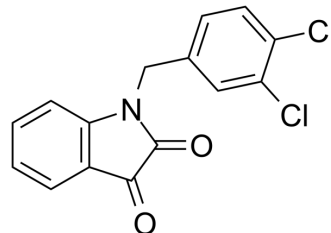


## MDK83190

Cat. No.:	HY-18633		
CAS No.:	79183-19-0		
Molecular Formula:	C <sub>15</sub> H <sub>9</sub> Cl <sub>2</sub> NO <sub>2</sub>		
Molecular Weight:	306.14		
Target:	Apoptosis		
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 : ≥ 46 mg/mL (150.26 mM)  
 \* "≥" means soluble, but saturation unknown.

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	3.2665 mL	16.3324 mL	32.6648 mL
5 mM	0.6533 mL	3.2665 mL	6.5330 mL
10 mM	0.3266 mL	1.6332 mL	3.2665 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: ≥ 2.5 mg/mL (8.17 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

MDK83190 is a potent apoptosis activator, induces Apaf-1 oligomerization, increases procaspase-9 processing and subsequent caspase-3 activation in a cyto c-dependent Manner<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

IC<sub>50</sub>: 4-9 μM (Leukemia origin cells)<sup>[1]</sup>.

#### In Vitro

MDK83190 (Compound 2) (1-50 μM; 2 hours) effects against cell lines of lymphoid origin (CCRF-CEM, MOLT-4, and Jurkat) with IC<sub>50</sub> values ranging from 4 to 9 μM<sup>[1]</sup>.

MDK83190 (Compound 2) (20 μM; 30 mins) activates procaspase-9 and procaspase-3 in a cyto c-dependent manner<sup>[1]</sup>.

MDK83190 (Compound 2) (0.1-100 μM; 22 hours) strongly induces caspase-3 activation, PARP cleavage, and DNA fragmentation, and finally killing cells with an IC<sub>50</sub> of 4 μM<sup>[1]</sup>.

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

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#### Cell Viability Assay<sup>[1]</sup>

Cell Line:	Leukemia cell line: CCRF-CEM cells, MOLT-4 cells, and Jurkat cells
Concentration:	1-50 $\mu$ M
Incubation Time:	2 hours
Result:	Was sensitive to compound 2-induced apoptosis.

#### Western Blot Analysis<sup>[1]</sup>

Cell Line:	Hela cells
Concentration:	20 $\mu$ M
Incubation Time:	30 mins
Result:	Induced procaspase-9 and procaspase-3 to active forms.

#### Apoptosis Analysis<sup>[1]</sup>

Cell Line:	Jurkat cells
Concentration:	0.1-100 $\mu$ M
Incubation Time:	22 hours
Result:	Resulted in apoptosis and finally killed cells.

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## REFERENCES

[1]. Nguyen JT, et al. Direct activation of the apoptosis machinery as a mechanism to target cancer cells. Proc Natl Acad Sci U S A. 2003 Jun 24;100(13):7533-8. Epub 2003 Jun 13.

**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