
Product Data Sheet

Product Name: Amiprofos-methyl

Cat. No.: GC18274

Chemical Properties

Cas. No. 36001-88-4

Chemical Name N-(1-methylethyl)-phosphoramidothioic acid, O-methyl O-(4-methyl-2-nitrophenyl) ester

SMILES CC1=CC([N+](=[O-])=O)=C(OP(NC(C)C)(OC)=S)C=C1Formula $C_{11}H_{17}N_2O_4PS$

M.Wt 304.3

Solubility DMF: 20 mg/ml, DMSO: 20 mg/ml, Ethanol: 10 mg/ml, PBS (pH 7.2): 0.2 mg/ml

Storage Store at $-20^{\circ}C$ General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure **Background**

Amiprofos-methyl (APM) is a phosphoric amide herbicide. It reversibly decreases *H. vulgare* root and shoot length and inhibits *in vitro* polymerization of Rosa tubulin induced by paclitaxel in a dose-dependent manner. APM completely inhibits tubulin polymerization in *Hemathus endosperm* cells at a concentration of $0.1 \mu M$. The antitubulin effects of APM are specific to plants as it has no effect on bovine brain tubulin polymerization at concentrations up to $100 \mu M$. APM inhibits calcium accumulation in corn mitochondria ($ID_{50} = 140 \text{ nM}$) and induces a 3-fold increase in the rate of calcium efflux from rat liver mitochondria at a concentration of 100 nM . APM inhibits the growth of *P. falciparum* ($IC_{50} = 3.5 \mu M$) and completely inhibits microtubule polymerization in *P. falciparum* trophozoites at a concentration of $20 \mu M$.

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

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