BPC-157

Research Applications

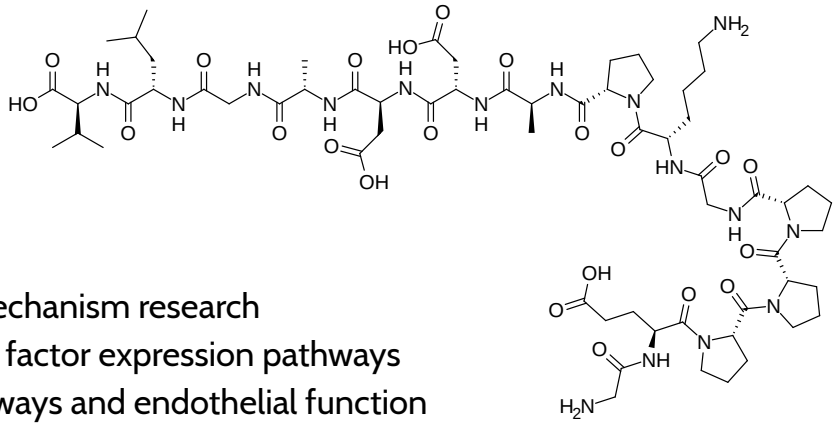
US Peptide Co

Mechanism of Action

BPC-157 (Body Protection Compound-157) is a pentadecapeptide derived from a protective protein found in gastric juice. In experimental models, it has demonstrated interaction with the NO system and modulation of growth factor expression. Research suggests it may influence angiogenesis pathways, cytokine expression, and cellular repair mechanisms in various tissue types.

Molecular Profile

- Chemical Formula: $C_{62}H_{98}N_{16}O_{22}$
- Molecular Weight: 1,419.6 Da
- Sequence: Gly-Glu-Pro-Pro-Pro-Gly-Lys-Pro-Ala-Asp-Asp-Ala-Gly-Leu-Val



Research Applications

- Tissue regeneration and cellular repair mechanism research
- Investigation of angiogenesis and growth factor expression pathways
- Models examining nitric oxide (NO) pathways and endothelial function
- Research on inflammatory mediators and cellular stress responses

Laboratory Considerations

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

References

1. Chang CH, et al. The promoting effect of pentadecapeptide BPC 157 on tendon healing involves tendon outgrowth, cell survival, and cell migration. J Appl Physiol. 2011;110(3):774-780.
2. Sikiric P, et al. Stable gastric pentadecapeptide BPC 157: novel therapy in gastrointestinal tract. Curr Pharm Des. 2011;17(16):1612-1632.
3. Seiwerth S, et al. BPC 157 and standard angiogenic growth factors. Gastrointestinal tract healing, lessons from tendon, ligament, muscle and bone healing. Curr Pharm Des. 2018;24(18):1972-1989.
4. Vukojevic J, et al. Rat inferior caval vein (ICV) ligature and particular new insights with the stable gastric pentadecapeptide BPC 157. Vascul Pharmacol. 2018;106:54-66.