Product Information

- Name: TNF-α (31-45), human
- CAS No. : 144796-71-4
- Molecular Weight: 1667.87 g/mol
- Formula: $C_{69}H_{122}N_{26}O_{22}$
- Appearance: White to off-white solid powder
- Sequence (Shortening): RRANALLANGVELRD (Full: Arg-Arg-Ala-Asn-Ala-Leu-Leu-Ala-Asn-Gly-Val-Glu-Leu-Arg-Asp)

Biological Activity

- Target and Mechanism: A potent activator of the NF-κB pathway. It is a proinflammatory cytokine that can induce necrosis or apoptosis and stimulates the NF-κB pathway via TNFR2, which can promote cancer growth, invasion, and metastasis.
- In Vitro Applications: Used to study NF-κB activation and TNF-α-mediated cellular effects. For example, it has been used in cell cultures at concentrations such as 100 ng/mL for 24 hours, 10 ng/mL for 24 hours, and 0.5-2 μg/L for 48 hours.

Handling and Storage

- Storage:

- Powder: Store at -80°C for up to 2 years, or at -20°C for up to 1 year. Sealed storage, away from moisture and light, preferably under nitrogen.
- In Solvent: Store at -80°C for up to 6 months, or at -20°C for up to 1 month (sealed, away from moisture and light, under nitrogen).
- Solubility: Soluble in water at a concentration of 50 mg/mL (29.98 mM) with ultrasonic assistance.
- Note: For sterile working solutions, filter using a 0.22 μm filter after dilution.

Precautions

- This product is for research use only and must not be used for clinical diagnosis or treatment.
- It is a potent biological peptide. Always wear appropriate personal protective equipment and handle it according to standard laboratory safety regulations. Avoid moisture, light, and air exposure during long-term storage.