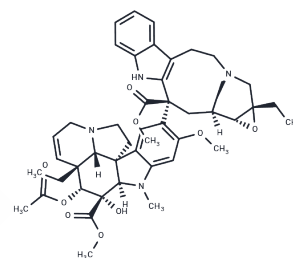


## Vinleurosine

## Chemical Properties

|                   |   |
|-------------------|---|
| CAS No. :         | 23360-92-1  |
| Formula:          | C <sub>46</sub> H <sub>56</sub> N <sub>4</sub> O <sub>9</sub>   |
| Molecular Weight: | 808.973   |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |



## Biological Description

|               |   |
|---------------|---|
| Description   | Vinleurosine can partially inhibit the energy dependent transport of alpha-aminoisobutyric acid in Ehrlich ascites tumor cells.   |
| Targets(IC50) | Others  |
| In vitro      | Vincristine, other periwinkle alkaloids, and colchicine partially inhibit the energy dependent transport of alpha-aminoisobutyric acid in Ehrlich ascites tumor cells. The properties of this phenomenon were characterized in detail for vincristine. Maximum depression of the steady-state intracellular alpha-aminoisobutyric acid level was achieved with a vincristine concentration of less than 0.5 μM. The inhibitory effect of vincristine increases as the extracellular alpha-aminoisobutyric acid concentration is increased reaching a maximum, however, of only approximately to 25% at a level of 5 mM, leaving a large gradient for alpha-aminoisobutyric acid across the cell membrane. Vincristine produced an asymmetrical uptake rate, while increasing the efflux of alpha-aminoisobutyric acid. Inhibition of net alpha-aminoisobutyric acid transport by vincristine was partially reversible (approximately to 40%). Colchicine (50 μM) reduced the steady-state alpha-aminoisobutyric acid level by 30%, an effect that was not reversible. Inhibition by Vinleurosine and vinrosidine was comparable to that of vincristine. Addition of glucose to the medium resulted in a small, but significant, decrease in the inhibitory effects of both vincristine and colchicine. The data indicate that these agents inhibit a small component of the uphill transport of alpha-aminoisobutyric acid in Ehrlich ascites tumor cells. The inhibitory effect of vincristine cannot be attributed to an increase in the passive permeability of the cell membrane to this agent. Rather, the data along with other studies from this laboratory suggest that vincristine reduces the energy-dependent transport of alpha-aminoisobutyric acid by either inhibiting cellular energy metabolism or by inhibiting cellular energy metabolism or by inhibiting the coupling of energy-metabolism to the transport of this amino acid and raises the possibility that cellular microtubules play a role in these processes. |

### Preparing Stock Solutions

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|       | <b>1mg</b> | <b>5mg</b> | <b>10mg</b> |
|-------|------------|------------|-------------|
| 1 mM  | 1.2361 mL  | 6.1807 mL  | 12.3614 mL  |
| 5 mM  | 0.2472 mL  | 1.2361 mL  | 2.4723 mL   |
| 10 mM | 0.1236 mL  | 0.6181 mL  | 1.2361 mL   |
| 50 mM | 0.0247 mL  | 0.1236 mL  | 0.2472 mL   |

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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

A reduction in energy-dependent amino acid transport by microtubular inhibitors in Ehrlich ascites tumor cells. J Cell Physiol. 1975 Oct;86(2 Pt 1):201-11.

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