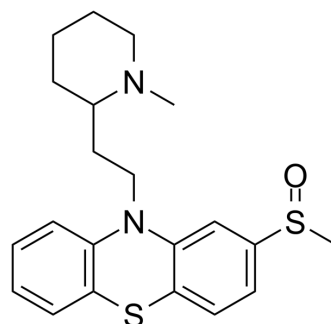


Mesoridazine

| | |
|--------------------|---|
| Cat. No.: | HY-B1482A |
| CAS No.: | 5588-33-0 |
| Molecular Formula: | C ₂₁ H ₂₆ N ₂ OS ₂ |
| Molecular Weight: | 386.57 |
| Target: | Potassium Channel |
| Pathway: | Membrane Transporter/Ion Channel |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |



BIOLOGICAL ACTIVITY

| | | | | | | | | | |
|-------------------------------------|--|---------------|--|---------|-------|-----------------|---|---------|--|
| Description | Mesoridazine (TPS-23), a metabolite of Thioridazine (HY-B0965A), acts as an orally active phenothiazine antipsychotic agent. Mesoridazine is a potent and rapid open-channel blocker of human ether-a-go-go related gene (hERG) channels and blocks hERG currents with an IC ₅₀ of 550 nM (at 0 mV) in human embryonic kidney 293 cells ^[1] . Mesoridazine can be used for the research of schizophrenia, as well as certain other psychiatric disorders ^{[1][2]} . | | | | | | | | |
| IC₅₀ & Target | IC ₅₀ : hERG currents ^[1] | | | | | | | | |
| In Vitro | <p>Mesoridazine blocks human ether-a-go-go-related gene (HERG) currents in a concentration-dependent manner (IC₅₀ = 550 nM at 0 mV), block increased significantly over the voltage range where HERG activates and saturates at voltages eliciting maximal HERG channel activation^[1].</p> <p>Mesoridazine (15 mM; 24 h) shows total absorption of 15.94 ± 4.04% and 39.24 ± 5.11% in nude mouse and pig skin, respectively^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> | | | | | | | | |
| In Vivo | <p>Mesoridazine (15 mM; topical administration; once or daily for 7 consecutive days) displays potent activity and a long period of analgesia at blocking cutaneous pain^[3].</p> <p>Mesoridazine (15 mM) shows intradermal concentration of 0.34 0.74 nmol/mg after topical application on nude mouse back for 6 h^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Eight-week-old female nude mice^[3]</td> </tr> <tr> <td>Dosage:</td> <td>15 mM</td> </tr> <tr> <td>Administration:</td> <td>Topical administration, once (analgesia test) or daily for 7 consecutive days (irritation test)</td> </tr> <tr> <td>Result:</td> <td>Showed analgesic effect. A slight transepidermal water loss (TEWL) increased from 7.8 to 9.9 g/m²/h was observed.</td> </tr> </table> | Animal Model: | Eight-week-old female nude mice ^[3] | Dosage: | 15 mM | Administration: | Topical administration, once (analgesia test) or daily for 7 consecutive days (irritation test) | Result: | Showed analgesic effect. A slight transepidermal water loss (TEWL) increased from 7.8 to 9.9 g/m ² /h was observed. |
| Animal Model: | Eight-week-old female nude mice ^[3] | | | | | | | | |
| Dosage: | 15 mM | | | | | | | | |
| Administration: | Topical administration, once (analgesia test) or daily for 7 consecutive days (irritation test) | | | | | | | | |
| Result: | Showed analgesic effect. A slight transepidermal water loss (TEWL) increased from 7.8 to 9.9 g/m ² /h was observed. | | | | | | | | |

REFERENCES

[1]. Liu KS, et al. Topically applied mesoridazine exhibits the strongest cutaneous analgesia and minimized skin disruption among tricyclic antidepressants: The skin

absorption assessment. Eur J Pharm Biopharm. 2016 Aug;105:59-68.

[2]. Zhi Su, et al. Mesoridazine: an open-channel blocker of human ether-a-go-go-related gene K⁺ channel. J Mol Cell Cardiol. 2004 Jan;36(1):151-60.

[3]. I S M Salih, et al. Comparison of the effects of thioridazine and mesoridazine on the QT interval in healthy adults after single oral doses. Clin Pharmacol Ther. 2007 Nov;82(5):548-54.

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

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