



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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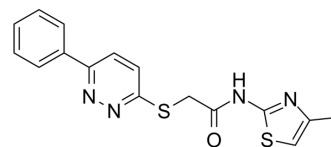
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## VU 0240551

<b>Cat. No.:</b>	HY-16689		
<b>CAS No.:</b>	893990-34-6		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>14</sub> N <sub>4</sub> OS <sub>2</sub>		
<b>Molecular Weight:</b>	342.44		
<b>Target:</b>	Potassium Channel		
<b>Pathway:</b>	Membrane Transporter/Ion Channel		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 50 mg/mL (146.01 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent		Mass		
	Concentration		1 mg	5 mg	10 mg
	1 mM		2.9202 mL	14.6011 mL	29.2022 mL
	5 mM		0.5840 mL	2.9202 mL	5.8404 mL
	10 mM		0.2920 mL	1.4601 mL	2.9202 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 (7.30 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: 2.5 mg/mL (7.30 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (7.30 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

VU 0240551 is a potent neuronal K-Cl cotransporter KCC2 inhibitor (IC<sub>50</sub>=560 nM) and is selective versus NKCC1. VU 0240551 also inhibits hERG and L-type Ca<sup>2+</sup> channels. VU 0240551 attenuates GABA-induced hyperpolarization of P cells, produces a positive shift in the P cell GABA reversal potential and enhances P cell synaptic transmission<sup>[1][2]</sup>.

#### In Vitro

VU 0240551 reduces the P cell response to GABA in a concentration-dependent manner with 75 and 100 μM treatments causing a significant reduction in GABA-elicited hyperpolarization while 25 μM had no significant effect<sup>[2]</sup>.

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	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	VU 0240551 (10 $\mu$ M) significantly blocks the chloride influx in cells from Eu rats but did not affect cells from SL rats <sup>[3]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## CUSTOMER VALIDATION

- Nat Neurosci. 2023 Mar 27.

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

## REFERENCES

- [1]. Delpire E, et al. Small-molecule screen identifies inhibitors of the neuronal K-Cl cotransporter KCC2. Proc Natl Acad Sci U S A. 2009 Mar 31;106(13):5383-8.
- [2]. Wang Y, et al. Differential effects of GABA in modulating nociceptive vs. non-nociceptive synapses. Neuroscience. 2015;298:397-409.
- [3]. Balapattabi K, et al. Effects of salt-loading on supraoptic vasopressin neurones assessed by ClopHensorN chloride imaging. J Neuroendocrinol. 2019;31(8):e12752.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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