Product Data Sheet

Product Name: Atrimustine (Bestrabucil)
Cat. No.: GC34155

Chemical Properties

Cas. No.	75219-46-4		
SMILES	C[C@@]1([C@H]2OC(COC(CCCC3=CC=C(N(CCCl)CCCl)C=C3)=O)=O)[C@](CC2)([H])[C@@](CCC4=CC(OC(C5=CC=CC=C5)=O)=CC=C64)([H])[C@]6([H])CC1		
Formula	$C_{41}H_{47}Cl_2NO_6$	M.Wt	720.72
Solubility	Soluble in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Atrimustine (Bestrabucil)		

Protocol

Cell experiment:

In the culture system containing 10 nM Testosterone, Atrimustine (Bestrabucil) exhibits a statistically significant inhibition of SC-115 cell growth at concentrations of 10 μM and 1 μM. Mixtures of Estradiol and Chlorambucil also significantly inhibit the growth of SC- 115 cells at concentrations of 1 μM and 100 nM. The inhibitory effect at day 7 of culture is regarded as similar for 10 μM Atrimustine and 1 μM of the mixture. At 10 μM, Atrimustine inhibits the growth of SC-115 cells to the sarve degree as the control culture without Testosterone and this concentration of Atrimustine is taken as the IC50. Thus, in experiment 2, 10 μM Atrimustine is used in the CM of SC-115 cells to study the inhibition of growth by Atrimustine [2].

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References:

[1]. Ezaki K, et al. A combination trial of human lymphoblastoid interferon and bestrabucil (KM2210) for adult T-cell leukemia-lymphoma. Cancer. 1991 Aug 15;68(4):695-8.
[2]. Akaza H, et al. Inhibitory effects of bestrabucil, a conjugate of chlorambucil and estradiol, on the production of androgen-induced growth factor(s) by Shionogi carcinoma 115 cells. Int J Urol. 1994 Mar;1(1):67-73.

Background

Atrimustine is a conjugate of chlorambucil and β-estradiol benzoate with the antitumor activity.

Atrimustine (Bestrabucil), a conjugate of chlorambucil and β-estradiol benzoate, has high affinity for tumor cells and enhancesthe antitumor activity of chlorambucil[1].The effect of Atrimustine (Bestrabucil), a benzoate of an estradiol-chlorambucil conjugate, is

examined on the production of growth factor(s) by Shionogi carcinoma 115 (SC-115) cells, an androgen-responsive cultured cancer cell line. At Atrimustine concentrations of 100 nM-10 μM, concentration-dependent inhibition of growth factor production by SC-115 cells can be demonstrated by 3H-thymidine uptake assay[2].

[1]. Ezaki K, et al. A combination trial of human lymphoblastoid interferon and bestrabucil (KM2210) for adult T-cell leukemia-lymphoma. Cancer. 1991 Aug 15;68(4):695-8. [2]. Akaza H, et al. Inhibitory effects of bestrabucil, a conjugate of chlorambucil and estradiol, on the production of androgen-induced growth factor(s) by Shionogi carcinoma 115 cells. Int J Urol. 1994 Mar;1(1):67-73.