

# Vinflunine

**Catalog No: tcsc2868**



## Available Sizes

**Size:** 5mg

**Size:** 10mg

**Size:** 50mg

**Size:** 100mg



## Specifications

**CAS No:**

162652-95-1

**Formula:**

$C_{45}H_{54}F_2N_4O_8$

**Pathway:**

Cell Cycle/DNA Damage;Cytoskeleton

**Target:**

Microtubule/Tubulin;Microtubule/Tubulin

**Purity / Grade:**

>98%

**Solubility:**

10 mM in DMSO

**Observed Molecular Weight:**

816.93

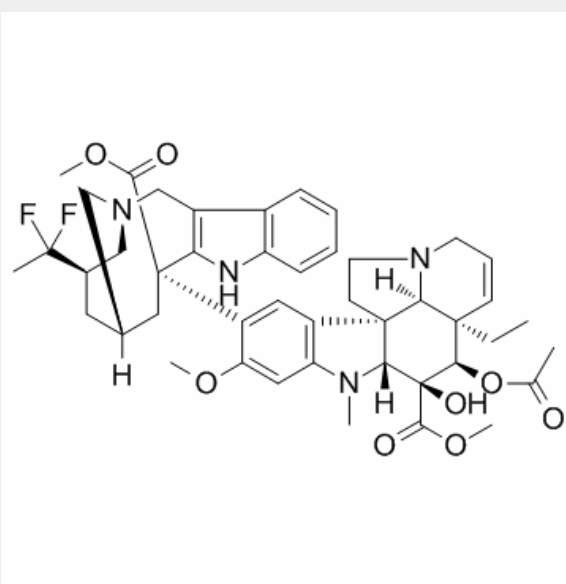
## Product Description

Vinflunine is a new vinca alkaloid uniquely fluorinated with the properties of mitotic-arresting and tubulin-interacting activity.

Target: Microtubule/Tubulin

The major effects of Vinflunine on dynamic instability are a slowing of the microtubule growth rate, an increase in growth duration, and a reduction in shortening duration. The effects of Vinflunine on the readmilling rate is examined by following [3H]GTP incorporation into MAP-rich microtubules, and the IC<sub>50</sub> is 0.42 μM [1]. Vinflunine induced mitotic accumulation with IC<sub>50</sub> with 18.8 nM, which decreases the centromere dynamicity by 44% and increases the time centromeres spent in a paused state by 63% [2]. Treatment of Vinflunine induces a rapid change in endothelial cell shape: cells retract and assumes a rounded morphology. Mean IC<sub>50</sub> values are  $9.9 \times 10^{-5}$  M  $\times 10^{-5}$  M for fibronectin and  $5.0 \times 10^{-5}$  M  $\times 10^{-5}$  M for type IV collagen. A short 4 hours exposure of endothelial cells to Vinflunine at  $10^{-8}$  M results in an inhibition of endothelial cell motility response to NIH3T3 cells-derived angiogenic factors. Inhibition is dose dependent, with a mean IC<sub>50</sub> value of  $7.1 \times 10^{-7}$  M  $\times 10^{-7}$  M [3].

Intravenous treatment of mice with Vinflunine, immediately before and 2 day after Matrigel implantation, results in a dose-dependent inhibition of the bFGF-induced angiogenic response, compared with vehicle-treated animals. Inhibition of haemoglobin content is significant at 1.25, 2.5 and 5 mg/kg, with no effect at 0.63 mg/kg ( $P > 0.05$ ). An ID<sub>50</sub> value (dose which inhibits 50% of bFGF-induced neovascularisation) is calculated as 1 mg/kg. Low doses of Vinflunine reduce the number of experimental liver metastases by human LS174T colon cancer cell. A slight overall decrease in liver metastatic foci is already observed at the very low dose of 0.16 mg/kg Vinflunine, although maximal overall inhibition is reached at the maximal tolerated dose (MTD) of 20 mg/kg [3].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!