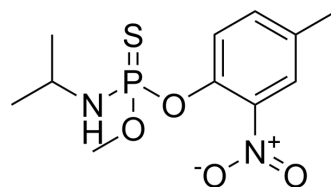


## Amiprofos methyl

Cat. No.:	HY-111939		
CAS No.:	36001-88-4		
Molecular Formula:	C <sub>11</sub> H <sub>17</sub> N <sub>2</sub> O <sub>4</sub> PS		
Molecular Weight:	304.3		
Target:	Microtubule/Tubulin		
Pathway:	Cell Cycle/DNA Damage; Cytoskeleton		
Storage:	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 160 mg/mL (525.80 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.2862 mL	16.4312 mL	32.8623 mL
	5 mM	0.6572 mL	3.2862 mL	6.5725 mL
	10 mM	0.3286 mL	1.6431 mL	3.2862 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Amiprofos methyl (BAY-NTN 6867) is a phosphoric amide herbicide. Amiprofos methyl is a specific and potent antimicrotubule agent. Amiprofos methyl directly poisons microtubule dynamics in plant cells<sup>[1]</sup>.

#### In Vitro

Amiprofos methyl (APM) inhibits competitively the binding of [<sup>14</sup>C]oryzalin to tubulin with a K<sub>i</sub>=5 μM. Amiprofos methyl concentrations inhibiting tobacco cell growth were within the threshold range of Amiprofos methyl concentrations that depolymerized cellular microtubules, indicating that growth inhibition is caused by microtubules depolymerization<sup>[2]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Morejohn LC, et al. Inhibition of Plant Microtubule Polymerization in vitro by the Phosphoric Amide Herbicide Amiprofos-Methyl. *Science*. 1984;224(4651):874-876.
- [2]. Murthy JV, et al. Competitive Inhibition of High-Affinity Oryzalin Binding to Plant Tubulin by the Phosphoric Amide Herbicide Amiprofos-Methyl. *Plant Physiol*. 1994;105(1):309-320.

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

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