[D-Phe2,6, Pro3]-LH-RH

Cat. No.:	HY-P3666
CAS No.:	64789-67-9
Molecular Formula:	$C_{59}H_{80}N_{14}O_{13}$
Molecular Weight:	1193.35
Sequence Shortening:	{Glp}-{d-Phe}-PSY-{d-Phe}-LRPG-NH2
Target:	GnRH Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

[D-Phe2,6, Pro3]-LH-RH is a potent luteinizing hormone releasing hormone (LHRH) antagonist[1].

In Vitro

[D-Phe2,6, Pro3]-LH-RH (0.1 pM-1 mM; 24 h) does not alter GnRH binding capacity in pituitary cells but blocks the increase in sites induced by GnRH[2].

[D-Phe2,6, Pro3]-LH-RH (2.7 μM) causes significant increases in thyrotropin (TSH) secretion in pituitaries[3].

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

In Vivo

[D-Phe2,6, Pro3]-LH-RH (300 mg/monkey, SC, 50 mg/injection; six injections) inhibits spontaneous preovulatory gonadotropin surges and prevents ovulation in the rhesus monkey[1].

[D-Phe2,6, Pro3]-LH-RH (750 μg, single injection at 12:00 h on the day of proestrus) inhibits ovulation in 100% of treated rats [1].

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

Animal Model:	Adult rhesus monkeys[1]
Dosage:	300 mg/monkey
Administration:	SC, every 8 h at a dose of 50 mg/injection; six injections
Result:	Showed antagonistic activity: 1) an immediate cessation of the LU and FSH surges; 2) prolonged surges and/or abnormal, discontinuous gonadotropin secretion; 3) LH and FSH peaks of diminished magnitude; 4) the absence of concomitant LH and FSH midcycle peaks; 3) LH and FSH peaks of diminished magnitude; 4) the absence of concomitant LH and FSH midcycle peaks; 5) suppression of serum estradiol concentrations without concurrent reductions in serum gonadotropin values; or 6) a failure to identify corpora lutea at the time of laparoscopic visualization of the ovaries.

REFERENCES

[1]. Wilks JW, et al. Effect of [D-Phe2, Pro3, D-Phe6]-luteinizing hormone releasing hormone, an antagonist, on preovulatory gonadotropin secretion in the rhesus monkey. Biol Reprod. 1980 Aug;23(1):1-9.

[2]. Loumaye E, et al. Homologous regulation of gonadotropin-releasing hormone receptors in cultured pituitary cells. Science. 1982 Feb 19;215(4535):983-5.

[3]. Gian, et al. TRH, LHRH and Synthetic [D-Phe2-6, Pro3]-LHRH Stimulate in Vitro Thyrotropin Secretion by Crested Newt Pituitaries. TRENDS IN COMPARATIVE ENDOCRINOLOGY AND NEUROBIOLOGY: FROM MOLECULAR TO INTEGRATIVE BIOLOGY. 1998;839(1):522-523.

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