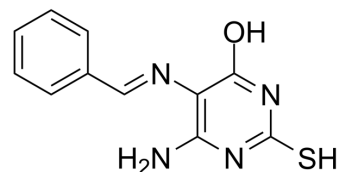


## L189

Cat. No.:	HY-15588		
CAS No.:	64232-83-3		
Molecular Formula:	C <sub>11</sub> H <sub>10</sub> N <sub>4</sub> OS		
Molecular Weight:	246.29		
Target:	DNA/RNA Synthesis		
Pathway:	Cell Cycle/DNA Damage		
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 : ≥ 33 mg/mL (133.99 mM)  
 \* "≥" means soluble, but saturation unknown.

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	4.0603 mL	20.3013 mL	40.6025 mL
5 mM	0.8121 mL	4.0603 mL	8.1205 mL
10 mM	0.4060 mL	2.0301 mL	4.0603 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 (10.15 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

L189 is a DNA ligase inhibitor. L189 has inhibition effect for DNA Ligase I, III and IV with IC<sub>50</sub> values of 5 μM, 9 μM and 5 μM, respectively. L189 has no cytotoxicity and individually increase cell death. L189 can be used for the research of cancer<sup>[1][2]</sup>.

#### In Vitro

L189 inhibits DNA Ligase I, III and IV activity with IC<sub>50</sub> values of 5 μM, 9 μM and 5 μM, respectively<sup>[1]</sup>.  
 L189 (5 μM, 48 h) bring good anti-proliferation activity preferentially and cause cell death by creating a cytotoxic environment<sup>[2]</sup>.  
 L189 (5 μM, 48 h) reduces HeLa nuclear staining along with TMZ<sup>[2]</sup>.  
 L189 (5 μM, 48 h) enhances TMZ-induced HeLa growth arrest when along with TMZ that possibly in G2/M cell cycle phase without employing cell death mechanisms<sup>[2]</sup>.  
 MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
 Cell Cytotoxicity Assay<sup>[1]</sup>

Cell Line:	HeLa cells
Concentration:	5 $\mu$ M
Incubation Time:	48 h
Result:	Blocked to HeLa growth and proliferation along with TMZ and not mark the significant cell cytotoxicity alone.

## CUSTOMER VALIDATION

- Nat Methods. 2023 Jul 20.
- Mol Cell. 2021 Aug 5;81(15):3128-3144.e7.
- J Mol Med (Berl). 2019 Aug;97(8):1183-1193.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Devashree Jahagirdar, et al. Combinatorial Use of DNA Ligase Inhibitor L189 and Temozolomide Potentiates Cell Growth Arrest in HeLa. Current Cancer Therapy Reviews, 2018, 14, 1-11.
- [2]. Xi Chen, Shijun Zhong, Xiao Zhu, et al. Rational Design of Human DNA Ligase Inhibitors that Target Cellular DNA Replication and Repair. Cancer Res 2008; 68: (9). May 1, 2008

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

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