

Bovine Fibrinogen

Cat #: A-CSH003

Size: 100mg, 1g

Storage: -20 °C (36 months)

Product Description

Product Name	Bovine Fibrinogen
Cat #	A-CSH003
CAS Number	9001-32-5
Molecular Weight	340 kDa
Appearance	White to off-white lyophilized powder or solid block
Protein content	50~70% protein (≥85% of protein is clottable)
Solubility	Soluble in 0.9% physiological saline (10mg/ml)

Fibrinogen (Fg), also known as coagulation factor I, is a protein with a molecular weight of approximately 340 kDa. It is composed of three pairs of different peptide chains, namely α , β , and γ chains, which are connected by disulfide bonds. Upon the action of thrombin, the α and β chains are released, giving rise to A and B peptides, respectively, and forming fibrinogen monomers. During this process, the release of acidic peptides reduces the negative charge, facilitating the polymerization of monomers into fibrinogen polymers. However, at this stage, the monomers are connected by hydrogen and hydrophobic bonds, and they can still be soluble in dilute acid and urea solutions. Further, in the presence of Ca^{2+} and activated factor XIII, the monomers are covalently linked, resulting in the formation of stable insoluble fibrin clots, completing the process of blood clotting. The molecular weights of the α , β , and γ chains are approximately 63.5 kDa, 56 kDa, and 47 kDa, respectively, containing around 4% carbohydrates.

Usage

Bovine fibrinogen solution undergoes denaturation at temperatures above 50 °C; therefore, the heating temperature

should not exceed 50 °C. Additionally, bovine fibrinogen is typically dissolved in physiological saline (0.9% NaCl) at 37 °C. The temperature during dissolution should not be too low, as it is difficult to dissolve at 4 °C or in salt-free solutions. Bovine fibrinogen is soluble in 0.9% NaCl solution and can be prepared as a solution with a concentration of 2.5-10 mg/ml and stored at -20 °C. After sterile filtration, it can be stably stored for approximately one week.

Notes

1. To dissolve the product, gently place it in preheated physiological saline at 37 °C and stir it slowly until it dissolves. Avoid vortex mixing during the process.
2. It is recommended to use a 0.2 µm filter membrane for filtration; a 0.1 µm filter membrane should not be used. Slow filtration using a syringe is acceptable, but vacuum filtration should be avoided.

Disclaimer

The reagent is only used in the field of scientific research, not suitable for clinical diagnosis or other purposes.