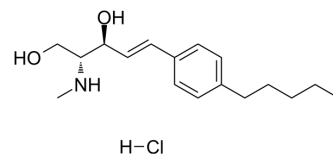


SK1-I hydrochloride

Cat. No.:	HY-119016A
CAS No.:	2366222-05-9
Molecular Formula:	C ₁₇ H ₂₈ ClNO ₂
Molecular Weight:	313.86
Target:	SphK
Pathway:	Immunology/Inflammation
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (796.53 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	3.1861 mL	15.9307 mL	31.8613 mL
		5 mM	0.6372 mL	3.1861 mL	6.3723 mL
	10 mM	0.3186 mL	1.5931 mL	3.1861 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (6.63 mM); Clear solution				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (6.63 mM); Clear solution				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (6.63 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	SK1-I hydrochloride (BML-258 hydrochloride), an analog of sphingosine, is an isozyme-specific competitive SPHK1 inhibitor with a K _i value of 10 μM ^[1] . SK1-I hydrochloride shows no activity at SPHK1 PKCα, PKCδ, PKA, AKT1, ERK1, EGFR, CDK2, IKKβ or CamK2β. SK1-I hydrochloride enhances autophagy and has antitumor activity ^[2] .
IC₅₀ & Target	SphK1
In Vitro	SK1-I hydrochloride (0-10 μM; 24 hours) attenuates cancer cell growth and survival in a TP53-dependent manner in HCT116 cells and HCT116 cells bearing TP53 null cancer ^[2] . SK1-I hydrochloride (0-20 μM; 12 hours) induces more CASP3 cleavage in HCT116 cells, compared to HCT116 cells lacking

TP53, leading to a hallmark of apoptosis^[2].

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

Cell Viability Assay^[2]

Cell Line:	HCT116 cells and HCT116 cells bearing TP53 null cancer
Concentration:	0 μ M, 2.5 μ M, 5 μ M, 7.5 μ M, 10 μ M
Incubation Time:	24 hours
Result:	Decreased cancer cell growth and survival.

Western Blot Analysis^[2]

Cell Line:	HCT116 cells and HCT116 cells bearing TP53 null cancer
Concentration:	0 μ M, 5 μ M, 10 μ M, 20 μ M
Incubation Time:	12 hours
Result:	Induced more CASP3 cleavage in HCT116 cells, compared to HCT116 cells lacking TP53.

In Vivo

Pre-treatment with SK1-I hydrochloride (BML-258 hydrochloride; intraperitoneal (i.p.) injection; once; 24 hours prior to baseline mean arterial blood pressure (MAP) measurement; 75 mg/kg) before anandamide (i.v. injection; two doses; 1 and 10 mg/kg) significantly decreases the hypotensive response^[3].

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

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

Tel: 609-228-6898	Fax: 609-228-5909	Email: tech@MedChemExpress.com
Animal Model:	Male C57BL/6 mice (24 \pm 3.5 g)	
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA		
Dosage:	75 mg/kg	
Administration:	Intraperitoneal (i.p.) injection; once; 24 hours prior to baseline MAP measurement	
Result:	Significantly lowered baseline mean arterial blood pressure (MAP).	

CUSTOMER VALIDATION

- PLoS Pathog. 2022 Sep 7;18(9):e1010794.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Melissa R Pitman, et al. Inhibitors of the sphingosine kinase pathway as potential therapeutics. *Curr Cancer Drug Targets*. 2010 Jun;10(4):354-67.
- [2]. Santiago Lima, et al. TP53 is required for BECN1- and ATG5-dependent cell death induced by sphingosine kinase 1 inhibition. *Autophagy*. 2018;14(6):942-957.
- [3]. Fiona H Greig, et al. Requirement for sphingosine kinase 1 in mediating phase 1 of the hypotensive response to anandamide in the anaesthetised mouse. *Eur J Pharmacol*. 2019 Jan 5;842:1-9.