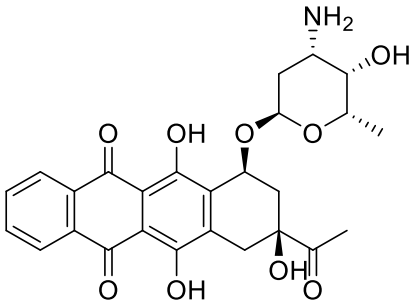
Product data sheet

MedKoo Cat#: 413483 Name: Idarubicin Free Base CAS: 58957-92-9 (free base) Chemical Formula: $C_{26}H_{27}NO_9$ Exact Mass: 497.1686 Molecular Weight: 497.5	
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:
Idarubicin Free Base is an orally administered anthracycline antineoplastic. The compound has shown activity against BREAST NEOPLASMS; LYMPHOMA; and LEUKEMIA.

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	2.01 mL	10.05 mL	20.10 mL
5 mM	0.40 mL	2.01 mL	4.02 mL
10 mM	0.20 mL	1.01 mL	2.01 mL
50 mM	0.04 mL	0.20 mL	0.40 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. Kinnunen U, Syrjälä H, Koistinen P, Koskela M. Idarubicin inhibits the growth of bacteria and yeasts in an automated blood culture system. Eur J Clin Microbiol Infect Dis. 2009 Mar;28(3):301-3. doi: 10.1007/s10096-008-0613-4. Epub 2008 Sep 2. PMID: 18763001.
2. Orlandi P, Barbara C, Bocci G, Fioravanti A, Di Paolo A, Del Tacca M, Danesi R. Idarubicin and idarubicinol effects on breast cancer multicellular spheroids. J Chemother. 2005 Dec;17(6):663-7. doi: 10.1179/joc.2005.17.6.663. PMID: 16433198.

In vivo study

1. Goel SA, Guo LW, Wang B, Guo S, Roenneburg D, Ananiev GE, Hoffmann FM, Kent KC. High-throughput screening identifies idarubicin as a preferential inhibitor of smooth muscle versus endothelial cell proliferation. PLoS One. 2014 Feb 24;9(2):e89349. doi: 10.1371/journal.pone.0089349. Erratum in: PLoS One. 2014;9(10):e110098. PMID: 24586708; PMCID: PMC3933427.

7. Bioactivity
Biological target:

Idarubicin is an orally active and potent anthracycline antileukemic agent. Idarubicin inhibits the topoisomerase II interfering with the replication of DNA and RNA transcription.

In vitro activity

Product data sheet

Idarubicin inhibited the growth of all of the five gram-positive cocci, one of five gram-negative rods and one of three yeast strains studied in the standard bottles but not in the FAN bottles.

Reference: Eur J Clin Microbiol Infect Dis. 2009 Mar;28(3):301-3. https://pubmed.ncbi.nlm.nih.gov/18763001/

In vivo activity

The morphometric data show that on day 14 after angioplasty, an aggressive neointimal plaque develops (see vehicle control, Figure 5A). However, rat arteries treated with idarubicin were found to have an 80% reduction in intimal hyperplasia (Figure 5B and C) compared to vehicle control.

Reference: PLoS One. 2014 Feb 24;9(2):e89349. https://pubmed.ncbi.nlm.nih.gov/24586708/