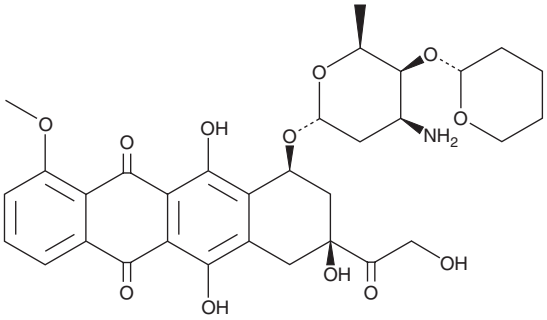
PRODUCT INFORMATION

Pirarubicin

Item No. 28384

CAS Registry No.:	72496-41-4
Formal Name:	(8S,10S)-10-[[3-amino-2,3,6-trideoxy-4-O-[(2R)-tetrahydro-2H-pyran-2-yl]-α-L-lyxo-hexopyranosyl]oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(2-hydroxyacetyl)-1-methoxy-5,12-naphthacenedione
MF:	$C_{32}H_{37}NO_{12}$
FW:	627.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 235, 289, 480, 496 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pirarubicin is supplied as a solid. A stock solution may be made by dissolving the pirarubicin in the solvent of choice, which should be purged with an inert gas. Pirarubicin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of pirarubicin in these solvents is approximately 2, 10, and 5 mg/ml, respectively.

Description

Pirarubicin is an anthracycline that has anticancer activity.[1] It interacts with topoisomerase II to inhibit DNA replication. Pirarubicin inhibits the growth of human HeLa and C33A cervical, as well as T-24 bladder cancer cells (IC_{50}s = 29, 52, and 36 ng/ml, respectively).[2] It inhibits the growth of human Huh7 and MHCC97H liver cancer cells (IC_{50}s = 0.159 and 0.374 µM, respectively).[3] Pirarubicin also inhibits the growth of M5076 mouse ovarian cancer cells *in vitro* (IC_{50} = 0.366 µM) and *in vivo* in a mouse allograft model when administered at a dose of 2 mg/kg for four days.[4]

References

1. Monneret, C. Recent developments in the field of antitumour anthracyclines. *Eur. J. Med. Chem.* **36(6)**, 483-493 (2001).
2. Tsuchiya, K.S., Ishii, T., Ikeno, S., *et al.* Inhibition of anchorage-independent growth of tumor cells by IT-62-B, a new anthracycline. *J. Antibiot. (Tokyo)* **50(10)**, 853-859 (1997).
3. Huang, H., Chen, T., Zhou, Y., *et al.* RIPK1 inhibition enhances pirarubicin cytotoxic efficacy through AKT-P21-dependent pathway in hepatocellular carcinoma. *Int. J. Med. Sci.* **15(14)**, 1648-1657 (2018).
4. Sugiyama, T., Sadzuka, Y., Nagasawa, K., *et al.* Membrane transport and antitumor activity of pirarubicin, and comparison with those of doxorubicin. *Jpn. J. Cancer Res.* **90(7)**, 775-780 (1999).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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