

PT-141 (bremelanotide)

PT-141, or bremelanotide, is a cyclic heptapeptide melanocortin receptor agonist derived from melanotan II. It was FDA-approved in 2019 as Vyleesi for hypoactive sexual desire disorder in premenopausal women.



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

Length	7 residues
Formula	C ₅₀ H ₆₈ N ₁₄ O ₁₀
Average mass	1,025.16 g/mol
Monoisotopic mass	1,024.5243 Da
Evidence	Approved drug
US status	FDA-approved as bremelanotide (Vyleesi, 2019)
WADA	Check the current Prohibited List

Cyclic heptapeptide (Asp–Lys lactam) with a free C-terminal acid.

Expected ions (monoisotopic)

[M+H] ⁺	[M+2H] ²⁺	[M+3H] ³⁺	[M+4H] ⁴⁺
1,025.5316	513.2694	342.5154	257.1383

What the COA should show

A bremelanotide certificate of analysis should confirm identity by mass spectrometry against the expected mass shown on this page and report HPLC purity. Important pitfalls include distinguishing bremelanotide from melanotan II, which differs only by a C-terminal amide versus acid (about 1 Da); high-resolution MS and a reference standard are needed to separate them reliably. Incomplete cyclization gives a linear species with a +18 Da mass. Tryptophan oxidation and D-Phe epimerization should also be considered. Salt form and net peptide content should be reported.

Storage and stability

Store lyophilized bremelanotide sealed at -20 °C, protected from light and moisture. The tryptophan residue is light- and oxidation-sensitive, so use amber vials or light shielding. The cyclic lactam structure improves stability compared with linear peptides, but solutions should still be aliquoted, kept cold and not repeatedly freeze-thawed.

Full entry, references and latest research: <https://peptidewiki.net/compounds/pt-141/>
For laboratory research reference only. Not medical advice; not for human or veterinary use.