

产品名称：**SMER28**
产品别名：**SMER28**

生物活性:

Description	SMER28 is a positive regulator of autophagy acting via an mTOR-independent mechanism. SMER28 prevents the accumulation of amyloid beta peptide.				
In Vitro	SMER28 (5-200 μM; 24 hours) shows a dose dependent decline of cell viability[4].				
	Cell Viability Assay[4]				
	Cell Line:	MMS1 cells			
	Concentration:	5, 25, 50, 75, 100, 150, 200 μM			
	Incubation Time:	24 hours			
	Result:	Showed a dose dependent decline of cell viability.			
In Vivo	SMER28 (15-65 mg/kg; i.h.; daily, two days before irradiation and during the three days of irradiation) significantly protects against post-irradiation weight loss and enhances survival of mice at 65 mg/kg[5].				
	Animal Model:	14 to 16 weeks male mice (Balb/c)[5]			
	Dosage:	15, 65 mg/kg			
	Administration:	Subcutaneous injection; two days before irradiation and during the three days of irradiation (total 5 days)			
	Result:	Significantly protected against post-irradiation weight loss and enhanced survival of mice at 65 mg/kg.			
Solvent&Solubility	In Vitro: DMSO : ≥ 32 mg/mL (121.16 mM) * "≥" means soluble, but saturation unknown.				
	Preparing Stock Solutions	SolventMassConcentration	1 mg	5 mg	10 mg
		1 mM	3.7862 mL	18.9308 mL	37.8616 mL
		5 mM	0.7572 mL	3.7862 mL	7.5723 mL
		10 mM	0.3786 mL	1.8931 mL	3.7862 mL
	*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液。一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。 储备液的保存方式和期限：-80℃，6 months；-20℃，1 month。-80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。				
	In Vivo: 请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂： ——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶				
	1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline Solubility: ≥ 2.5 mg/mL (9.47 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.47 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀 向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。				

	2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (9.47 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.47 mM, 饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (9.47 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.47 mM, 饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Renna M et al. Chemical inducers of autophagy that enhance the clearance of mutant proteins in neurodegenerative diseases. J Biol Chem. 2010 Apr 9;285(15):11061-7. [2]. Nekova TS, et al. Small molecule enhancers of rapamycin induce apoptosis in myeloma cells via GSK3A/Bpreferentially within a protective bone marrow microenvironment. Br J Haematol. 2014 Oct;167(2):272-4. [3]. Shen D et al. Novel cell- and tissue-based assays for detecting misfolded and aggregated protein accumulation within aggresomes and inclusion bodies. Cell Biochem Biophys. 2011 Jul;60(3):173-85. [4]. Koukourakis MI, et al. SMER28 is a mTOR-independent small molecule enhancer of autophagy that protects mouse bone marrow and liver against radiotherapy. Invest New Drugs. 2018 Oct;36(5):773-781. [5]. Tian Y et al. A small-molecule enhancer of autophagy decreases levels of Abeta and APP-CTF via Atg5-dependent autophagy pathway. FASEB J. 2011 Jun;25(6):1934-42.

源叶生物