# Eprazinone dihydrochloride

**Cat. No.:** HY-B2078A

**CAS No.:** 10402-53-6

**Molecular Formula:** $C_{24}H_{34}Cl_2N_2O_2$

**Molecular Weight:** 453.44

**Target:** Neurokinin Receptor

**Pathway:** GPCR/G Protein; Neuronal Signaling

**Storage:**

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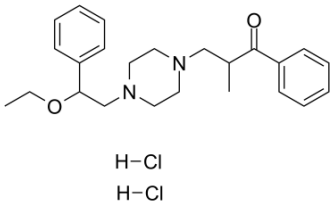
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 6 months |
| | -20°C | 1 month |




## BIOLOGICAL ACTIVITY

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| **Description** | Eprazinone dihydrochloride is a gent with mucolytic, secretolytic, antitussive, and bronchial antispasmodic properties. Eprazinone dihydrochloride is a neurokinin 1 receptor (NK1R) ligand. Eprazinone dihydrochloride has the potential for chronic bronchitis treatment that improved pulmonary function and arterial partial pressure of oxygen[1][2]. |
| **$IC_{50}$ & Target** | Neurokinin 1 receptor[1] |
| **In Vitro** | Eprazinone specifically displaces binding to the NK1R. Although Eprazinone displays a rather weak inhibition of [$^{125}$I]BH-SP binding to NK1R, at a concentration of 25 μM, and an antagonistic effect of about 30%, NK1R blockade could contribute to its mucolytic activity[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | Eprazinone (50-200 mg/kg; oral gavage; daily; for 4 days; adult male rats) at a dose of 200 mg/kg significantly increases total and individual (with the exception of phosphatidylinositol) phospholipid levels and decreases total neutral lipids. Lower doses of Eprazinone significantly decrease neutral lipid levels without affecting the phospholipids[1].<br>In airway epithelial studies, mucosal addition of Eprazinone produces a dose-dependent partially reversible decrease in short-circuit current (Isc). The decrease in Isc at lower Eprazinone concentrations is accounted for entirely by a decrease in net chloride secretion while at higher concentrations both sodium and chloride transport are affected[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

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| Animal Model: | Adult male pathogen free Fischer 344 inbred rats (200-250 g)[1] |
| Dosage: | 50 mg/kg, 100 mg/kg, and 200 mg/kg |
| Administration: | Oral gavage; daily; for 4 days |
| Result: | At a dose of 200 mg/kg significantly increased total and individual (with the exception of phosphatidylinositol) phospholipid levels and decreased total neutral lipids. |

## REFERENCES

[1]. R S Thrall, et al. Eprazinone Alters Lung Lavage Lipid Levels and Transtracheal Ion Transport. Exp Lung Res. May-Jun 1992;18(3):409-20.

[2]. Yvonne Krautscheid, et al. Pharmacophore Modeling, Virtual Screening, and in Vitro Testing Reveal Haloperidol, Eprazinone, and Fenbutrazate as Neurokinin Receptors Ligands. J Chem Inf Model. 2014 Jun 23;54(6):1747-57.



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