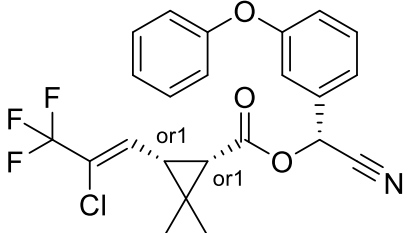


Product data sheet



MedKoo Cat#: 571231 Name: lambda-Cyhalothrin CAS: 91465-08-6 Chemical Formula: C ₂₃ H ₁₉ ClF ₃ NO ₃ Exact Mass: 449.1006 Molecular Weight: 449.8542		
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:

lambda-Cyhalothrin is an insecticide and pesticide that has adverse effects on rats as well, including neurotoxic and hepatopancreatic effects.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.22 mL	11.11 mL	22.23 mL
5 mM	0.44 mL	2.22 mL	4.45 mL
10 mM	0.22 mL	1.11 mL	2.22 mL
50 mM	0.04 mL	0.22 mL	0.44 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. Abdallah FB, Fetoui H, Fakhfakh F, Keskes L. Caffeic acid and quercetin protect erythrocytes against the oxidative stress and the genotoxic effects of lambda-cyhalothrin in vitro. Hum Exp Toxicol. 2012 Jan;31(1):92-100. doi: 10.1177/0960327111424303. Epub 2011 Oct 25. PMID: 22027499.

2. Zhao M, Zhang Y, Liu W, Xu C, Wang L, Gan J. Estrogenic activity of lambda-cyhalothrin in the MCF-7 human breast carcinoma cell line. Environ Toxicol Chem. 2008 May;27(5):1194-200. doi: 10.1897/07-482.1. PMID: 18419197.

In vivo study

1. Yang D, Sun X, Wei X, Zhang B, Fan X, Du H, Zhu R, Oh Y, Gu N. Lambda-cyhalothrin induces lipid accumulation in mouse liver is associated with AMPK inactivation. Food Chem Toxicol. 2022 Dec 15;172:113563. doi: 10.1016/j.fct.2022.113563. Epub ahead of print. PMID: 36529352.

2. Al Malahi NM, Al Jumaily MM, Al-Shaibani EAS, Alajmi RA, Alkhuriji AF, Al-Tamimi J, Alhimaidi AR. Ameliorative effect of L-carnitine on lambda-cyhalothrin-induced anatomical and reproductive aberrations in albino mice. Saudi J Biol Sci. 2022 Sep;29(9):103373. doi: 10.1016/j.sjbs.2022.103373. Epub 2022 Jul 4. PMID: 35865321; PMCID: PMC9293953.

Product data sheet



7. Bioactivity

Biological target:

lambda-Cyhalothrin is an insecticide and pesticide that has adverse effects on rats as well, including neurotoxic and hepatopancreatic effects.

In vitro activity

The aim of this study was to examine (i) the potency of LTC to induce oxidative stress response in rat erythrocytes in vitro and (ii) the role of caffeic acid (20 μ M) and/or quercetin (10 μ M) in preventing the cytotoxic effects. These results suggest that LTC exerts its toxic effect by increasing lipid peroxidation, altering the antioxidant enzyme activities and DNA damage.

Reference: Hum Exp Toxicol. 2012 Jan;31(1):92-100. <https://pubmed.ncbi.nlm.nih.gov/22027499/>

In vivo activity

To indicate the potential pathogenesis of liver injury caused by LCT (lambda-cyhalothrin) exposure, ICR mice were orally administrated with LCT at a dose of 0.4 mg/kg and 2 mg/kg. The results suggest that LCT induced obesity, dyslipidemia and hepatic steatosis. In addition, LCT also induced oxidative stress, liver function injury, and disorganized structure of the liver.

Reference: Food Chem Toxicol. 2022 Dec 15;172:113563. <https://pubmed.ncbi.nlm.nih.gov/36529352/>

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.