Idarubicin (hydrochloride)

Item No. 14176

CAS Registry No.: 57852-57-0
Formal Name: (7S,9S)-9-acetyl-7-[5-amino-2,3,6-trideoxy-α-L-lyxo-hexopyranosyl(oxy)]-7,8,9,10-tetrahydro-6,9,11-trihydroxy-5,12-naphthacenedione, monohydrochloride

Synonyms: 4-Demethoxydaunorubicin, 4-DMD, NSC 256439
MF: C26H27NO9 • HCl
FW: 534.0
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: \( \lambda_{\text{max}} \) 252, 287, 482 nm

Laboratory Procedures

For long term storage, we suggest that idarubicin (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

Idarubicin (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the idarubicin (hydrochloride) in the solvent of choice. Idarubicin (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of idarubicin (hydrochloride) in these solvents is approximately 10 mg/ml.

Idarubicin (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, idarubicin (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Idarubicin (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Idarubicin is a 4-demethoxy analog of the leukemia therapeutic daunorubicin (Item No. 14159). Both are anthracycline antibiotics which intercalate in DNA and inhibit topoisomerase II, resulting in cancer cell cytotoxicity at low concentrations (IC_{50} = 20-120 nM for idarubicin).

Idarubicin is effective in combination therapy for the treatment of different types of leukemia.

References


Related Products

For a list of related products please visit: www.caymanchem.com/catalog/14176

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes no warranty or guarantee of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman warrants only to the original customer that the material will meet our specifications in the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have any obligation or liability, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

The limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer’s exclusive remedy and Cayman’s sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman’s option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.