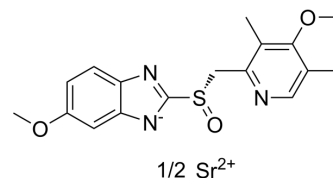


Esomeprazole hemistrontium

Cat. No.:	HY-17021C
CAS No.:	914613-86-8
Molecular Formula:	C ₁₇ H ₁₈ N ₃ O ₃ SSr ⁺
Molecular Weight:	388.22
Target:	Proton Pump; Bacterial
Pathway:	Membrane Transporter/Ion Channel; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	<p>Esomeprazole ((S)-Omeprazole) hemistrontium is a potent and orally active proton pump inhibitor and reduces acid secretion through inhibition of the H⁺, K⁺-ATPase in gastric parietal cells. Esomeprazole hemistrontium has the potential for symptomatic gastroesophageal reflux disease research^{[1][2][3]}.</p>								
In Vitro	<p>Esomeprazole (25-100 μM; 20 hours; MDA-MB-468 cells) hemistrontium treatment suppresses growth of triple-negative breast cancer cell in vitro in a dose-dependent manner through increase in their intracellular acidification^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Cell Line:</td> <td>MDA-MB-468 cells</td> </tr> <tr> <td>Concentration:</td> <td>25 μM, 50 μM, 75 μM, 100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>20 hours</td> </tr> <tr> <td>Result:</td> <td>Suppressed growth of triple-negative breast cancer cell in vitro in a dose-dependent manner.</td> </tr> </table>	Cell Line:	MDA-MB-468 cells	Concentration:	25 μM, 50 μM, 75 μM, 100 μM	Incubation Time:	20 hours	Result:	Suppressed growth of triple-negative breast cancer cell in vitro in a dose-dependent manner.
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In Vivo	<p>Esomeprazole (30-300 mg/kg; oral gavage; daily; for 19 or 11 days; C57BL/6J mice) hemistrontium treatment significantly inhibits the progression of fibrosis throughout the lungs of the animals. Esomeprazole also reduces circulating markers of inflammation and fibrosis^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Animal Model:</td> <td>C57BL/6J mice (8-weeks old, 25-30 g) treated with cotton smoke-induced lung injury^[2]</td> </tr> <tr> <td>Dosage:</td> <td>30 mg/kg, 300 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Oral gavage; daily; for 19 or 11 days</td> </tr> <tr> <td>Result:</td> <td>Significantly inhibited the progression of fibrosis throughout the lungs of the animals.</td> </tr> </table>	Animal Model:	C57BL/6J mice (8-weeks old, 25-30 g) treated with cotton smoke-induced lung injury ^[2]	Dosage:	30 mg/kg, 300 mg/kg	Administration:	Oral gavage; daily; for 19 or 11 days	Result:	Significantly inhibited the progression of fibrosis throughout the lungs of the animals.
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REFERENCES

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- [1]. Wayne Goh, et al. Use of proton pump inhibitors as adjunct treatment for triple-negative breast cancers. An introductory study. J Pharm Pharm Sci. 2014;17(3):439-46.
- [2]. Christina Nelson, et al. Therapeutic Efficacy of Esomeprazole in Cotton Smoke-Induced Lung Injury Model. Front Pharmacol. 2017 Jan 26;8:16.
- [3]. Thomas J Johnson, et al. Esomeprazole: a clinical review. Am J Health Syst Pharm. 2002 Jul 15;59(14):1333-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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