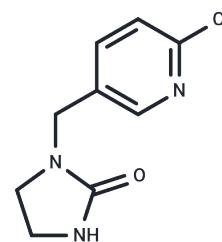


Imidacloprid-urea

Chemical Properties

CAS No. :	120868-66-8
Formula:	C ₉ H ₁₀ ClN ₃ O
Molecular Weight:	211.65
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Imidacloprid-urea is a secondary metabolite of imidacloprid. Imidacloprid is a potent and widely used neonicotinoid with inhibitory effects on pests of cereals, vegetables, tea and cotton. imidacloprid-urea can occupy or block the adsorption sites of imidacloprid on the soil, which may affect the fate, transport and bioavailability of imidacloprid in the environment.
Targets(IC50)	Drug Metabolite
In vitro	Imidacloprid (0, 10, and 20 μ M ; 4-6 days) can reduce insulin-stimulated glucose uptake in adipocytes (3T3-L1), hepatocytes (HepG2), and myotubes (C2C12) cell culture models. Treatment with imidacloprid inhibits phosphorylation of protein kinase B (AKT) and ribosomal S6 kinase (S6K).[3]
In vivo	Imidacloprid(0, 5, 10, 20 mg/kg/day ; oral ; female rats) shows mild pathological changes in the brain, liver, and kidneys of rats.[4]

Solubility Information

Solubility	H ₂ O: 11.2 mg/mL (52.92 mM),Sonication is recommended. DMSO: 112.5 mg/mL (531.54 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.7248 mL	23.6239 mL	47.2478 mL
5 mM	0.945 mL	4.7248 mL	9.4496 mL
10 mM	0.4725 mL	2.3624 mL	4.7248 mL
50 mM	0.0945 mL	0.4725 mL	0.945 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Liu W, et al. Competitive sorption between imidacloprid and imidacloprid-urea on soil clay minerals and humic acids. *J Agric Food Chem.* 2002 ; 50(23):6823-6827.

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Kim J, et al. Imidacloprid, a neonicotinoid insecticide, induces insulin resistance. *J Toxicol Sci.* 2013 ; 38(5):655-660.

Bhardwaj S, et al. A 90 days oral toxicity of imidacloprid in female rats: morphological, biochemical and histopathological evaluations. *Food Chem Toxicol.* 2010 ; 48(5):1185-1190.

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