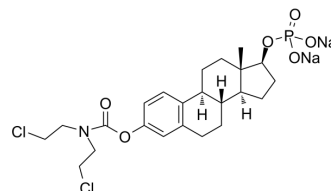


## Estramustine phosphate sodium

<b>Cat. No.:</b>	HY-13627
<b>CAS No.:</b>	52205-73-9
<b>Molecular Formula:</b>	C <sub>23</sub> H <sub>30</sub> Cl <sub>2</sub> NNa <sub>2</sub> O <sub>6</sub> P
<b>Molecular Weight:</b>	564.35
<b>Target:</b>	Microtubule/Tubulin; Apoptosis
<b>Pathway:</b>	Cell Cycle/DNA Damage; Cytoskeleton; Apoptosis
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 62.5 mg/mL (110.75 mM; Need ultrasonic)																					
	DMSO : 5 mg/mL (8.86 mM; Need ultrasonic)																					
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Please refer to the solubility information to select the appropriate solvent.																						
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 65 mg/mL (115.18 mM); Clear solution; Need ultrasonic																					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Estramustine phosphate sodium, an estradiol analog, is an orally active antimicrotubule chemotherapy agent. Estramustine phosphate sodium depolymerises microtubules by binding to microtubule associated proteins (MAPs) and/or to tubulin. Estramustine phosphate sodium can interfere mitosis, trigger cell death and induce apoptosis, which can be used for the research of cancer like prostate cancer <sup>[1][2][3]</sup> .
<b>In Vitro</b>	Estramustine phosphate sodium (1 µg/ mL, 48 h) suppresses PC3 cell growth <sup>[1]</sup> . Estramustine phosphate sodium (2 µg/mL, 48 h) elevates phosphatidylserine eversion amount on PC3 cells and induces PC3 cell apoptosis through reducing miR-31 <sup>[1]</sup> . Estramustine phosphate sodium (0-40 µM, 24-72 h) inhibits cell proliferation and tubulin cytoskeleton in RAW 264.7 cells <sup>[2]</sup> . Estramustine phosphate sodium (10 µM, 24 h) inhibits TGF-β-induced RAW 264.7 cell migration, as well as TGF-β-induced uPA production by inhibiting Smad3 activation <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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<b>In Vivo</b>	<p>Estramustine phosphate sodium (Intraperitoneal injection, 4 or 12 mg/kg, a daily dose for 2 weeks) inhibits PAC120 tumor growth 53% by day 35<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tbody> <tr> <td>Animal Model:</td> <td>Swiss nu/nu (nude) male mice (5-week-old) bearing PAC120 tumors<sup>[3]</sup></td> </tr> <tr> <td>Dosage:</td> <td>4 mg/kg, 12 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection; daily; for 2 weeks</td> </tr> <tr> <td>Result:</td> <td>Suppressed the development of skin lesions and resulted in a dissociation between DTH response and antibody production.</td> </tr> </tbody> </table> <table border="1"> <tbody> <tr> <td>Animal Model:</td> <td>Human prostate cancer xenograft PAC120<sup>[3]</sup></td> </tr> <tr> <td>Dosage:</td> <td>4 or 12 mg/kg, a daily dose for 2 weeks.</td> </tr> <tr> <td>Administration:</td> <td>Intraperitoneal injection</td> </tr> <tr> <td>Result:</td> <td>Inhibited PAC120 tumor growth 53% by day 35.</td> </tr> </tbody> </table>	Animal Model:	Swiss nu/nu (nude) male mice (5-week-old) bearing PAC120 tumors <sup>[3]</sup>	Dosage:	4 mg/kg, 12 mg/kg	Administration:	Intraperitoneal injection; daily; for 2 weeks	Result:	Suppressed the development of skin lesions and resulted in a dissociation between DTH response and antibody production.	Animal Model:	Human prostate cancer xenograft PAC120 <sup>[3]</sup>	Dosage:	4 or 12 mg/kg, a daily dose for 2 weeks.	Administration:	Intraperitoneal injection	Result:	Inhibited PAC120 tumor growth 53% by day 35.								
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## REFERENCES

[1]. C Wei, et al. Estramustine phosphate induces prostate cancer cell line PC3 apoptosis by down-regulating miR-31 levels. Eur Rev Med Pharmacol Sci. 2018 Jan;22(1):40-45.

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[2]. Sonja S Mojsilovic, et al. Estramustine Phosphate Inhibits TGF- $\beta$ -Induced Mouse Macrophage Migration and Urokinase-Type Plasminogen Activator Production. *Anal Cell Pathol (Amst)*. 2018 Sep 2;2018:3134102.

[3]. Stephane Oudard, et al. Activity of docetaxel with or without estramustine phosphate versus mitoxantrone in androgen dependent and independent human prostate cancer xenografts. *J Urol*. 2003 May;169(5):1729-34.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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