

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=C1

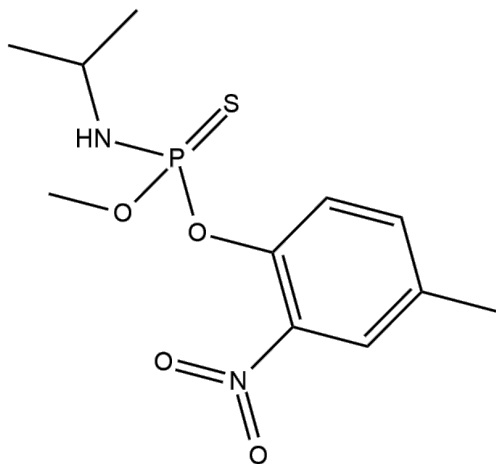
Formula $C_{11}H_{17}N_2O_4PS$ M.Wt 304.3

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°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°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 *Hemanthus* endosperm cells at

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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a concentration of 0.1 μM . The antitubulin effects of APM are specific to plants as it has no effect on bovine brain tubulin polymerization at concentrations up to 100 μM . APM inhibits calcium accumulation in corn mitochondria ($\text{ID}_{50} = 140 \text{ nM}$) 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* ($\text{IC}_{50} = 3.5 \mu\text{M}$) and completely inhibits microtubule polymerization in *P. falciparum* trophozoites at a concentration of 20 μM .

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