



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

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

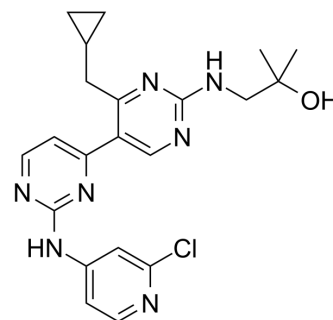
mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

Vps34-IN-1

Cat. No.:	HY-12795
CAS No.:	1383716-33-3
Molecular Formula:	C ₂₁ H ₂₄ ClN ₇ O
Molecular Weight:	425.91
Target:	PI3K; Autophagy
Pathway:	PI3K/Akt/mTOR; Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 1 year -20°C 6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 31 mg/mL (72.79 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.3479 mL	11.7396 mL	23.4791 mL
	5 mM		0.4696 mL	2.3479 mL	4.6958 mL
	10 mM		0.2348 mL	1.1740 mL	2.3479 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 (5.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (5.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (5.87 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Vps34-IN-1 is a potent and selective inhibitor of class III Vps34 PI3K. Vps34-IN-1 inhibits phosphorylation of PtdIns by recombinant insect cell expressed Vps34-Vps15 complex with an IC₅₀ of ~25 nM. Vps34-IN-1 can suppress SGK3 activation by reducing PtdIns(3)P levels via lowering phosphorylation of T-loop and hydrophobic motifs. Vps34-IN-1 modulates autophagy^{[1][2][3]}.

IC₅₀ & Target

Vps34

	25 nM (IC ₅₀)								
In Vitro	Vps34-IN-1 does not significantly inhibit any of the lipid kinases including class I (p110α, p110β p110γ and p110δ) and all three members of the class II PI3Ks (PI3KC2α, PI3KC2β and PI3KC2γ) enzymes^[1]. Vps34-IN-1 (0.01, 0.1, 1 μM; for 1 h) inhibits PtdIns(3)P levels at endosomes in a dose-dependent manner^[1]. Vps34-IN-1 (0.01, 0.1, 1 μM; for 1 h) induces a dose-dependent reduction in SGK3 activity that is maximally lowered by ~60% at 1 μM and ~40% at 0.1 μM. The suppression of SGK3 activity is accompanied by a commensurate decrease in T-loop and hydrophobic motif phosphorylation^[1]. Vps34-IN-1 (1, 2, 4 μM; 24 h) induces a dose-dependent inhibition of SGK3 phosphorylation^[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only. Western Blot Analysis^[2] <table> <tr> <td>Cell Line:</td><td>MHH97H and Huh7 cells</td></tr> <tr> <td>Concentration:</td><td>1, 2, 4 μM</td></tr> <tr> <td>Incubation Time:</td><td>24 h</td></tr> <tr> <td>Result:</td><td>Induced a dose-dependent inhibition of SGK3 phosphorylation in MHH97H and Huh7 cells. Reduced the expression of CSC-related markers CD133 and Nanog.</td></tr> </table>	Cell Line:	MHH97H and Huh7 cells	Concentration:	1, 2, 4 μM	Incubation Time:	24 h	Result:	Induced a dose-dependent inhibition of SGK3 phosphorylation in MHH97H and Huh7 cells. Reduced the expression of CSC-related markers CD133 and Nanog.
Cell Line:	MHH97H and Huh7 cells								
Concentration:	1, 2, 4 μM								
Incubation Time:	24 h								
Result:	Induced a dose-dependent inhibition of SGK3 phosphorylation in MHH97H and Huh7 cells. Reduced the expression of CSC-related markers CD133 and Nanog.								

CUSTOMER VALIDATION

- J Exp Clin Cancer Res. 2018 Jun 25;37(1):122.
- Plant Cell Rep. 2022 Jan 3.
- Biochem Pharmacol. 2023 Jun 6;115634.
- bioRxiv. 2024 Mar 7.
- Oncotarget. 2016 Aug 16;7(33):53515-53525.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Fengchao Liu, et al. Prolonged inhibition of class I PI3K promotes liver cancer stem cell expansion by augmenting SGK3/GSK-3β/β-catenin signaling. J Exp Clin Cancer Res. 2018 Jun 25;37(1):122.
- [2]. Ruzica Bago, et al. Characterization of VPS34-IN1, a selective inhibitor of Vps34, reveals that the phosphatidylinositol 3-phosphate-binding SGK3 protein kinase is a downstream target of class III phosphoinositide 3-kinase. Biochem J. 2014 Nov 1;463(3):413-27.
- [3]. Limpert AS, et al. Autophagy in Cancer: Regulation by Small Molecules. Trends Pharmacol Sci. 2018 Dec;39(12):1021-1032

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA