

Vinflunine (Tartrate)

Catalog No: tcsc3469



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

1201898-17-0

Formula:

$C_{49}H_{60}F_2N_4O_{14}$

Pathway:

Cell Cycle/DNA Damage;Cytoskeleton

Target:

Microtubule/Tubulin;Microtubule/Tubulin

Purity / Grade:

>98%

Solubility:

DMSO : $\geq$ 45 mg/mL (46.53 mM)

Observed Molecular Weight:

967.02

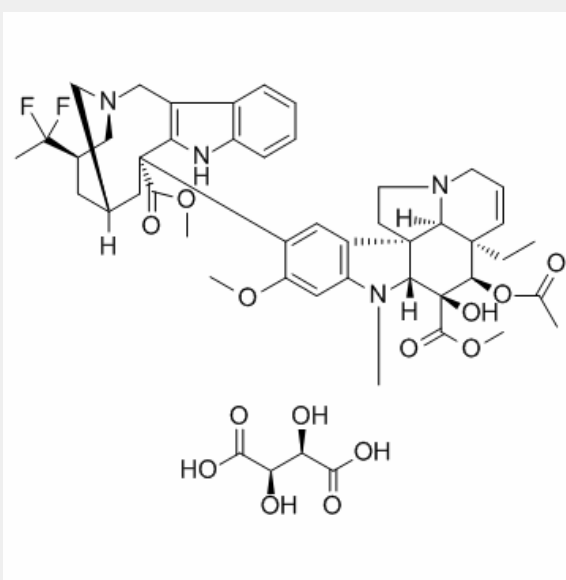
Product Description

Vinflunine Tartrat 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 IC₅₀ is 0.42 μM [1]. Vinflunine induced mitotic accumulation with IC₅₀ 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 IC₅₀ values are 9.9×10^{-5} M $\times 10^{-5}$ M for fibronectin and 5.0×10^{-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 IC₅₀ value of 7.1×10^{-7} $\times 10^{-7}$ 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 ID₅₀ 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].



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