

Epitalon

Epitalon is a synthetic tetrapeptide (Ala-Glu-Asp-Gly) developed by Vladimir Khavinson's group in St. Petersburg, based on a pineal gland extract. It is studied in aging and telomere research, with evidence coming mostly from that group.



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

Length	4 residues
Formula	C ₁₄ H ₂₂ N ₄ O ₉
Average mass	390.35 g/mol
Monoisotopic mass	390.1387 Da
Evidence	Early clinical studies
US status	Not FDA-approved; PCAC recommended 503A listing (July 2026), FDA action pending
WADA	Check the current Prohibited List

Synthetic tetrapeptide.

Expected ions (monoisotopic)

[M+H] ⁺	[M+2H] ²⁺	[M+3H] ³⁺	[M+4H] ⁴⁺
391.1460	196.0766	131.0535	98.5419

What the COA should show

An epitalon certificate of analysis should confirm identity by mass spectrometry against the expected mass shown on this page and report HPLC purity. Because the peptide is very short and polar, it can elute early on standard reverse-phase methods, so the chromatographic method should demonstrate adequate retention and resolution. The Asp-Gly motif can form aspartimide and isoaspartate species; isoaspartate has the same mass as the parent peptide, so separation by HPLC rather than MS alone is needed to detect it. Salt form and net peptide content should be stated.

Storage and stability

Store lyophilized epitalon sealed at -20 °C, protected from moisture and light. The Asp-Gly sequence makes the peptide prone to isomerization in solution, especially at neutral to basic pH and higher temperatures, so solutions should be prepared close to use, kept cold, aliquoted and not repeatedly freeze-thawed. Allow vials to reach room temperature before opening.

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