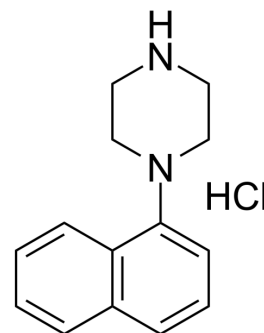


1-(1-Naphthyl)piperazine hydrochloride

Cat. No.:	HY-112538
CAS No.:	104113-71-5
Molecular Formula:	C ₁₄ H ₁₇ ClN ₂
Molecular Weight:	248.75
Target:	5-HT Receptor; Apoptosis
Pathway:	GPCR/G Protein; Neuronal Signaling; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	1-1-Naphthylpiperazine hydrochloride (1-NP hydrochloride; 1-Naphthylpiperazine hydrochloride) is a serotonergic derivative of quipazine, which is both an agonist for 5-HT _{1A} receptor and an antagonist for 5-HT _{2A} receptor. 1-1-Naphthylpiperazine hydrochloride induces cell apoptosis. 1-1-Naphthylpiperazine hydrochloride prevents the immunosuppression and photocarcinogenesis ^[1] .																	
IC₅₀ & Target	5-HT _{1A} Receptor	5-HT _{2A} Receptor																
In Vitro	<p>1-1-Naphthylpiperazine hydrochloride (50-300 μM) suppresses the melanoma cells MNT-1 with an IC₅₀ is 163.6 μM, by inducing the cell cycle arrest at S-phase, cell apoptosis and ROS generation^[1].</p> <p>1-1-Naphthylpiperazine hydrochloride (0-200 μM) regulates the expressions of related genes, which are associated with the UV-induced immunosuppression^[1].</p> <p>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"> <tr> <td>Cell Line:</td> <td>MNT-1</td> </tr> <tr> <td>Concentration:</td> <td>50-300 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>3-24 h</td> </tr> <tr> <td>Result:</td> <td>Inhibited cell viability</td> </tr> </table> <p>RT-PCR^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MNT-1</td> </tr> <tr> <td>Concentration:</td> <td>0-150 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Downregulated levels of PAK1, upregulated levels of PTGS2 and IL12A.</td> </tr> </table>		Cell Line:	MNT-1	Concentration:	50-300 μM	Incubation Time:	3-24 h	Result:	Inhibited cell viability	Cell Line:	MNT-1	Concentration:	0-150 μM	Incubation Time:	24 h	Result:	Downregulated levels of PAK1, upregulated levels of PTGS2 and IL12A.
Cell Line:	MNT-1																	
Concentration:	50-300 μM																	
Incubation Time:	3-24 h																	
Result:	Inhibited cell viability																	
Cell Line:	MNT-1																	
Concentration:	0-150 μM																	
Incubation Time:	24 h																	
Result:	Downregulated levels of PAK1, upregulated levels of PTGS2 and IL12A.																	
In Vivo	1-1-Naphthylpiperazine hydrochloride (1 μM, i.p., single dose) promotes the DNA repair induced by UV radiation through the mechanism involving nucleotid excision repair(NER), which prevents the immune suppression and interferes the photocarcinogenesis in UVB exposed C57BL/6 mice ^[2] .																	

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	UVB-radiation exposed C57BL/6 mice and XPA-/- mice ^[2]
Dosage:	1 μ M
Administration:	i.p., single dose
Result:	Accelerated the repair of UV-induced photoproducts with presence of NER.

REFERENCES

- [1]. Menezes AC, et al., Cytotoxic effect of the serotonergic drug 1-(1-Naphthyl)piperazine against melanoma cells. *Toxicol In Vitro*. 2018 Mar;47:72-78.
- [2]. Sreevidya CS, et al., Agents that reverse UV-Induced immune suppression and photocarcinogenesis affect DNA repair. *J Invest Dermatol*. 2010 May;130(5):1428-37.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA