

Product Data Sheet

Product Name: Collagenase D

Cat. No.: GC26373

Chemical Properties

Cas. No.

Formula

M.Wt

Solubility

Storage Store at -20°C, protect from light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

This plan is based on literature, please modify it to meet your specific needs [1][2].

1. Preparation of Stock Solution

1) Dissolve Collagenase D in HBSS (containing Ca^{2+} , which is an activator of Collagenase D) and shake thoroughly to prepare a 100× stock solution.

2) Sterilize by filtration through a 0.22μm filter. Use immediately or aliquot into small portions and store at -20°C protected from light.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

Product Data Sheet

Note: It is recommended to resuspend only the amount of lyophilized powder to be used immediately, avoiding repeated freeze-thaw cycles. The working concentration of Collagenase D is 0.5-2.5mg/ml. The optimal working concentration needs to be determined based on specific experimental conditions or relevant literature.

2. Tissue Isolation

- 1) Cut the tissue into small pieces using a sterile scalpel or scissors.
- 2) Immerse the tissue pieces in sufficient HBSS and add Collagenase D to the required working concentration.
- 3) Incubate on a horizontal shaker at 37°C for 1-2 hours. Collect single cells through a cell filter. (3mM CaCl₂ helps improve separation efficiency. For tissues that are not completely separated, an appropriate amount of fresh collagenase D working solution can be added and digested at 37°C. 5-10mM EDTA can be used to terminate the activity of collagenase D)
- 4) Wash the collected cells with HBSS without collagenase, add cell culture medium and resuspend to prepare a single-cell suspension.

References:

- [1] Kushwah R, Hu J. Analysis of pulmonary dendritic cell maturation and migration during allergic airway inflammation. J Vis Exp. 2012;(65):e4014.
- [2] Yang, Nan et al. "Quantitative live imaging of Venus::BMAL1 in a mouse model reveals complex dynamics of the master circadian clock regulator." PLoS genetics vol. 16,4 e1008729. 30 Apr. 2020.

Background

Collagenase D is an enzyme used to digest collagen and extracellular matrix (ECM). Collagenase D is widely used to digest and dissociate various organs and tissues, including lung, heart, liver, kidney, brain, muscle, bone, adipose tissue, cartilage, mammary tissue, placenta, blood vessels, and tumors, to prepare single-cell suspensions for primary cell culture establishment and subsequent analysis.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA