

Product data sheet



MedKoo Cat#: 584559 Name: Lufenuron CAS: 103055-07-8 Chemical Formula: C ₁₇ H ₈ Cl ₂ F ₈ N ₂ O ₃ Exact Mass: 509.9784 Molecular Weight: 511.1492		
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:

Lufenuron is a chitin-synthesis inhibitor.

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
DMSO	125.0	244.55

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.96 mL	9.78 mL	19.56 mL
5 mM	0.39 mL	1.96 mL	3.91 mL
10 mM	0.20 mL	0.98 mL	1.96 mL
50 mM	0.04 mL	0.20 mL	0.39 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

TBD

In vivo study

1. Basal WT, Ahmed ART, Mahmoud AA, Omar AR. Lufenuron induces reproductive toxicity and genotoxic effects in pregnant albino rats and their fetuses. Sci Rep. 2020 Nov 11;10(1):19544. doi: 10.1038/s41598-020-76638-6. PMID: 33177580; PMCID: PMC7658361.

2. Wang C, Henderson G, Gautam BK. Lufenuron suppresses the resistance of Formosan subterranean termites (Isoptera: Rhinotermitidae) to entomopathogenic bacteria. J Econ Entomol. 2013 Aug;106(4):1812-8. doi: 10.1603/ec13068. PMID: 24020297.

7. Bioactivity

Biological target:

Lufenuron is a lipophilic benzoylurea insecticide and a chitin synthesis inhibitor that can be used for flea and fish lice control.

In vitro activity

TBD

In vivo activity

Product data sheet



Moreover, lufenuron-induced oxidative stress in the liver of mothers and fetuses was confirmed by the increased malondialdehyde levels and decreased levels of enzymatic antioxidants (glutathione peroxidase and superoxide dismutase). Taken together, it can be concluded that lufenuron has a great potential in exerting teratogenic, genotoxic, and oxidative stresses on pregnant rats and their fetuses upon chronic exposure to residual levels during the organogenesis gestational period.

Reference: Sci Rep. 2020 Nov 11;10(1):19544. <https://pubmed.ncbi.nlm.nih.gov/33177580/>

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.