



>>**Entry Name:** Leuprorelin, BAN, INN

**Synonym(s):** 6-D-Leucine-9-(N-ethyl-L-prolinamide)-10-deglycinamideluteinizing hormone-releasing factor (pig), 9Cl. Leuprolide. Leuplin

**CAS Registry Number:** 53714-56-0

H-5-oxoPro-His-Trp-Ser-Tyr-D-Leu-Leu-Arg-Pro-NHEt

**Molecular Formula:** C<sub>59</sub>H<sub>84</sub>N<sub>16</sub>O<sub>12</sub>

**Molecular Weight:** 1209.413

**Accurate Mass:** 1208.645464

**Percentage Composition:** C 58.59%; H 7.00%; N 18.53%; O 15.87%

**Biological Use/Importance:** Highly potent LHRH analogue used to suppress testosterone in treatment of prostatic cancer. Also used in other sex-hormone-related disorders. Protective effect on cisplatin-induced renal and gastrointestinal tract toxicity

**Development Status:** Marketed drug. Launched 1984. Worldwide 46th best selling prescription drug as Lupron (acetate salt) (\$0.95 bn) (Tap Pharmaceutical products) and worldwide 55th best selling pharmaceutical drug as Leuplin (\$0.81 bn) (Takeda Chemical Industries) (2000, Pharma Business)

**Optical Rotation:** [ $\alpha$ ]<sub>D</sub><sup>26</sup> -33 (c, 0.5 in AcOH aq.)

**Sigma:** L5009

>>**Derivative:** Acetate salt (1:1)

**Synonym(s):** Leuprolide acetate, USAN. Carcinil. Enanton. Enantone. Ginecrin. Leuplin. Leuprolidine. Leupron. Lucrin. Lupron. Procren. Prostag. Trenantone. Abbott 43818. DC-2-269. TAP 144

**CAS Registry Number:** 74381-53-6

**Molecular Formula:** C<sub>61</sub>H<sub>88</sub>N<sub>16</sub>O<sub>14</sub>

**Molecular Weight:** 1269.465

**Accurate Mass:** 1268.666594

**Percentage Composition:** C 57.71%; H 6.99%; N 17.65%; O 17.64%

#### References:

- Vilchez-Martinez, J.A. *et al.*, *Biochem. Biophys. Res. Commun.*, 1974, **59**, 1226, (*synth, pharmacol*)  
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Matsuzawa, A. *et al.*, *Eur. J. Cancer Clin. Oncol.*, 1982, **18**, 495, (*pharmacol*)  
*Clin. Ther., Suppl. A*, 1992, **14**, (*rev, issue*)  
Adjei, A.L. *et al.*, *Pharm. Biotechnol.*, 1993, **5**, 159, (*rev*)  
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Nomura, K. *et al.*, *Endocrine J.*, 1995, **42**, 315, (*use*)  
Martindale, *The Extra Pharmacopoeia*, 32nd edn., Pharmaceutical Press, 1999, 1253