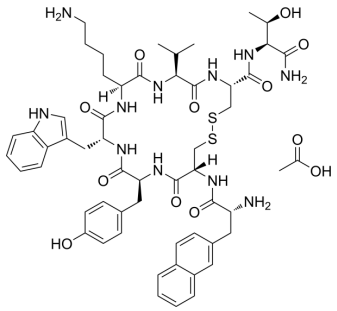
Lanreotide acetate



Cat. No.:	HY-P1959A
CAS No.:	2378114-72-6
Molecular Formula:	$C_{56}H_{73}N_{11}O_{12}S_2$
Molecular Weight:	1156.38
Sequence:	{d-2nal}-Cys-Tyr-{d-Trp}-Lys-Val-Cys-Thr-NH2 (Disulfide bridge: Cys2-Cys7)
Sequence Shortening:	{d-2nal}-CY-{d-Trp}-KVCT-NH2 (Disulfide bridge: Cys2-Cys7)
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture and light, under nitrogen Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (86.48 mM; Need ultrasonic)
H_2O : 25 mg/mL (21.62 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8648 mL	4.3238 mL	8.6477 mL
	5 mM	0.1730 mL	0.8648 mL	1.7295 mL
	10 mM	0.0865 mL	0.4324 mL	0.8648 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.16 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.16 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (2.16 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Lanreotide (BIM 23014) acetate is a somatostatin analogue with antineoplastic activity. Lanreotide acetate can be used for the research of carcinoid syndrome[1][2].

In Vitro

Lanreotide (BIM 23014) (100 nM; 0-48 h) enhanced radiation-induced apoptosis[1].
Lanreotide results in a dose-dependent decrease in GH3 cell colony forming units. Lanreotide at concentrations of 1, 10, 100, and 1000 nM results in cell survival rates of 75, 56, 39 and 27% respectively. The IC_{50} is 57 nM[1].
Lanreotide inhibits GH-secreting pituitary adenoma cell proliferation and hormone release in vitro[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Apoptosis Analysis[1]

Cell Line:	GH3
Concentration:	100 nM
Incubation Time:	48 h, 24 h, or immediately (0 h) before radiation
Result:	Increased apoptotic sub-G1 proportion compared with radiation alone.

In Vivo

Lanreotide acetate (2.5-10mg/kg; s.c.; daily for 5 days) resluts in tumor growth inhibition[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male nude mice, 8 weeks old and 20–25 g in body weight (GH3 tumor-bearing nude mice) [1]
Dosage:	2.5, 5, 10 mg/kg
Administration:	Subcutaneous; daily for 5 days
Result:	Produced tumor growth inhibition.

REFERENCES

[1]. Ning S, et al. Lanreotide promotes apoptosis and is not radioprotective in GH3 cells.Endocr Relat Cancer. 2009 Sep;16(3):1045-55.

[2]. Florio T, et al. Characterization of the intracellular mechanisms mediating somatostatin and lanreotide inhibition of DNA synthesis and growth hormone release from dispersed human GH-secreting pituitary adenoma cells in vitro.Clin Endocrinol (Oxf). 2003 Jul;59(1):115-28.

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