

Gonadorelin

Gonadorelin is the synthetic form of native gonadotropin-releasing hormone (GnRH), a 10-amino-acid hypothalamic peptide that stimulates release of LH and FSH. It was previously approved in the US as a diagnostic agent and is used in veterinary products.



■ Hydrophobic ■ Acidic ■ Basic ■ Polar ■ Gly, Pro, Cys ■ Non-standard

Length	10 residues
Formula	C ₅₅ H ₇₅ N ₁₇ O ₁₃
Average mass	1,182.29 g/mol
Monoisotopic mass	1,181.5730 Da
Evidence	Approved drug
US status	Previously FDA-approved (Factrel); not marketed in the US
WADA	Prohibited in males (S2)

Synthetic GnRH: decapeptide amide with N-terminal pyroglutamate.

Expected ions (monoisotopic)

[M+H] ⁺	[M+2H] ²⁺	[M+3H] ³⁺	[M+4H] ⁴⁺
1,182.5803	591.7938	394.8650	296.4005

What the COA should show

A certificate of analysis should confirm identity by mass spectrometry, with the observed mass matching the expected mass shown on this page for the pyroglutamate- and amide-terminated decapeptide, and report HPLC purity with the chromatogram. Incomplete pyroglutamate formation, a free C-terminal acid instead of the amide, and racemization are characteristic synthesis-related impurities. The tryptophan residue is susceptible to oxidation, giving species with small mass increases. The salt form, such as acetate or hydrochloride, should be named, and net peptide content reported.

Storage and stability

Store lyophilized gonadorelin sealed at -20 °C or in refrigerated conditions as indicated on its documentation, protected from light and moisture, and let vials reach room temperature before opening. The tryptophan residue makes it sensitive to light and oxidation, so minimize exposure to air and light. Prepare solutions for lab use in sterile water or buffer, keep them refrigerated for short-term use, aliquot for longer storage at -20 °C or below, and avoid repeated freeze-thaw cycles.

Full entry, references and latest research: <https://peptidewiki.net/compounds/gonadorelin/>
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