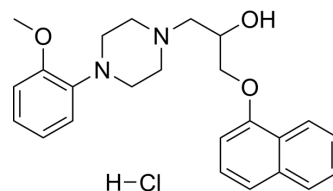


## Naftopidil hydrochloride

Cat. No.:	HY-B0391B
CAS No.:	1164469-60-6
Molecular Formula:	C <sub>24</sub> H <sub>29</sub> ClN <sub>2</sub> O <sub>3</sub>
Molecular Weight:	428.95
Target:	Adrenergic Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Naftopidil hydrochloride (KT-611 hydrochloride) is a selective alpha1-adrenoceptor antagonist, with K <sub>i</sub> s of 3.7 nM, 20 nM and 1.2 nM for the cloned human α <sub>1a</sub> -, α <sub>1b</sub> - and α <sub>1d</sub> -adrenoceptor subtypes, respectively. Naftopidil hydrochloride has antiproliferative effects. Naftopidil hydrochloride can be used for the research of prostate hyperplasia <sup>[1]</sup> .																		
<b>IC<sub>50</sub> &amp; Target</b>	Alpha-1A adrenergic receptor 3.7 nM (K <sub>i</sub> )	Alpha-1B adrenergic receptor 20 nM (K <sub>i</sub> )	Alpha-1D adrenergic receptor 1.2 nM (K <sub>i</sub> )																
<b>In Vitro</b>	<p>Naftopidil hydrochloride suppresses human prostate tumor growth by altering interactions between tumor cells and stroma [2].</p> <p>Naftopidil hydrochloride (10 μM for PCa cells, 0.1-10 μM for PrSC; 3 days) shows growth inhibitory effects on PCa cells and PrSC<sup>[2]</sup>.</p> <p>Naftopidil hydrochloride (50 μM for E9 cells, 25 μM for PrSC; 48 hours) increases the level of cell-cycle regulatory protein p27 in E9 cells, but not PrSC<sup>[2]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>PCa cells, PrSC</td> </tr> <tr> <td>Concentration:</td> <td>10 μM (PCa cells); 0.1 μM, 1 μM, 10 μM (PrSC)</td> </tr> <tr> <td>Incubation Time:</td> <td>3 days</td> </tr> <tr> <td>Result:</td> <td>Exhibited growth inhibitory effects on PCa cells and PrSC in dose-dependent manners.</td> </tr> </table> <p>Western Blot Analysis<sup>[2]</sup></p> <table border="1"> <tr> <td>Cell Line:</td> <td>PCa cells, PrSC</td> </tr> <tr> <td>Concentration:</td> <td>50 μM (E9 cells), 25 μM (PrSC)</td> </tr> <tr> <td>Incubation Time:</td> <td>48 hours</td> </tr> <tr> <td>Result:</td> <td>Increased the level of cell-cycle regulatory protein p27 in E9 cells, but not PrSC.</td> </tr> </table>			Cell Line:	PCa cells, PrSC	Concentration:	10 μM (PCa cells); 0.1 μM, 1 μM, 10 μM (PrSC)	Incubation Time:	3 days	Result:	Exhibited growth inhibitory effects on PCa cells and PrSC in dose-dependent manners.	Cell Line:	PCa cells, PrSC	Concentration:	50 μM (E9 cells), 25 μM (PrSC)	Incubation Time:	48 hours	Result:	Increased the level of cell-cycle regulatory protein p27 in E9 cells, but not PrSC.
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**In Vivo**

Naftopidil hydrochloride (10 mg/kg; p.o; daily; for 28 days) decreases microvessel density (MVD) in E9+PrSC tumors mice model<sup>[2]</sup>.

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Animal Model:	Male athymic mice(7-8 weeks), with E9+PrSC xenograft <sup>[2]</sup>
Dosage:	10 mg/kg
Administration:	Oral administration, daily, for 28 days
Result:	Decreased tumor weights.

**REFERENCES**

[1]. Yasuhide Hori, et al. Naftopidil, a selective {alpha}1-adrenoceptor antagonist, suppresses human prostate tumor growth by altering interactions between tumor cells and stroma. *Cancer Prev Res (Phila)*. 2011 Jan;4(1):87-96.

[2]. R Takei, et al. Naftopidil, a novel alpha1-adrenoceptor antagonist, displays selective inhibition of canine prostatic pressure and high affinity binding to cloned human alpha1-adrenoceptors. *Jpn J Pharmacol*. 1999 Apr;79(4):447-54.

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

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