Goserelin

Cat. No.: HY-13673

CAS No.: 65807-02-5

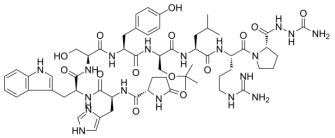
Molecular Formula: $C_{59}H_{84}N_{18}O_{14}$

Molecular Weight: 1269.41

Target: GnRH Receptor; Apoptosis

Pathway: GPCR/G Protein; Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Goserelin (ICI 118630), a decapeptide analogue of gonadotropin-releasing hormone (GnRH/LHRH), functions as a GnRH agonist. Goserelin can be used for the research of breast cancer, epithelial ovarian cancer and prostate cancer[1][2].

IC_{50} & Target

GnRH[1]

In Vitro

Goserelin (1 nM-1 mM; 48-72 hours) promotes EOC cell apoptosis[1].
Goserelin (100 μM; 24-72 hours) regulates the expression of human apoptosis-related genes in SKOV3-ip cells[1].
Goserelin (100 μM; 24-72 hours) influences EOC cell apoptosis by upregulating FOXO1 through the PI3K/AKT signaling pathway[1].

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

Apoptosis Analysis[1]

Cell Line:	SKOV3 cells, SKOV3-ip cells, A2780 cells (human EOC cell lines)
Concentration:	1 nM, 10 nM, 100 nM, 1 μM, 10 μM, 100 μM, 1 mM
Incubation Time:	48 hours, 72 hours
Result:	Significantly increased the total apoptosis rate of SKOV3-ip, SKOV3 and A2780 cells.

Western Blot Analysis[1]

Cell Line:	SKOV3 cells, SKOV3-ip cells, A2780 cells (human EOC cell lines)
Concentration:	1 nM, 10 nM, 100 nM, 1μM , 10 μM, 100 μM, 1 mM
Incubation Time:	48 hours, 72 hours
Result:	The expression of cleaved-caspase-3 and cleaved-PARP were observably increased at 100 μM.

RT-PCR[1]

Cell Line:	SKOV3-ip cells

Concentration:	100 μM
Incubation Time:	24 hours, 48 hours, 72 hours
Result:	Expression of human apoptosis-related genes regulated

In Vivo

Goserelin (100 μg; s.c.; daily; for 19 days) significantly increases the proportion of apoptotic cells in the subcutaneous xenograft tumors[1].

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

Animal Model:	Five-week-old specific-pathogen free (SPF) female nude mice (18-20 g), subcutaneous xenograft tumor model[1]
Dosage:	100 μg/mice
Administration:	Subcutaneous injection, daily, for 19 days
Result:	Significantly increased the proportion of apoptotic cells in the subcutaneous xenograft tumors

REFERENCES

[1]. Ning Zhang, et al. Goserelin promotes the apoptosis of epithelial ovarian cancer cells by upregulating forkhead box O1 through the PI3K/AKT signaling pathway. Oncol Rep. 2018 Mar; 39(3): 1034–1042.

[2]. Halle C F Moore, et al. Goserelin for ovarian protection during breast-cancer adjuvant chemotherapy. N Engl J Med. 2015 Mar 5;372(10):923-32.

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