# Sermorelin
## Research Applications

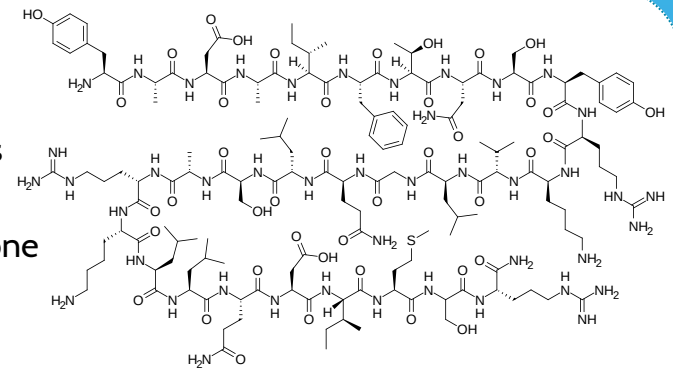
US Peptide Co

## Mechanism of Action

SS-31 (Elamipretide) is a mitochondria-targeted tetrapeptide with unique cell-penetrating properties. In research models, it selectively binds to cardiolipin, a phospholipid located exclusively in the inner mitochondrial membrane. This interaction helps stabilize mitochondrial cristae structure, optimize electron transport chain function, and reduce reactive oxygen species production, making it valuable for studying mitochondrial dynamics and cellular energy metabolism.

## Research Applications

- Growth hormone secretion pathway research
- Investigation of GHRH receptor signaling mechanisms
- Models examining pituitary function and regulation
- Research on neuroendocrine control of growth hormone



## Molecular Profile

- Chemical Formula: $C_{149}H_{246}N_{44}O_{42}S$
- Molecular Weight: 3,358.9 Da
- Sequence: Tyr-Ala-Asp-Ala-Ile-Phe-Thr-Asn-Ser-Tyr-Arg-Lys-Val-Leu-Gly-Gln-Leu-Ser-Ala-Arg-Lys-Leu-Leu-Gln-Asp-Ile-Met-Ser-Arg-$NH_2$

## Laboratory Considerations

- Store lyophilized powder at -20°C
- Reconstituted solutions should be stored at 4°C
- Avoid repeated freeze-thaw cycles

## References


1. Corpas E, et al. Growth hormone (GH)-releasing hormone-(1-29) twice daily reverses the decreased GH and insulin-like growth factor-I levels in old men. J Clin Endocrinol Metab. 1992;75(2):530-535.
2. Walker RF, et al. A 12-month pilot clinical trial of sermorelin (GRF 1-29 NH2) for the restoration of GH secretion in the elderly. Ann N Y Acad Sci. 1996;786:296-299.
3. Vittone J, et al. Effects of single nightly injections of growth hormone-releasing hormone (GHRH 1-29) in healthy elderly men. Metabolism. 1997;46(1):89-96.
4. Prakash A, et al. Sermorelin: a review of its use in the diagnosis and treatment of children with idiopathic growth hormone deficiency. BioDrugs. 1999;12(2):139-157.