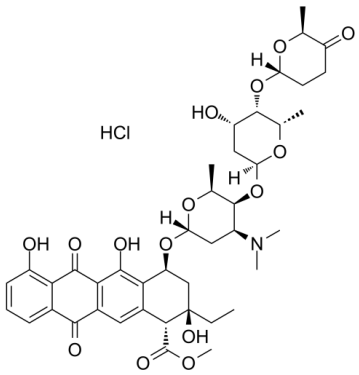
Data Sheet

Product Name:	Aclacinomycin A hydrochloride
Cat. No.:	CS-0079483
CAS No.:	75443-99-1
Molecular Formula:	C42H54ClNO15
Molecular Weight:	848.33
Target:	Proteasome; Topoisomerase
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Solubility:	DMSO : ≥ 125 mg/mL (147.35 mM)



BIOLOGICAL ACTIVITY:

Aclacinomycin A hydrochloride (Aclarubicin hydrochloride), a fluorescent molecule and the first described non-peptidic inhibitor showing discrete specificity for the CTRL (chymotrypsin-like) activity of the **20S proteasome**[1]. Aclacinomycin A hydrochloride is also a dual inhibitor of **topoisomerase I and II**[2]. An effective anthracycline chemotherapeutic agent for hematologic cancers and solid tumors[3]. IC50 & Target: 20S proteasome[1].
Topoisomerase I and II[2].

References:

[1]. Isoe T, et al. Inhibition of different steps of the ubiquitin system by CDDP and aclarubicin. Biochim Biophys Acta. 1992 Sep 15;1117(2):131-5.

[2]. Hajji N, et al. Induction of genotoxic and cytotoxic damage by aclarubicin, a dual topoisomerase inhibitor. Mutat Res. 2005 May 2;583(1):26-35.

[3]. Iihoshi H, et al. Aclarubicin, an anthracycline anti-cancer drug, fluorescently contrasts mitochondria and reduces the oxygen consumption rate in living human cells. Toxicol Lett. 2017 Aug 5;277:109-114.

CAIndexNames:

1-Naphthacenecarboxylic acid, 2-ethyl-1,2,3,4,6,11-hexahydro-2,5,7-trihydroxy-6,11-dioxo-4-[[2,3,6-trideoxy-4-O-[2,6-dideoxy-4-O-[(2R,6S)-tetrahydro-6-methyl-5-oxo-2H-pyran-2-yl]-α-L-lyxo-hexopyranosyl]-3-(dimethylamino)-α-L-lyxo-hexopyranosyl]oxy]-, methyl ester, hydrochloride (1:1), (1R,2R,4S)-

SMILES:

O=C([C@@H]1C2=CC(C(C3=CC=CC(O)=C43)=O)=C(C4=O)C(O)=C2[C@@H](O[C@@](O[C@@H](C)[C@H]5O[C@@](O[C@@H](C)[C@H]6O[C@](CCC7=O)([H])O[C@H]7C)([H])C[C@@H]6O)([H])C[C@@H]5N(C)C)C[C@]1(O)CC)OC.Cl

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