Epithalon
Research Applications

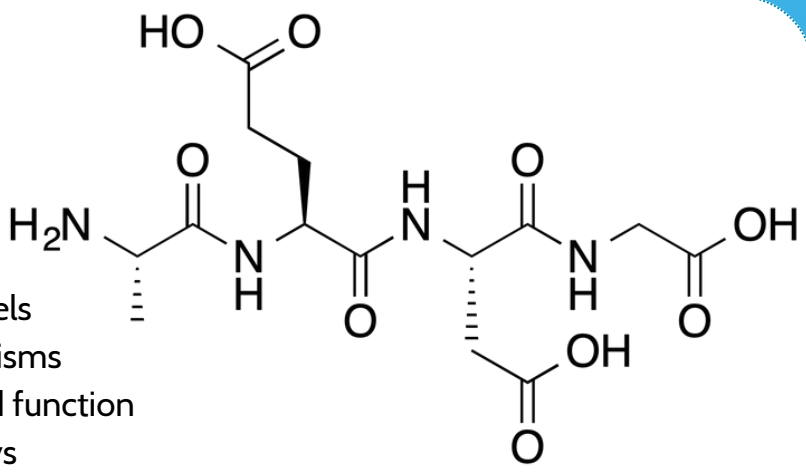
US Peptide Co

Mechanism of Action

Epithalon (Epitalon) is a synthetic tetrapeptide originally derived from the pineal gland peptide epithalamin. In research models, it has demonstrated interaction with telomerase activity, potentially influencing telomere length regulation. Studies suggest Epithalon may modulate gene expression related to cellular aging processes and circadian rhythm regulation, making it valuable for research on cellular senescence mechanisms and chronobiology.

Molecular Profile

- Chemical Formula: $C_{14}H_{22}N_4O_5$
- Molecular Weight: 390.4 Da
- Sequence: Ala-Glu-Asp-Gly



Research Applications

- Cellular aging and senescence research models
- Investigation of telomere regulation mechanisms
- Studies on circadian rhythm and pineal gland function
- Research on cellular stress response pathways

Laboratory Considerations

- Store lyophilized powder at -20°C
- Reconstituted solutions should be stored at 4°C
- Protect from light during storage and experimentation

References

1. Khavinson VK, et al. Peptide promotes overcoming of the division limit in human somatic cell. Bull Exp Biol Med. 2004;137(5):503-506.
2. Anisimov VN, et al. Effect of Epitalon on biomarkers of aging, life span and spontaneous tumor incidence in female Swiss-derived SHR mice. Biogerontology. 2003;4(4):193-202.
3. Khavinson VK, et al. Epithalon peptide induces telomerase activity and telomere elongation in human somatic cells. Bull Exp Biol Med. 2003;135(6):590-592.
4. Korkushko OV, et al. Geroprotective effect of epithalamin (pineal gland peptide preparation) in elderly subjects with accelerated aging. Bull Exp Biol Med. 2011;151(3):366-369.