

Datasheet

# Collagenase Type I

## Enzyme for Cell Dissociation

Product	Description	Catalogue-No.	Size
Collagenase I	Collagen cleaving protease from <i>Chlostridium histolyticum</i>	LS0004194 LS0004196	100 mg 1 g

### Product description

Collagenase is a neutral protease produced in *Chlostridium histolyticum*, which major substrate is collagen. Collagen is the major component of extracellular binding tissue.

Collagen forms triple helical fibrils consisting of tropocollagen molecules, which combine laterally creating an axially repeating periodicity.

The enzyme plays an important role in tissue metabolism and is produced by specific cells involved in repairs and remodelling processes. Mammalian collagenases split collagen in its native triple helical conformation at a specific site. The resulting fragments tend to uncoil into random coil polypeptides (gelatine).

Collagenase has found widespread application in the isolation of specific cell types from attendant connective tissue.

Particular enzymatic activities have been correlated with specific tissues, thus having formal types established. The collagenase type I contains the original balance of collagenase caseinase clostripain and tryptic activities. It is generally used for epithelial, liver, lung and adrenal primary cell isolations.

### Solubility and storage conditions

Storage: 2-8 °C (Prepared Collagenase Solution store at - 20 °C)

Stability: 2 years from date of production

Size: 100 mg, 1 g

pH-Optimum: pH 6,8 – 8,8

Activators: Ca<sup>2+</sup>, Mg<sup>2+</sup>

Inhibitors: EGTA, β-Mercaptoethanol, red. Glutathion

### Suitability

Enzymatic mixture for the dissociation and disaggregation of epithelial, liver, lung and adrenal primary cell isolations.

### Instructions for Use

1. The Collagenase Type I should be reconstituted in HBSS (Hank's balanced salt solution) to a concentration of 1 mg/ml and then sterile-filtered with a 0.2 µm filter.
2. Coat small particles of tissue or a cell layer with collagenase solution and incubate it at 37 °C.
3. Check the successful detachment of the cells with a microscope.
4. Cell suspension should be centrifuged immediately after detachment and washed two times with buffer, to rinse of all the residing collagenase, because fresh media can't stop the enzyme activity
5. Resuspend cells in fresh media and cultivate.

### Technical support

For technical support, questions or remarks please contact your local PAN-Biotech partner or the technical department of PAN-Biotech via email ([info@pan-biotech.com](mailto:info@pan-biotech.com)) or phone +49-8543-601630.

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