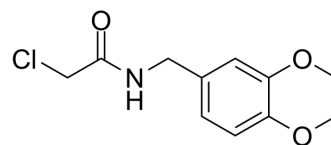


DKM 2-93

Cat. No.:	HY-101836		
CAS No.:	65836-72-8		
Molecular Formula:	C ₁₁ H ₁₄ ClNO ₃		
Molecular Weight:	243.69		
Target:	E1/E2/E3 Enzyme		
Pathway:	Metabolic Enzyme/Protease		
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 : 125 mg/mL (512.95 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		4.1036 mL	20.5179 mL	41.0357 mL
		5 mM		0.8207 mL	4.1036 mL	8.2071 mL
10 mM			0.4104 mL	2.0518 mL	4.1036 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 (8.54 mM); Clear solution					
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (8.54 mM); Clear solution					
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (8.54 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	DKM 2-93 is a relatively selective inhibitor of UBA5 with an IC ₅₀ of 430 μM.
IC ₅₀ & Target	IC ₅₀ : 430 μM (UBA5), 90 μM (PaCa2 cells), 30 μM (Panc1 cells) ^[1]
In Vitro	Ubiquitin-like modifier activating enzyme 5 (UBA5) is a novel pancreatic cancer therapeutic target. DKM 2-93 impairs pancreatic cancer cell survival through covalently modifying the catalytic cysteine of UBA5, thereby inhibiting its activity as a protein that activates the ubiquitin-like protein UFM1 to UFMylate proteins. DKM 2-93 inhibits PaCa2 and Panc1 cells

survival with IC₅₀s of 90 and 30 μM, respectively^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

DKM 2-93 daily treatment significantly impairs tumor growth of PaCa2 cells in vivo in tumor xenograft studies in immune-deficient mice without causing any weight loss or overt toxicity^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[1]

PaCa2 and Panc1 cells are treated with 0-1000 μM DKM 2-93 for 48 hours. Cell viability is assessed by Hoescht stain^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Administration ^[1]

Mice: Mice are subcutaneously injected with PaCa2 cells to initiate the tumor xenograft study and treatments of mice are initiated with vehicle or DKM 2-93 (50 mg/kg ip, once per day) three days after injection of cancer cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Rep. 2019 Apr 16;27(3):971-986.e9.
- Cell Rep. 2019 Apr 16;27(3):971-986.e9.

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REFERENCES

[1]. Roberts AM, et al. Chemoproteomic Screening of Covalent Ligands Reveals UBA5 As a Novel Pancreatic Cancer Target. ACS Chem Biol. 2017 Apr 21;12(4):899-904.

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

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