



# SZABO SCANDIC

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Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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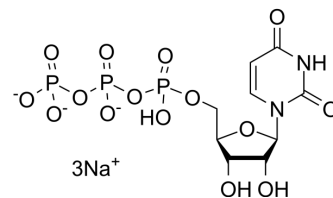
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## Uridine triphosphate trisodium salt

<b>Cat. No.:</b>	HY-W013093
<b>CAS No.:</b>	19817-92-6
<b>Molecular Formula:</b>	C <sub>9</sub> H <sub>12</sub> N <sub>2</sub> Na <sub>3</sub> O <sub>15</sub> P <sub>3</sub>
<b>Molecular Weight:</b>	550.09
<b>Target:</b>	Endogenous Metabolite; P2Y Receptor
<b>Pathway:</b>	Metabolic Enzyme/Protease; GPCR/G Protein
<b>Storage:</b>	-20°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 75 mg/mL (136.34 mM; Need ultrasonic)  
DMSO : 10 mg/mL (18.18 mM; ultrasonic and warming and heat to 80°C)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.8179 mL	9.0894 mL	18.1788 mL
	5 mM	0.3636 mL	1.8179 mL	3.6358 mL
	10 mM	0.1818 mL	0.9089 mL	1.8179 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 100 mg/mL (181.79 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: 1 mg/mL (1.82 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 1 mg/mL (1.82 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: 1 mg/mL (1.82 mM); Clear solution; Need ultrasonic

### BIOLOGICAL ACTIVITY

#### Description

Uridine triphosphate (UTP) trisodium salt is a pyrimidine nucleoside triphosphate that is used as a substrate to synthesize RNA or as an energy source in metabolic reactions. Uridine triphosphate trisodium salt activates membrane-bound P2Y2 receptors<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

Human Endogenous Metabolite

## In Vitro

Uridine triphosphate (UTP) (0, 10, 100, 250, 500, and 1000  $\mu$ M; 2, 4, 6, 8, 10, and 12 h) trisodium salt enhances RT4-D6P2T cells migration and wound repair. Uridine triphosphate trisodium salt induces Schwannoma cell migration through activation of P2Y2 receptors and through the increase of extracellular MMP-2 activation and expression<sup>[2]</sup>. Uridine triphosphate (UTP) trisodium salt evokes MAPK phosphorylation in a biphasic pattern MAPK phosphorylation, with an early transient phosphorylation 5 min after treatment, and a late and sustained phosphorylation that appeared at 6 h and lasted up to 24 h<sup>[2]</sup>.

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

Western Blot Analysis<sup>[2]</sup>

Cell Line:	RT4-D6P2T cells
Concentration:	250 $\mu$ M
Incubation Time:	5 min, 45 min, 2 h, 6 h, 12 h, 24 h, 48 h
Result:	Induces biphasic MAPK phosphorylation.

## In Vivo

Uridine triphosphate (UTP) (0.44-4.4  $\mu$ g/kg; i.v.; once) trisodium salt reduces infarct size and improves rat heart function after myocardial infarct<sup>[3]</sup>.

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

Animal Model:	Male Wistar rats (250-300 g; 2-3 months) with myocardial infarction (MI) <sup>[3]</sup>
Dosage:	0.44 $\mu$ g/kg 30 min before MI, and 4.4 $\mu$ g/kg i.v. 24 h prior to MI.
Administration:	i.v.; once
Result:	Reduced infarct size and improves rat heart function after myocardial infarct.

## CUSTOMER VALIDATION

- Anal Chim Acta. 18 October 2021, 339180.
- Life Sci. 2023 Jun 27;121896.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Lamarca A, et al. Uridine 5'-triphosphate promotes in vitro Schwannoma cell migration through matrix metalloproteinase-2 activation. PLoS One. 2014 Jun 6;9(6):e98998.
- [2]. Yitzhaki S, et al. Uridine-5'-triphosphate (UTP) reduces infarct size and improves rat heart function after myocardial infarct. Biochem Pharmacol. 2006 Oct 16;72(8):949-55.
- [3]. Choi JH, et al. Uridine triphosphate increases proliferation of human cancerous pancreatic duct epithelial cells by activating P2Y2 receptor. Pancreas. 2013 May;42(4):680-6.

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

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