

# Produktinformation



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Diagnostik & molekulare Diagnostik



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# PRODUCT INFORMATION



## Goserelin (acetate)

Item No. 24071

CAS Registry No.: 145781-92-6

Formal Name: 2-(aminocarbonyl)hydrazide-6-[O-

> (1,1-dimethylethyl)-D-serine]-1-9-luteinizing hormone-releasing

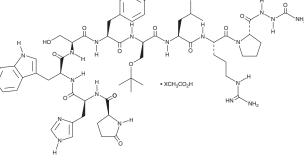
factor (swine), acetate

MF:  $C_{59}H_{84}N_{18}O_{14} \bullet XC_2H_4O_2$ 

FW: 1,329.5 **Purity:** ≥98% UV/Vis.:  $\lambda_{max}$ : 282 nm Supplied as: A crystalline solid

-20°C Storage: Stability: ≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



### **Laboratory Procedures**

Goserelin (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the goserelin (acetate) in the solvent of choice. Goserelin (acetate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of goserelin (acetate) in ethanol is approximately 0.25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of goserelin (acetate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of goserelin (acetate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

#### Description

Goserelin is a synthetic gonadotropin-releasing hormone (GNRH) agonist that binds to the GNRH receptor (GNRHR;  $K_i = 1.6$  nM in CHO cells expressing the human receptor). It binds to mouse pituitary  $\alpha T3-1$ cells and human placenta ( $K_a$ s = 2 and 580 nM, respectively) and increases intracellular calcium in  $\alpha$ T3-1 cells.<sup>2</sup> Goserelin induces testosterone production in vitro within 4 h in rat Leydig cells (ED<sub>50</sub> = 83 nM) but decreases testosterone plasma level in vivo in rats over a period of 2 to 24 weeks. 3,4 It inhibits tumor growth in a DU145 human prostate carcinoma mouse xenograft model when administered at a dose of 100 μg per day.<sup>5</sup> Formulations containing goserelin have been used in the treatment of hormone-dependent breast and prostate cancers, as well as endometriosis and uterine fibroids.

#### References

- 1. Nederpelt, I., Georgi, V., Schiele, F., et al. Br. J. Pharmacol. 173(1), 128-141 (2016).
- 2. Chatzaki, E., Bax, C.M., Eidne, K.A., et al. Cancer Res. 56(9), 2059-2065 (1996).
- 3. Sullivan, M.H. and Cooke, B.A. Biochem. J. 218(2), 621-624 (1984).
- 4. Ward, J.A., Furr, B.J., Valcaccia, B., et al. J. Androl. 10(6), 478-486 (1989).
- 5. Dondi, D., Moretti, R.M., Montagnani, M.M., et al. Int. J. Cancer 76(4), 506-511 (1998).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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