



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

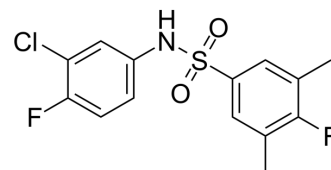
mail@szabo-scandic.com

www.szabo-scandic.com

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

TERT activator-1

Cat. No.:	HY-402361
CAS No.:	666699-46-3
Molecular Formula:	C ₁₄ H ₁₂ ClF ₂ NO ₂ S
Molecular Weight:	331.77
Target:	MEK; ERK; AP-1
Pathway:	MAPK/ERK Pathway; Stem Cell/Wnt; Immunology/Inflammation
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (301.41 mM)

* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		3.0141 mL	15.0707 mL	30.1414 mL
	5 mM		0.6028 mL	3.0141 mL	6.0283 mL
	10 mM		0.3014 mL	1.5071 mL	3.0141 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 (7.54 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: 2.5 mg/mL (7.54 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (7.54 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

TERT activator-1 is a small molecule activator of telomerase reverse transcriptase (TERT). TERT activator-1 promotes TERT transcription through the MEK/ERK/AP-1 signaling cascade. TERT activator-1 promotes adult neurogenesis and enhances neuromuscular function. TERT activator-1 reduces cellular senescence and systemic inflammation in aged mice, and can be used in the study of aging^[1].

IC₅₀ & Target

MEK1	MEK2	ERK1	ERK2
------	------	------	------

In Vitro

TERT activator-1 (0-10 μ M; 0-4 h) specifically activates TERT transcription in MRC-5 cells via the MEK/ERK/AP-1 pathway and can alter chromatin status in the TERT promoter region^[1].

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

Real Time qPCR^[1]

Cell Line:	MRC-5 human fibroblasts cells
Concentration:	0, 0.05, 0.1, 0.5, 1, 5 and 10 μ M
Incubation Time:	4 h
Result:	Reduced the mRNA levels of TERT.

In Vivo

TERT activator-1 (6 mg/kg; intraperitoneal injection; 1-6 weeks) alleviates aging and promotes adult neurogenesis in naturally aging mice^[1].

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

Animal Model:	C57BL/6 mice aged 10-12 weeks old ^[1]
Dosage:	6 mg/kg
Administration:	Intraperitoneal injection (i.p.); 1 week
Result:	Significantly increased the level of TERT protein. Reduced aging genetic traits including cell-cycle arrest and PML body. Suppressed p16 ^{Ink4a} and other senescence-associated secretory phenotype (SASP) components. Induced signatures of organism growth and natural killer cell activation. Increased in the levels of mBDNF in adult hippocampus.
Animal Model:	Naturally aged C57BL/6 mice aged 20-21 months old ^[1]
Dosage:	6 mg/kg
Administration:	Intraperitoneal injection (i.p.); 3 times a week; 6 months
Result:	Improves hippocampal-dependent cognitive function. Enhances neuromuscular function. Did not result in any overt adverse consequences.

REFERENCES

[1]. Shim HS, et al. TERT activation targets DNA methylation and multiple aging hallmarks. Cell. 2024 Jul 25;187(15):4030-4042.e13.

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