



# SZABO SCANDIC

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### Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

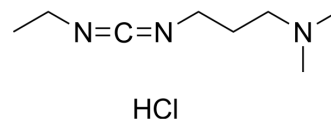
[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

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## 1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride

<b>Cat. No.:</b>	HY-D0178
<b>CAS No.:</b>	25952-53-8
<b>Molecular Formula:</b>	C <sub>8</sub> H <sub>18</sub> ClN <sub>3</sub>
<b>Molecular Weight:</b>	191.7
<b>Target:</b>	Biochemical Assay Reagents
<b>Pathway:</b>	Others
<b>Storage:</b>	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 100 mg/mL (521.65 mM; Need ultrasonic)					
	DMSO : 62.5 mg/mL (326.03 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		5.2165 mL	26.0824 mL	52.1648 mL
<b>5 mM</b>			1.0433 mL	5.2165 mL	10.4330 mL	
<b>10 mM</b>		0.5216 mL	2.6082 mL	5.2165 mL		
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (13.04 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (13.04 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (13.04 mM); Clear solution					

### BIOLOGICAL ACTIVITY

<b>Description</b>	1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride is a carbodiimide reagent that can form nucleic acid and compounds with amide bonds. 1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride accelerates the formation reaction of esters, amides, and peptides, as a condensing and dehydrating agent, which are often used for polynucleotide synthesis, anhydroxydation, lactonization and esterification <sup>[1][2]</sup> .
<b>In Vitro</b>	1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride (EDC.HCl) is a very useful agent to form amide bonds (peptide bonds) in an aqueous medium <sup>[1]</sup> . 1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride (EDC·HCl), is widely used for polyaniline-carbon nanotube

preparation for a cholesterol biosensor, precolumn derivatization of aliphatic amines for HPLC, molecular beacons formation for DNA research, sensor preparation for calcium detection, the fluorescent determination of carboxylic acids, and solidphase microsequencing of peptides<sup>[2]</sup>.

1-(3-Dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride (EDC•HCl) is an aminoaldehyde dehydrogenase (AMADH) inhibitor, while its inhibition on glutamate decarboxylase (GAD) is insignificant<sup>[3]</sup>.

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

## REFERENCES

[1]. Kunihiko Seno, et al. Spectrophotometric determination of 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride by flow injection analysis. Anal Sci. 2008 Apr;24(4):505-8.

[2]. Kunihiko Seno, et al. Determination of 1-(3-dimethylaminopropyl)-3-ethylcarbodiimide hydrochloride by flow-injection analysis based on a specific condensation reaction between malonic acid and ethylenediamine. Anal Sci. 2009 Mar;25(3):389-93.

[3]. Runqiang Yang, et al. AMADH inhibitor optimization and its effects on GABA accumulation in soybean sprouts under NaCl-CaCl<sub>2</sub> treatment. 3 Biotech. 2019 May;9(5):184.

**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