



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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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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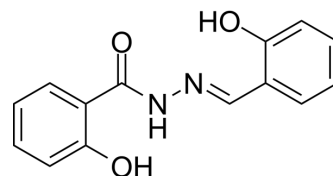
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## SCS

<b>Cat. No.:</b>	HY-103528		
<b>CAS No.:</b>	3232-36-8		
<b>Molecular Formula:</b>	C <sub>14</sub> H <sub>12</sub> N <sub>2</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	256.26		
<b>Target:</b>	GABA Receptor		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling		
<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 : 50 mg/mL (195.11 mM; ultrasonic and warming and heat to 60°C)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.9023 mL	19.5114 mL	39.0229 mL
	5 mM	0.7805 mL	3.9023 mL	7.8046 mL
	10 mM	0.3902 mL	1.9511 mL	3.9023 mL

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

## BIOLOGICAL ACTIVITY

### Description

SCS (Salicylidene salicylhydrazide) is a potent, allosteric and selective inhibitor of  $\beta$ 1-containing GABA<sub>A</sub> receptors with an IC<sub>50</sub> of 32 nM against  $\alpha$ 2 $\beta$ 1 $\gamma$ 1 $\theta$  by VIPR measurement. SCS is also a chelator of metal ions<sup>[1]</sup>.

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

IC<sub>50</sub>: 32 nM ( $\alpha$ 2 $\beta$ 1 $\gamma$ 1 $\theta$ ; by VIPR measurement)  
 IC<sub>50</sub>: 4.5 nM ( $\alpha$ 2 $\beta$ 1 $\gamma$ 1 $\theta$ ), 5.3 nM ( $\alpha$ 2 $\beta$ 1 $\gamma$ 1), 7.9 nM ( $\alpha$ 1 $\beta$ 1 $\gamma$ 2s) (Measured by using whole-cell patch clamp)<sup>[1]</sup>

### In Vitro

SCS (0.1 nM-3  $\mu$ M) produces a concentration-dependent inhibition of GABA EC<sub>20</sub> currents recorded from Ltk<sup>-</sup> cells expressing  $\alpha$ 2 $\beta$ 1 $\gamma$ 1 $\theta$ ,  $\alpha$ 2 $\beta$ 1 $\gamma$ 1 and  $\alpha$ 1 $\beta$ 1 $\gamma$ 2s receptors compared with  $\alpha$ 2 $\beta$ 3 $\gamma$ 2s and  $\alpha$ 1 $\beta$ 2 $\gamma$ 2s receptors upon which SCS has no effect<sup>[1]</sup>. Inhibition by SCS is not voltage or use dependent<sup>[1]</sup>. Structural determinants necessary for the inhibition of GABA<sub>A</sub> receptors by SCS are located within the region arginine 238 and glycine 335 of the  $\beta$ 1 subunit. T255 and I308 of the  $\beta$ 1 subunit are required for inhibition by SCS<sup>[1]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### In Vivo

SCS (Salicylidene salicylhydrazide; 500-1000 mg/kg, i.p. or 800-1000 mg/kg, oral) produces abdominal constrictions in mice <sup>[2]</sup>.

SCS (10-75 mg/kg; i.p.; once) shows antinociceptive activity against tonic, phasic and Capsaicin (HY-10448) nociception in mice<sup>[2]</sup>.

SCS (10-75 mg/kg; i.p.; once) shows anti-inflammatory activity in mice<sup>[2]</sup>. SCS (50 and 75 mg/kg; i.p.; once) shows antinociceptive activity against neuropathic nociception<sup>[2]</sup>.

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

Animal Model:	BALB/c mice; tonic, phasic and Capsaicin (HY-10448) nociception model <sup>[2]</sup>
Dosage:	10, 25, 50, and 75 mg/kg
Administration:	IP, single dose
Result:	Produced a significant protection on tonic, phasic and capsaicin nociception in a dose-dependent manner.
Animal Model:	BALB/c mice, Oxaliplatin (HY-17371)-induced neuropathic nociception model <sup>[2]</sup>
Dosage:	50 and 75 mg/kg
Administration:	IP, single dose
Result:	Significantly attenuated the paw withdrawal threshold changes associated with Oxaliplatin. Significantly increased the percent antinociception during 30-120 min.

## REFERENCES

[1]. Thompson SA, et al. Salicylidene salicylhydrazide, a selective inhibitor of beta 1-containing GABAA receptors. *Br J Pharmacol.* 2004 May;142(1):97-106.

[2]. Rukh L, et al. Efficacy assessment of salicylidene salicylhydrazide in chemotherapy associated peripheral neuropathy. *Eur J Pharmacol.* 2020 Dec 5;888:173481.

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

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