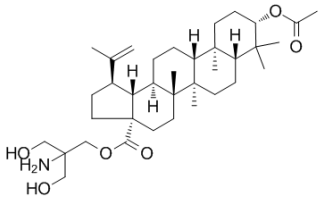
NVX-207

Cat. No.:	HY-101597		
CAS No.:	745020-66-0		
Molecular Formula:	$C_{36}H_{59}NO_6$		
Molecular Weight:	601.86		
Target:	Apoptosis		
Pathway:	Apoptosis		
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 (207.69 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.6615 mL	8.3076 mL	16.6152 mL
	5 mM	0.3323 mL	1.6615 mL	3.3230 mL
	10 mM	0.1662 mL	0.8308 mL	1.6615 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 (3.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.46 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

NVX-207, a Betulinic acid-derived anti-cancer compound, shows anti-tumor activity (mean IC_{50}=3.5 μM) against various human and canine cell lines. NVX-207-induced apoptosis is associated with activation of the intrinsic apoptotic pathway via cleavage of caspases -9, -3, -7 and of PARP[1].

In Vitro

NVX-207 induces cell death via apoptosis[1]. NVX-207 has a high cytotoxicity with IC_{50} values ranging from 7.6-8.5 μM, in the three analyzed malignant glioma cell lines. NVX-207 leads to PARP cleavage and to a decrease in Survivin expression levels under normoxic and hypoxic conditions. NVX-207 (20 μM) causes a significantly high rate of necrosis of glioma cell lines[2].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Intravenous application of NVX-207 in mice is well tolerated[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [2]	Cytotoxic activities are evaluated using the Sulforhodamine-B (SRB) assay. Exponentially growing cells are seeded into 96-well plates at cell densities to prevent confluence for 96 h. After 24 h, the cells are treated using a dilution series of the compounds for 72 h under normoxic or hypoxic conditions. After treatment, the adherent cells are fixed using 10% TCA at 4°C for 1 h; the cells are washed with ice-cold water and are dyed using 100 µL of 4.4% SRB solution for 10 min. After staining, the plates are washed with 1% acetic acid and air-dried overnight. Three hundred microliters of 20 mM Tris base solution is added, and the absorbance is measured at 540 nm using a 96-well plate reader. The IC_{50} values indicate the concentrations of the compound that cause 50% cell inhibition. The data are obtained in three independent experiments. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Willmann M, et al. Characterization of NVX-207, a novel betulinic acid-derived anti-cancer compound. Eur J Clin Invest. 2009;39(5):384-394.

[2]. Bache M, et al. Betulinic acid derivatives NVX-207 and B10 for treatment of glioblastoma--an in vitro study of cytotoxicity and radiosensitization. Int J Mol Sci. 2014 Oct 30;15(11):19777-90.

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