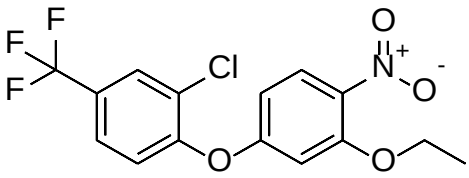
Product data sheet

MedKoo Cat#: 461288 Name: Oxyfluorfen CAS: 42874-03-3 Chemical Formula: $C_{15}H_{11}ClF_3NO_4$ Exact Mass: 361.0329 Molecular Weight: 361.7012	
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:
Oxyfluorfen is a herbicide of the nitrodiphenyl ether class. It is being used to control annual and perennial broad-leaved weeds and sedges in a variety of field crops.

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	100.0	276.47

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.76 mL	13.82 mL	27.65 mL
5 mM	0.55 mL	2.76 mL	5.53 mL
10 mM	0.28 mL	1.38 mL	2.76 mL
50 mM	0.06 mL	0.28 mL	0.55 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

Li Z, Guo J, Jia K, Zheng Z, Chen X, Bai Z, Yang Y, Chen B, Yuan W, Chen W, Yang J. Oxyfluorfen induces hepatotoxicity through lipo-sugar accumulation and inflammation in zebrafish (Danio rerio). Ecotoxicol Environ Saf. 2021 Dec 31;230:113140. doi: 10.1016/j.ecoenv.2021.113140. Epub ahead of print. PMID: 34979306.

7. Bioactivity
Biological target:

Oxyfluorfen is a protoporphyrinogen oxidase inhibitor.

In vitro activity

TBD

In vivo activity

In this study, zebrafish was used as a model animal to evaluate OXY (oxyfluorfen)-induced liver toxicity. The study found that 0.25, 0.5, and 1 mg/L of OXY affected the early development of zebrafish and severely damaged the lipid and sugar metabolism in the liver

of zebrafish larvae. Furthermore, a metabolic function disorder caused liver damage. OXY also caused inflammation by upregulating the inflammatory factors IL-6, IL-8, and TNF-α, and activated the apoptotic pathway to inhibit hepatocyte proliferation, resulting in zebrafish liver toxicity.

Reference: Ecotoxicol Environ Saf. 2021 Dec 31;230:113140. https://pubmed.ncbi.nlm.nih.gov/34979306/