction mixture is incubated for 1 hr at 37 ℃ and stopped by the addition of 50 µg of yeast tRNA and 2 mL of 10% solution of trichloroacetic acid containing 1 mM sodium pyrophosphate. The samples are filtered on filters (0.45 µm), washed first with 5% TCA solution for 5 times and then with 2 ml of 70% ethanol. The filters are dried, scintillation fluid is added and the radioactivity counted in a counter.

Solubility Information

Solubility	H2O: 10 mg/mL (12.84 mM),Sonication is recommended. DMSO: 100 mg/mL (128.38 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2838 mL	6.4191 mL	12.8381 mL
5 mM	0.2568 mL	1.2838 mL	2.5676 mL
10 mM	0.1284 mL	0.6419 mL	1.2838 mL
50 mM	0.0257 mL	0.1284 mL	0.2568 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

Ngan VK, et al. Mechanism of mitotic block and inhibition of cell proliferation by the semisynthetic Vinca alkaloids vinorelbine and its newer derivative vinflunine. Mol Pharmacol. 2001 Jul;60(1):225-32.
Liu XM, et al. Unique induction of p21(WAF1/CIP1)expression by vinorelbine in androgen-independent prostate cancer cells. Br J Cancer. 2003 Oct 20;89(8):1566-73.
Poirier VJ, et al. Toxicity, dosage, and efficacy of vinorelbine (Navelbine) in dogs with spontaneous neoplasia. J Vet Intern Med. 2004 Jul-Aug;18(4):536-9.
Pierro JA, et al. Phase I clinical trial of vinorelbine in tumor-bearing cats. J Vet Intern Med. 2013 Jul-Aug;27(4):943-8.