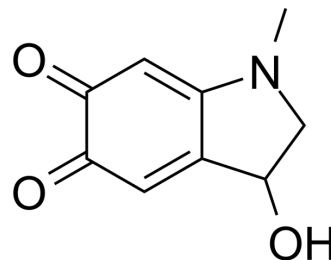


Adrenochrome

Cat. No.:	HY-116513		
CAS No.:	54-06-8		
Molecular Formula:	C ₉ H ₉ NO ₃		
Molecular Weight:	179.17		
Target:	Others		
Pathway:	Others		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (558.13 mM; Need ultrasonic)																													
	Preparing Stock Solutions	<table border="1"> <thead> <tr> <th>Solvent</th> <th>Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>Concentration</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>1 mM</td> <td></td> <td>5.5813 mL</td> <td>27.9065 mL</td> <td>55.8129 mL</td> </tr> <tr> <td>5 mM</td> <td></td> <td>1.1163 mL</td> <td>5.5813 mL</td> <td>11.1626 mL</td> </tr> <tr> <td>10 mM</td> <td></td> <td>0.5581 mL</td> <td>2.7906 mL</td> <td>5.5813 mL</td> </tr> </tbody> </table>	Solvent	Mass	1 mg	5 mg	10 mg	Concentration					1 mM		5.5813 mL	27.9065 mL	55.8129 mL	5 mM		1.1163 mL	5.5813 mL	11.1626 mL	10 mM		0.5581 mL	2.7906 mL	5.5813 mL			
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Please refer to the solubility information to select the appropriate solvent.																														
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (13.95 mM); Suspended solution; Need ultrasonic																													
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (13.95 mM); Suspended solution; Need ultrasonic																													

BIOLOGICAL ACTIVITY

Description	Adrenochrome (Adraxone) is an oxidation product of Epinephrine. Adrenochrome is a potent coronary constricting agent in the rat heart. Adrenochrome can be used for neurological disorder research ^{[1][2][3]} .
In Vitro	Adrenochrome decreases microsomal calcium binding, calcium uptake and Ca ²⁺ -stimulated Mg ²⁺ -dependent ATPase activities. The inhibitory effect of Adrenochrome on microsomal calcium uptake activity of the isolated membrane is independent of pH (6.0-8.0), calcium concentrations (10-200 μM), protein concentration (0.02-0.10 mg/mL), temperature (25-37 degrees C) and incubation time (2-30 min) ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In isolated rat hearts, concentrations of Adrenochrome from 1 to 1000 ng/mL increases coronary pressure in a dose- and time-dependent manner. Furthermore, the degree of constriction by Adrenochrome is dependent on the CaCl ₂

concentration in the perfusion medium^[1].

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

REFERENCES

[1]. M Karmazyn,, et al. Adrenochrome-induced coronary artery constriction in the rat heart. J Pharmacol Exp Ther. 1981 Oct;219(1):225-30.

[2]. S Takeo,et al. Effects of adrenochrome on calcium accumulating and adenosine triphosphatase activities of the rat heart microsomes. J Pharmacol Exp Ther. 1980 Sep;214(3):688-93.

[3]. Koji Ueda, et al. Catecholamine oxidation-mediated transcriptional inhibition in Mn neurotoxicity. J Toxicol Sci. 2020;45(10):619-624.

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

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