



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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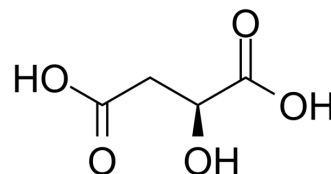
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## (S)-Malic acid

<b>Cat. No.:</b>	HY-Y1069		
<b>CAS No.:</b>	97-67-6		
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>6</sub> O <sub>5</sub>		
<b>Molecular Weight:</b>	134		
<b>Target:</b>	Endogenous Metabolite		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

H<sub>2</sub>O : 100 mg/mL (746.27 mM; Need ultrasonic)  
 DMSO : 100 mg/mL (746.27 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	7.4627 mL	37.3134 mL	74.6269 mL
	5 mM	1.4925 mL	7.4627 mL	14.9254 mL
	10 mM	0.7463 mL	3.7313 mL	7.4627 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (18.66 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (18.66 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (18.66 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

(S)-Malic acid ((S)-2-Hydroxysuccinic acid) is a dicarboxylic acid in naturally occurring form, contributes to the pleasantly sour taste of fruits and is used as a food additive.

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

Human Endogenous Metabolite	Human Endogenous Metabolite
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## In Vitro

It is showed that ME is essential for (S)-2-Hydroxysuccinic acid (L-malic acid) utilization in *L. casei*. Furthermore, deletion of either the gene encoding the histidine kinase or the response regulator of the TC system resulted in the loss of the ability to grow on (S)-2-Hydroxysuccinic acid, thus indicating that the cognate TC system regulates and is essential for the expression of ME. Transcriptional analyses shows that expression of *maeE* is induced in the presence of (S)-2-Hydroxysuccinic acid and repressed by glucose, whereas TC system expression is induced by (S)-2-Hydroxysuccinic acid and is not repressed by glucose<sup>[1]</sup>.

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

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## REFERENCES

[1]. Landete JM, et al. Requirement of the *Lactobacillus casei* MaeKR two-component system for L-malic acid utilization via a malic enzyme pathway. *Appl Environ Microbiol.* 2010 Jan;76(1):84-95.

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

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