

Product data sheet



MedKoo Cat#: 526081 Name: Rafoxanide CAS: 22662-39-1 Chemical Formula: C ₁₉ H ₁₁ Cl ₂ I ₂ NO ₃ Exact Mass: 624.8205 Molecular Weight: 626.01		
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.	

Product description:

Rafoxanide is a salicylanilide used as an anthelmintic. It is used to treat fluke, hookworm, and other infestations.

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	30	47.92
DMSO	30	47.92
Ethanol	2	3.19

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.60 mL	7.99 mL	15.97 mL
5 mM	0.32 mL	1.60 mL	3.19 mL
10 mM	0.16 mL	0.80 mL	1.60 mL
50 mM	0.03 mL	0.16 mL	0.32 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

- Laudisi F, Pacifico T, Maresca C, Luiz-Ferreira A, Antonelli S, Ortenzi A, Colantoni A, Di Grazia A, Franzè E, Colella M, Di Fusco D, Sica GS, Monteleone I, Monteleone G, Stolfi C. Rafoxanide sensitizes colorectal cancer cells to TRAIL-mediated apoptosis. *Biomed Pharmacother.* 2022 Nov;155:113794. doi: 10.1016/j.biopha.2022.113794. Epub 2022 Oct 4. PMID: 36271571.
- Ramírez-Hernández M, Norambuena J, Hu H, Thomas B, Tang C, Boyd JM, Asefa T. Repurposing Anthelmintics: Rafoxanide- and Copper-Functionalized SBA-15 Carriers against Methicillin-Resistant *Staphylococcus aureus*. *ACS Appl Mater Interfaces.* 2023 Apr 12;15(14):17459-17469. doi: 10.1021/acsami.2c19899. Epub 2023 Mar 28. PMID: 36975176; PMCID: PMC10257252.

In vivo study

- Di Grazia A, Laudisi F, Di Fusco D, Franzè E, Ortenzi A, Monteleone I, Monteleone G, Stolfi C. Rafoxanide Induces Immunogenic Death of Colorectal Cancer Cells. *Cancers (Basel).* 2020 May 21;12(5):1314. doi: 10.3390/cancers12051314. PMID: 32455811; PMCID: PMC7281008.
- He W, Xu Z, Song D, Zhang H, Li B, Gao L, Zhang Y, Feng Q, Yu D, Hu L, Chen G, Tao Y, Wu X, Shi J, Zhu W. Antitumor effects of rafoxanide in diffuse large B cell lymphoma via the PTEN/PI3K/Akt and JNK/c-Jun pathways. *Life Sci.* 2020 Feb 15;243:117249. doi: 10.1016/j.lfs.2019.117249. Epub 2020 Jan 8. PMID: 31926247.

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7. Bioactivity

Biological target:

In vitro kinase assays using Rafoxanide showed it to be a low micromolar inhibitor of OSR1 T185E in vitro, IC₅₀ = 8.18 μ M. Rafoxanide is also a low micromolar inhibitor of SPAK T233E in vitro with IC₅₀ value of 13.03 μ M.

In vitro activity

Rafoxanide acts as a selective TRAIL sensitizer in vitro and in a syngeneic experimental model of CRC by decreasing the levels of c-FLIP and survivin. These data suggest that rafoxanide could be deployed as an anti-cancer drug in combinatorial approaches aimed at overcoming CRC cell resistance to TRAIL-based therapies.

Reference: Biomed Pharmacother. 2022 Nov;155:113794. <https://pubmed.ncbi.nlm.nih.gov/36271571/>

In vivo activity

There was a marked increase of tumor-free survival among immunocompetent mice immunized with rafoxanide-treated dying tumor cells as compared with placebo. These data indicate rafoxanide as a immunogenic cell death inducer.

Reference: Cancers (Basel). 2020 May 21;12(5):1314. <https://pubmed.ncbi.nlm.nih.gov/32455811/>

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.