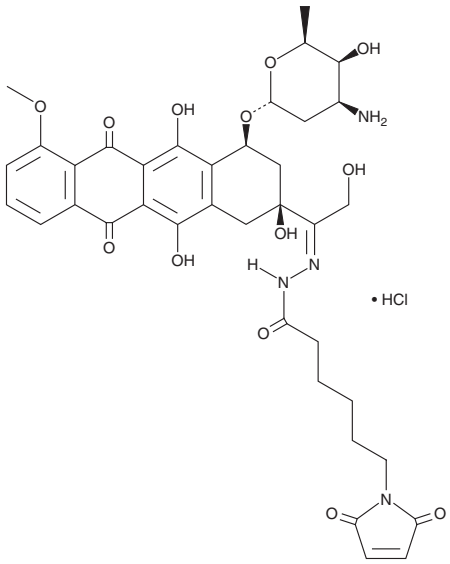
PRODUCT INFORMATION

Aldoxorubicin (hydrochloride)

Item No. 35311



CAS Registry No.:	480998-12-7
Formal Name:	2,5-dihydro-2,5-dioxo-1H-pyrrole-1-hexanoic acid, 2-[1-[(2S,4S)-4-[(3-amino-2,3,6-trideoxy-α-L-lyxo-hexopyranosyl) oxy]-1,2,3,4,6,11-hexahydro-2,5,12-trihydroxy-7-methoxy-6,11-dioxo-2-naphthacenyl]-2-hydroxyethylidene] hydrazide, monohydrochloride
Synonyms:	DOXO-EMCH, INNO-206, MC-DOXHZN
MF:	$C_{37}H_{42}N_4O_{13}$ • HCl
FW:	787.2
Purity:	≥95%
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

Aldoxorubicin (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the aldoxorubicin (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Aldoxorubicin (hydrochloride) is soluble in ethanol and DMSO.

Description

Aldoxorubicin is a prodrug form of the anthracycline antitumor antibiotic doxorubicin (Item No. 15007).[1] Aldoxorubicin selectively binds to serum albumin, which releases doxorubicin in acidic environments, such as the tumor microenvironment. It inhibits the proliferation of RenCa renal cell carcinoma cells as well as MCF-7 breast and LXFL 529 lung cancer cells (IC_{50}s = 1, 1.1, and 0.5 µM, respectively). Aldoxorubicin (39.3 µmol/kg) induces tumor regression in an MDA-MB-435 breast cancer mouse xenograft model. Unlike doxorubicin, aldoxorubicin is not toxic to mice (LD_{50} = >60 mg/kg).[2] It has also been used to conjugate doxorubicin to antibodies.[3]

References

1. Kratz, F., Warnecke, A., Scheuermann, K., *et al.* Probing the cysteine-34 position of endogenous serum albumin with thiol-binding doxorubicin derivatives. Improved efficacy of an acid-sensitive doxorubicin derivative with specific albumin-binding properties compared to that of the parent compound. *J. Med. Chem.* **45(25)**, 5523-5533 (2002).
2. Kratz, F., Ehling, G., Kauffmann, H.M., *et al.* Acute and repeat-dose toxicity studies of the (6-maleimidocaproyl)hydrazone derivative of doxorubicin (DOXO-EMCH), an albumin-binding prodrug of the anticancer agent doxorubicin. *Hum. Exp. Toxicol.* **26(1)**, 19-35 (2007).
3. Willner, D., Trail, P.A., Hofstead, S.J., *et al.* (6-Maleimidocaproyl)hydrazone of doxorubicin—a new derivative for the preparation of immunoconjugates of doxorubicin. *Bioconjug. Chem.* **4(6)**, 521-527 (1993).

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.

WARRANTY AND LIMITATION OF REMEDY
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