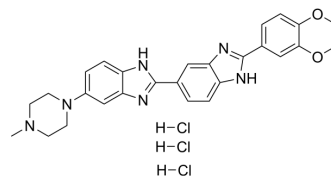


## DMA trihydrochloride

<b>Cat. No.:</b>	HY-15621A
<b>CAS No.:</b>	2095832-33-8
<b>Molecular Formula:</b>	C <sub>27</sub> H <sub>31</sub> Cl <sub>3</sub> N <sub>6</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	577.93
<b>Target:</b>	Fluorescent Dye
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 15.9 mg/mL (27.51 mM; Need ultrasonic and warming)				
		Solvent Concentration	Mass		
	<b>Preparing Stock Solutions</b>		1 mg	5 mg	10 mg
		1 mM	1.7303 mL	8.6516 mL	17.3031 mL
		5 mM	0.3461 mL	1.7303 mL	3.4606 mL
	10 mM	0.1730 mL	0.8652 mL	1.7303 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 8.33 mg/mL (14.41 mM); Clear solution; Need ultrasonic and warming and heat to 60°C				

### BIOLOGICAL ACTIVITY

<b>Description</b>	DMA trihydrochloride is a fluorescent compound ( $\lambda_{ex}$ =340 nm, $\lambda_{em}$ =478 nm).
<b>IC<sub>50</sub> &amp; Target</b>	IC <sub>50</sub> : 3.4 $\mu$ M (HeLa cell), 5.3 $\mu$ M (MCF7 cell) <sup>[1]</sup>
<b>In Vitro</b>	The newly synthesized bisbenzimidazole derivatives DMA (6c) is evaluated for their cytotoxicity against human tumor cell lines, which are cervix carcinoma cell line (HeLa), breast carcinoma cell line (MCF7) and brain glioma cell line (U87) in comparison to Hoechst. In case of MCF7, the IC <sub>50</sub> is observed at 5.3 $\mu$ M for DMA. The IC <sub>50</sub> determined in the case of HeLa is 3.4 $\mu$ M for DMA <sup>[1]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### PROTOCOL

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### Cell Assay

Various human tumor cells (U87, HeLa and MCF7) are maintained as monolayer at 37°C in 5% CO<sub>2</sub> using DMEM medium. Approximately 3000-8000 cells/well are seeded in 96-well plates containing 200 µL of medium and incubated for 24 h. The culture medium is replaced by fresh medium containing 1, 10, 50, 100 µM of DMA (6c) and incubated for 24, 48 and 72 h. The cell viability is determined by the MTT assay. The light absorbance is measured using a microplate reader<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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### REFERENCES

[1]. Singh M, et al. Synthesis and biological activity of novel inhibitors of topoisomerase I: 2-aryl-substituted 2-bis-1H-benzimidazoles. Eur J Med Chem. 2011 Feb;46(2):659-69.

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

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