

Collagenase V(from *Clostridium histolytica*)

Cat: C8170

Storage: -20°C for at least 1 year.

Introduction:

Collagenase V contains at least 7 protease components with molecular weight ranging from 68-130KD. It can be used in the separation of pancreatic islet tissue, separating connective tissue into individual cells. The concentration is generally 1-2mg/mL for digestive cartilage tissue and about 1mg/mL for digestive liver tissue. However, the specific digestive concentration varies by species. Many literatures indicate that collagenase can digest a variety of tissues, and the concentration of collagenase is generally 0.1 to 5 mg/mL, and the digestion process can be stirred to promote the digestion of the enzyme. In the process of digestion, collagenase can cause a small amount of cell death, and the general digestion time is 15min to several hours. If the concentration changes, the digestion time may be longer. The preferred Buffer during digestion is the Krebs Ringer Buffer containing calcium ions and BSA. If a large number of cells die during digestion, the amount of enzymes needs to be reduced. At the same time, 0.5%BSA or 5-10% serum can be added to stabilize the state of cells and the digestive effect. Sterilization of collagenase begins with centrifugation or removal of insoluble matter with a 0.8 μ m filter. It is then filtered with a 0.2 μ m filter to remove bacteria. For tissue culture applications, collagenase can be formulated with calcium-free solutions such as hanks, ebss, etc.

Enzyme preservation solution:

0.05-0.1mg/mL collagenase dissolved in 50mM TES buffer, pH7.4(37°C) containing 0.36mM calcium chloride. The final concentration of the reaction system was 50mM TES, 0.36 mM calcium chloride, 25mg collagen, and 0.005-0.01mg collagenase.

Stability:

The enzyme solution can maintain activity at 37°C for 5h at a neutral PH containing 0.3-0.5mM calcium ions. It can be maintained at -20°C for several months.

Related Literature:

- [1] Xinrui Zhao,Lidong Liu,Rui Li,et al. Hypoxia-Inducible Factor 1- α (HIF-1 α) Induces Apoptosis of Human Uterosacral Ligament Fibroblasts Through the Death Receptor and Mitochondrial Pathways. Medical Journal of Experimental. December 2018. (IF1.420)
- [2] Wu Huihui,Sun Xiao,Zhang Zhaoqiang,et al. Deoxynivalenol impairs proliferation and induces apoptosis in primary murine osteoblasts. Toxicological & Environmental Chemistry. April 2018. (IF 0.971)

Note: Please refer to the official website of Solarbio for more references on the use of this product.