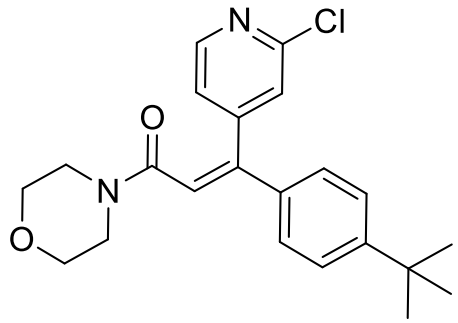
Product data sheet

MedKoo Cat#: 561001 Name: Pyrimorph CAS#: 868390-90-3 Chemical Formula: $C_{22}H_{25}ClN_2O_2$ Exact Mass: 384.1605 Molecular Weight: 384.90	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Pyrimorph is a fungicide with high activity against the plant pathogen Phytophthora capsici. Pyrimorph inhibited different stages in the life cycle of P. capsici including mycelial growth, sporangium production, zoospore release, and cystospore germination with EC(50) values of 1.84, 0.17, 4.92, and 0.09 microg mL(-1), respectively.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	1	2.60

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.60 mL	12.99 mL	25.98 mL
5 mM	0.52 mL	2.60 mL	5.20 mL
10 mM	0.26 mL	1.30 mL	2.60 mL
50 mM	0.05 mL	0.26 mL	0.52 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Pang Z, Chen L, Miao J, Wang Z, Bulone V, Liu X. Proteomic profile of the plant-pathogenic oomycete Phytophthora capsici in response to the fungicide pyrimorph. Proteomics. 2015 Sep;15(17):2972-82. doi: 10.1002/pmic.201400502. Epub 2015 Jun 8. PMID: 25914214.
2. Yan X, Qin W, Sun L, Qi S, Yang D, Qin Z, Yuan H. Study of inhibitory effects and action mechanism of the novel fungicide pyrimorph against Phytophthora capsici. J Agric Food Chem. 2010 Mar 10;58(5):2720-5. doi: 10.1021/jf902410x. PMID: 20000417.

In vivo study

1. Zhao C, Liu B, Wang J, Li N, Qin Z, Qiu L. Acute toxicity and bioconcentration of pyrimorph in zebrafish, Brachydanio rerio. Pest Manag Sci. 2011 Sep;67(9):1178-83. doi: 10.1002/ps.2198. Epub 2011 May 12. PMID: 21567892.

7. Bioactivity
Biological target:

Pyrimorph is active against P. infestans, P. capsica, and R. solani (EC50s = 1.36, 0.72, and 4.44 µg/ml, respectively). Pyrimorph is toxic to zebrafish (LC50 = 19.8 mg/L).

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In vitro activity

Pyrimorph exhibited strong inhibitory effects on multiple stages of the Phytophthora capsici's life cycle, including mycelial growth, sporangium production, zoospore release, and cystospore germination. Pyrimorph impaired the energy generation system. Additionally, pyrimorph displayed inhibitory effects on various metabolic pathways, particularly the hexose monophosphate pathway.

Reference: J Agric Food Chem. 2010 Mar 10;58(5):2720-5. https://pubmed.ncbi.nlm.nih.gov/20000417/

In vivo activity

Pyrimorph has low toxicity to zebrafish; however, it showed medium bioconcentration factor to zebrafish. The 48, 72 and 96 h median lethal concentration values of pyrimorph to zebrafish were 24.33, 22.61 and 19.79 mg L(-1) respectively. The highest bioconcentration factor of pyrimorph in the fish were 1.07 × 10(2) (144 h) and 23.1 (96 h) after exposure to 2.00 and 0.25 mg L(-1) of pyrimorph respectively.

Reference: Pest Manag Sci. 2011 Sep;67(9):1178-83. https://pubmed.ncbi.nlm.nih.gov/21567892/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.