

Doxorubicin Hydrochloride

Apoptosis inducer
Catalog No. SIH-390



Discovery through Partnership | Excellence through Quality

Product Name

Doxorubicin Hydrochloride

Description

Apoptosis inducer

Purity

>98% (TLC); NMR (Conforms)

CAS No.

25316-40-9

Molecular Formula

$C_{27}H_{29}NO_{11} \cdot HCl$

Molecular Weight

580

Field Of Use

Not for use in humans. Not for use in diagnostics or therapeutics. For in vitro research use only.

Properties

Storage Temperature

-20°C

Shipping Temperature

Shipped Ambient

Product Type

Inducer

Solubility

May be dissolved in water (25 mg/ml); or DMSO (30 mg/ml).

Source

Synthetic

Appearance

Red- Orange Powder

SMILES

[C@H]2(OC1OC(C(O)C(N)C1)C)C[C@@](O)(CC3=C2C(=C4C(=C3O)C(=O)C5=C(C4=O)C(=CC=C5)OC)O)C(=O)CO.[H+].[Cl-]

InChI

InChI=1S/C27H29NO11.ClH/c1-10-22(31)13(28)6-17(38-10)39-15-8-27(36,16(30)9-29)7-12-19(15)26(35)21-20(24(12)33)23(32)11-4-3-5-14(37-2)18(11)25(21)34;/h3-5,10,13,15,17,22,29,31,33,35-36H,6-9,28H2,1-2H3

InChIKey

MWWSFMDVAYGXBV-RUELKSSGSA-N

Safety Phrases

Classification: Not WHMIS controlled.

Safety Phrases:

S22 - Do not breathe dust.

S24/25 - Avoid contact with skin and eyes.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Hazard statements:

H302- Harmful if swallowed.

H350- May cause cancer.

Precautionary statements:

P201- Obtain special instructions before use.

P308 + P313- IF exposed or concerned: Get medical advice/ attention.

Cite This Product

Doxorubicin Hydrochloride (StressMarq Biosciences Inc., Victoria BC CANADA, Catalog # SIH-390)

Biological Description

Alternative Names

Adriamycin

Research Areas

Alzheimer's Disease, Apoptosis, Cancer, Cell Signaling, DNA Synthesis, DNA/RNA, Epigenetics and Nuclear Signaling, Neurodegeneration, Neuroscience, Topoisomerases

PubChem ID

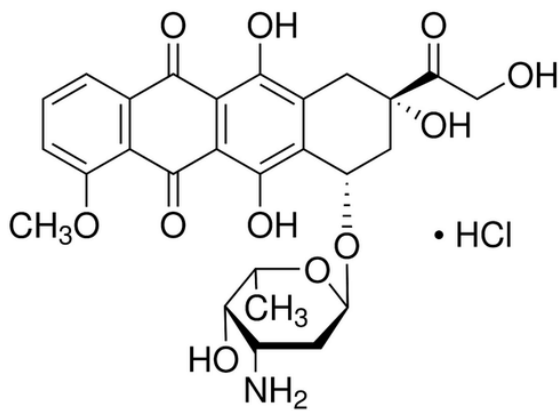
Scientific Background

Doxorubicin Hydrochloride is used in a clinical setting for the treatment of a wide range of cancers, including lymphomas, leukemias, and solid tumors of the breast, pancreas, stomach, bladder, and ovaries. This drug intercalates into DNA and therefore induces apoptosis by hindering cellular functions like replication and transcription by specifically inhibiting the binding of reverse transcriptase, RNA polymerase and topoisomerase II. Doxorubicin has some adverse effects for patients including immunosuppressive effects caused by hematologic toxicity. Doxorubicin has also been shown to induce autophagy in a species-specific manner.

References

1. Kusayanagi, T. et al. (2012). *Bioorg Med Chem.* 20(21): 6248-55.
2. Chen, N. T. et al. (2012). *PLoS One.* 7(9).
3. Patel, S. et al. (1997). *Mol Pharmacol.* 52(4): 658-66.
4. Cutts, S. et al. (1996). *J Biol Chem.* 271(10): 5422-9.
5. Danesi, R. et al. (2004). *Transplant Proc.* 36(3): 703-4.
6. Dirks-Naylor, A. (2013). *Life Sci.* 93(24): 913-6.

Product Images



Chemical structure of Doxorubicin Hydrochloride (SIH-390), a Autophagy inducer. CAS #: 25316-40-9. Molecular Formula: C₂₇H₂₉NO₁₁ . HCl. Molecular Weight: 580 g/mol.

Product Citations (0)

Currently there are no citations for this product.

Reviews

There are no reviews yet.