

# PRODUCT INFORMATION



## Buserelin-NH<sub>2</sub> (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<sub>58</sub>H<sub>83</sub>N<sub>17</sub>O<sub>13</sub> • XCF<sub>3</sub>COOH

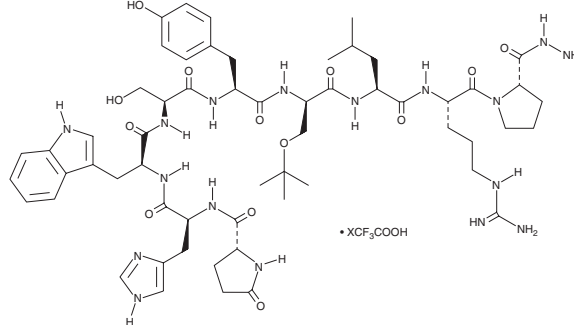
**FW:** 1,226.4

**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-NH<sub>2</sub> (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the buserelin-NH<sub>2</sub> (trifluoroacetate salt) in water. The solubility of buserelin-NH<sub>2</sub> (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.<sup>1,2</sup> It is a long-acting agent that, after an initial increase in sex hormone levels, decreases the level of circulating gonadotropins and sex hormones.<sup>2</sup> Buserelin (20 µg/kg) reduces tumor growth in a DMBA-induced rat model of mammary cancer.<sup>3</sup> 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.<sup>4</sup> 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).

#### WARNING

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

#### SAFETY DATA

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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/31/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM