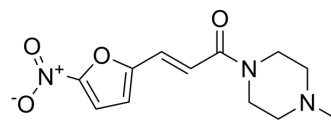


NSC59984

Cat. No.:	HY-19726		
CAS No.:	803647-40-7		
Molecular Formula:	C ₁₂ H ₁₅ N ₃ O ₄		
Molecular Weight:	265.27		
Target:	MDM-2/p53		
Pathway:	Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 38 mg/mL (143.25 mM)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.7697 mL	18.8487 mL	37.6974 mL
	5 mM	0.7539 mL	3.7697 mL	7.5395 mL
	10 mM	0.3770 mL	1.8849 mL	3.7697 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 (9.42 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
 Solubility: ≥ 2.5 mg/mL (9.42 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NSC59984 induces mutant p53 protein degradation via MDM2 and the ubiquitin-proteasome pathway^[1]. NSC59984 acts by targeting GOF-mutant p53 and stimulates p73 to restore the p53 pathway signaling^[2].

In Vitro

NSC59984 specifically restores p53 pathway signaling in mutant p53-expressing human colorectal cancer cells. NSC59984 induces cell death in tumor cells but not normal cells with little or no genotoxicity. NSC59984 induces mutant p53 protein degradation through MDM2-mediated ubiquitination in cancer cells. NSC59984 restores p53 pathway signaling through activation of p73. NSC59984 induces p73-dependent cell apoptosis in cancer. The EC₅₀ of NSC59984 in most cancer cells is significantly lower than those of normal cells, with EC₅₀ of 8.38 μM for p53-null HCT116 cells^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

NSC59984 synergizes with CPT11 to induce cell death in mutant p53-expressing colorectal cancer cells and inhibits mutant p53-associated colon tumor xenograft growth in a p73-dependent manner^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Mol Life Sci. 2022 Jun 4;79(6):340.

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REFERENCES

[1]. Zhang S, et al. Small-Molecule NSC59984 Restores p53 Pathway Signaling and Antitumor Effects against Colorectal Cancer via p73 Activation and Degradation of Mutant p53. Cancer Res. 2015 Sep 15;75(18):3842-52.

[2]. Zhang S, et al. Small-Molecule NSC59984 Restores p53 Pathway Signaling and Antitumor Effects against Colorectal Cancer via p73 Activation and Degradation of Mutant p53. Cancer Res. 2015 Sep 15;75(18):3842-52.

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

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