



# SZABO SCANDIC

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## 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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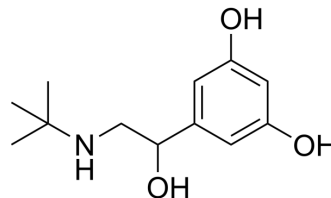
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## Terbutaline

<b>Cat. No.:</b>	HY-B0802A		
<b>CAS No.:</b>	23031-25-6		
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>19</sub> NO <sub>3</sub>		
<b>Molecular Weight:</b>	225.28		
<b>Target:</b>	Adrenergic Receptor; Antibiotic; Drug Metabolite		
<b>Pathway:</b>	GPCR/G Protein; Neuronal Signaling; Anti-infection; 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

DMSO : 250 mg/mL (1109.73 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	4.4389 mL	22.1946 mL	44.3892 mL
	5 mM	0.8878 mL	4.4389 mL	8.8778 mL
	10 mM	0.4439 mL	2.2195 mL	4.4389 mL

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

### BIOLOGICAL ACTIVITY

**Description** Terbutaline is an orally active  $\beta_2$ -adrenergic receptor agonist and an active metabolite of bambuterol<sup>[1]</sup>. Terbutaline can be used in asthma symptom research<sup>[2]</sup>.

**IC<sub>50</sub> & Target** Beta-2 adrenergic receptor

**In Vitro** Terbutaline (0-10  $\mu$ M, 1 hour) enhances MKP-1 expression in activated mouse macrophages<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
RT-PCR<sup>[3]</sup>

Cell Line: J774 macrophages

Concentration: 0-10  $\mu$ M

Incubation Time: 1 hour

	Result:	Enhanced MKP-1 expression in J774 macrophages in a dose-dependent manner.
	Western Blot Analysis <sup>[3]</sup>	
	Cell Line:	J774 macrophages
	Concentration:	100 nM
	Incubation Time:	1 hour
	Result:	Reduced the phosphorylation of p38 MAPK in J774 macrophages.
<b>In Vivo</b>	Terbutaline (intraperitoneal injection; 0.5 mg/kg; twice a day; 20 days) treatment can improve the allodynia in ob/ob mice <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Adult male ob/ob mice <sup>[4]</sup>
	Dosage:	0.5 mg/kg
	Administration:	Intraperitoneal injection; 0.5 mg/kg; twice a day; 20 days
	Result:	Reversed the mechanical allodynia in ob/ob mice.

## REFERENCES

- [1]. Mohamed Ismail NA, et al. Nifedipine versus terbutaline for tocolysis in external cephalic version. *Int J Gynaecol Obstet.* 2008 Sep;102(3):263-6.
- [2]. Joana A Loureiro, et al. The interaction of a  $\beta_2$  adrenoceptor agonist drug with biomimetic cell membrane models: The case of terbutaline sulphate. *Life Sci.* 2021 Nov 15;285:119992.
- [3]. Tiina Keränen, et al. Anti-Inflammatory Effects of  $\beta_2$ -Receptor Agonists Salbutamol and Terbutaline Are Mediated by MKP-1. *PLoS One.* 2016 Feb 5;11(2):e0148144.
- [4]. Nada Choucair-Jaafar, et al. The antiallodynic action of nortriptyline and terbutaline is mediated by  $\beta(2)$  adrenoceptors and  $\delta$  opioid receptors in the ob/ob model of diabetic polyneuropathy. *Brain Res.* 2014 Feb 10;1546:18-26.

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

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