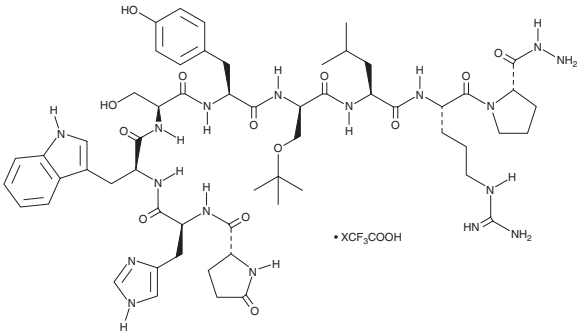
PRODUCT INFORMATION

Buserelin-$NHNH_2$ (trifluoroacetate salt)

Item No. 24156

Formal Name:	6-[O-(1,1-dimethylethyl)-D-serine]-9-(N-ethyl-L-prolinamide)-1-9-luteinizing hormone-releasing factor (swine), hydrazide, 2,2,2-trifluoroacetate
MF:	$C_{58}H_{83}N_{17}O_{13} \bullet XCF_3COOH$
FW:	1,226.4
Purity:	≥95%
Supplied as:	A lyophilized solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Buserelin-$NHNH_2$ (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the buserelin-$NHNH_2$ (trifluoroacetate salt) in water. The solubility of buserelin-$NHNH_2$ (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Buserelin is a synthetic gonadotropin-releasing hormone (GNRH) agonist that is at least 20 times more potent than GNRH.[1,2] It is a long-acting agent that, after an initial increase in sex hormone levels, decreases the level of circulating gonadotropins and sex hormones.[2] Buserelin (20 µg/kg) reduces tumor growth in a DMBA-induced rat model of mammary cancer.[3] It induces enteric neurodegeneration, decreasing the number of luteinizing hormone receptor-positive neurons in the rat gastrointestinal tract, when administered at a dose of 1 mg/kg for 5 days.[4] Formulations containing buserelin have been used in the treatment of hormone-dependent prostate cancer and endometriosis.

References

1. Conn, P.M. and Crowley, W.F., Jr. Gonadotropin-releasing hormone and its analogs. *Annu. Rev. Med.* **45**, 391-405 (1994).
2. Sandow, J., von Rechenberg, W., Jerzabek, G., *et al.* Hypothalamic-pituitary-testicular function in rats after supraphysiological doses of a highly active LRH analogue (buserelin). *Acta Endocrinol. (Copenh.)* **94(4)**, 489-497 (1980).
3. Koibuchi, Y., Sugamata, N., Iino, Y., *et al.* The mechanisms of antitumor effects of luteinizing hormone-releasing hormone agonist (buserelin) in 7, 12-dimethylbenz(a)anthracene-induced rat mammary cancer. *Int. J. Mol. Med.* **4(2)**, 145-148 (1999).
4. Sand, E., Voss, U., Hammar, O., *et al.* Gonadotropin-releasing hormone analog buserelin causes neuronal loss in rat gastrointestinal tract. *Cell Tissue Res.* **351(3)**, 521-534 (2013).

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