Berubicin hydrochloride

Cat. No.: HY-14942A

CAS No.: 293736-67-1

Molecular Formula: $C_{34}H_{36}ClNO_{11}$

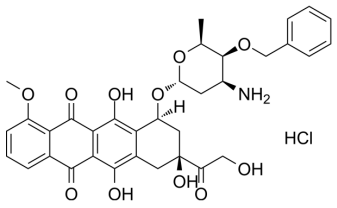
Molecular Weight: 670.1

Target: Apoptosis

Pathway: Apoptosis

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description

Berubicin hydrochloride (RTA 744) is a Doxorubicin (HY-15142A) analogue. Berubicin hydrochloride triggers apoptosis and cell killing in NB cells by activating proapoptotic mediators. Berubicin hydrochloride has proapoptotic and anti-leukemia activities. Berubicin hydrochloride can be used for cancer research[1][2][3].

In Vitro

Berubicin hydrochloride inhibits the activity of K562 cells with an IC_{50} value of 0.18 mg/mL[1].
Berubicin hydrochloride (0-100 μM; 24 h) inhibits thymidine absorption by KBM-5 cells[2].
Berubicin hydrochloride (1 μM; 15 min) activates NF-κB by the p50 and p65 subunits of NF-κB in KBM-5 cells[2].
Berubicin hydrochloride (0-100 μM; 72 h) inhibits Jurkat and RIP-deleted Jurkat cells proliferation in dose dependent manner[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[2]

Cell Line:	KBM-5 cells.
Concentration:	0, 0.1, 1, 10 and 100 μM.
Incubation Time:	24 h.
Result:	Inhibited cell viability with dose-dependent manner.

Western Blot Analysis[2]

Cell Line:	KBM-5 cells.
Concentration:	0, 0.1, 1 and 10 μM.
Incubation Time:	4 h.
Result:	Increased NF-κB expression with time and dose dependent manner.

Cell Viability Assay[3]

Cell Line:	SH-SY5Y cells.
Concentration:	0.1, 1 and 10 μM.

Incubation Time:	0, 1, 2, 3, 4 and 5 d.
Result:	Inhibited cell viability with dose-dependent manner.
Apoptosis Analysis[3]	
Cell Line:	SH-SY5Y cells.
Concentration:	50, 500 and 2000 nM.
Incubation Time:	48 h.
Result:	Promoted cell apoptosis.
Western Blot Analysis[3]	
Cell Line:	SH-SY5Y cells.
Concentration:	0, 0.1, 1.0 or 10 μM.
Incubation Time:	0, 0.5, 1, 2, 4, 6, 8, 12 or 24 h.
Result:	Activated Casp 3 and Casp 9. Increased p53 and NF-κB expression. Reduced IκBα expression.

REFERENCES

[1]. Faderl S, et al. WP744, a novel anthracycline with enhanced proapoptotic and antileukemic activity. Anticancer Res. 2001 Nov-Dec;21(6A):3777-84.

[2]. Ashikawa K, et al. Evidence that activation of nuclear factor-kappaB is essential for the cytotoxic effects of doxorubicin and its analogues. Biochem Pharmacol. 2004 Jan 15;67(2):353-64.

[3]. Wu J, Harris NL, Inge TH. Nuclear factor-kappa B and apoptosis inducing factor activation by doxorubicin analog WP744 in SH-SY5Y neuroblastoma cells. J Surg Res. 2004 Dec;122(2):231-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA