

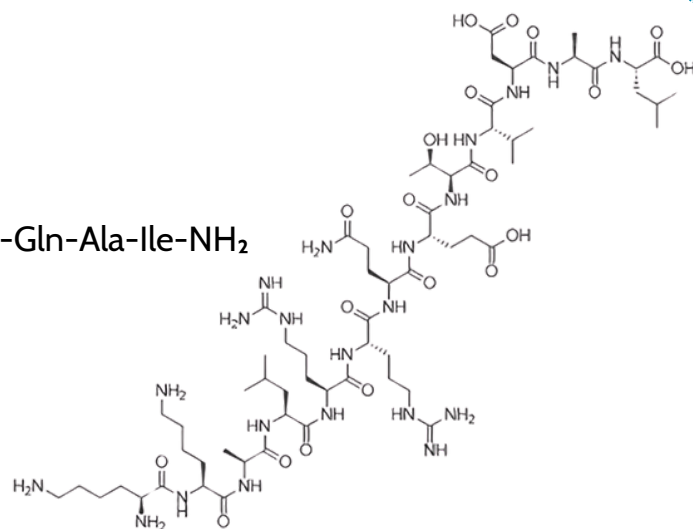


Mechanism of Action

FOXO4-DRI (D-Retro-Inverso) is a modified peptide designed to disrupt the interaction between FOXO4 and p53 proteins. In research models, it competitively binds to p53, preventing its sequestration by FOXO4 in senescent cells. This disruption allows p53 to induce apoptotic pathways specifically in senescent cells while sparing healthy cells, making it valuable for studying selective senescence targeting and cellular aging mechanisms.

Molecular Profile

- Chemical Formula: $C_{124}H_{190}N_{36}O_{36}$
- Molecular Weight: 2,862.1 Da
- Sequence: H-Arg-Lys-Gly-Gly-Ser-Arg-Arg-Asn-Ala-Trp-Gly-Asn-Gln-Ser-Tyr-Ala-Glu-Leu-Ile-Ser-Gln-Ala-Ile-NH₂



Laboratory Considerations

- Store lyophilized powder at -20°C
- Reconstituted solutions should be stored at 2-8°C
- Avoid repeated freeze-thaw cycles

Research Applications

- Cellular senescence pathway research
- Investigation of p53/FOXO4 protein interaction mechanisms
- Models examining selective senescent cell responses
- Research on cellular aging and stress resistance pathways

References

1. Baar MP, et al. Targeted apoptosis of senescent cells restores tissue homeostasis in response to chemotoxicity and aging. *Cell*. 2017;169(1):132-147.e16.
2. de Keizer PL. The fountain of youth by targeting senescent cells? *Trends Mol Med*. 2017;23(1):6-17.
3. Zhu Y, et al. The Achilles' heel of senescent cells: from transcriptome to senolytic drugs. *Aging Cell*. 2015;14(4):644-658.
4. Childs BG, et al. Senescent cells: an emerging target for diseases of ageing. *Nat Rev Drug Discov*. 2017;16(10):718-735.