



# SZABO SCANDIC

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Diagnostik & molekulare Diagnostik



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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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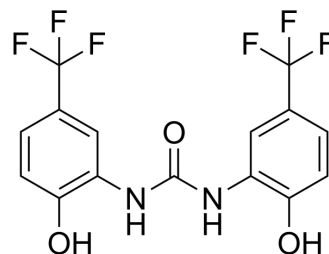
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## NS1643

<b>Cat. No.:</b>	HY-16916		
<b>CAS No.:</b>	448895-37-2		
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>10</sub> F <sub>6</sub> N <sub>2</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	380.24		
<b>Target:</b>	Potassium Channel; Autophagy		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Autophagy		
<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 : ≥ 100 mg/mL (262.99 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.6299 mL	13.1496 mL	26.2992 mL
	5 mM	0.5260 mL	2.6299 mL	5.2598 mL
	10 mM	0.2630 mL	1.3150 mL	2.6299 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 (6.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (6.57 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (6.57 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

NS1643 is a partial agonist of human ether-a-go-go-related gene (hERG) K<sup>+</sup> channels with an EC<sub>50</sub> of 10.5 μM. NS1643 inhibits the growth of breast cancer tumors in TNBC mouse models. NS1643 inhibits cell migration and invasion of breast cancer cells<sup>[1][2]</sup>.

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

EC<sub>50</sub>: 10.5 μM (hERG) K<sup>+</sup> channel<sup>[1]</sup>

## In Vitro

NS1643 (0-100  $\mu$ M) dose- and voltage-dependently increases hERG current in oocytes<sup>[1]</sup>.  
NS1643 (3, 10 and 30  $\mu$ M) slows the rate of hERG inactivation throughout the testing voltage range and reduces the extent of hERG channel rectification<sup>[1]</sup>.  
NS1643 (10 and 50  $\mu$ M) dose-dependently inhibits cell migration and invasion of MDA-MB-231 and SKBR3 cancer cells<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:	MDA-MB-231, SKBR3 and MCF7 breast cancer cell lines
Concentration:	50 $\mu$ M
Incubation Time:	24 h
Result:	Decreased Vimentin, N-cadherin and CD44 levels, and increased E-cadherin in breast cancer cell lines.

## In Vivo

NS1643 (6 mg/kg; i.p., twice per week) inhibits breast tumor metastasis<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	NSG mice with human-derived TNBC tumor xenografts <sup>[2]</sup>
Dosage:	6 mg/kg
Administration:	Intraperitoneal injection; 6 mg/kg; twice per week
Result:	Significantly reduced tumor growth and the metastatic liver tumors were significantly smaller than those in the control group. Decreased levels of human nuclear antigen (HNA).

## CUSTOMER VALIDATION

- Int J Mol Sci. 2023 Jul 28, 24(15), 12079.

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## REFERENCES

- [1]. Breuer EK, et al. Potassium channel activity controls breast cancer metastasis by affecting  $\beta$ -catenin signaling. Cell Death Dis. 2019 Feb 21;10(3):180.  
[2]. Casis O, et al. Mechanism of action of a novel human ether-a-go-go-related gene channel activator. Mol Pharmacol. 2006 Feb;69(2):658-65. Epub 2005 Nov 11.

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

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