

## 1. PRODUCT DESCRIPTION

TDzyme® is a tissue dissociation enzyme produced from *E. coli* by using the manufacturing method of genetic recombination.

- TDzyme® C is manufactured by the genetic recombination of collagenase derived from *Clostridium histolyticum*.
- TDzyme® T is manufactured by the genetic recombination of collagenase derived from *Geobacillus stearothermophilus*
- TDzyme® is manufactured in animal source free condition, so there is no risk of contamination with viruses.
- TDzyme® is prepared by the purification of each enzyme with high purity and then mixing them by using column chromatography, which leads to high quality and lot-to-lot consistency.
- TDzyme® is suitable for tissue dissociation and cell culture due to low endotoxin specification.
- TDzyme® is manufactured in lyophilized form, which secures enhanced stability in storage.
- TDzyme® is contained in a novel reconstitution cartridge which enables simultaneous dissolution and in-line filtration of lyophilized enzyme, securing users' easy handling and minimizing contamination risks.

## 2. APPLICATION

TDzyme® consists of TDzyme® C and TDzyme® T.

- TDzyme® C is collagenase formulated to contain minimal amount of thermolysin. It is suitable for breakdown of various tissues, including pancreatic islets.

- TDzyme® T is thermolysin and can be mixed with TDzyme® C to dissociate stronger tissues such as adipose tissues, cartilage, and extracellular matrices of skin and blood vessels.

### 3. PRODUCT USE

Reconstitute the lyophilized enzyme with **ice-cold Milli-Q water only**. Do not use buffer or culture media. Special formulation of TDzyme® enables quick dissolution, and in-line sterile filtration could be easily done. TDzyme® C contains small amount of neutral protease (thermolysin), so collagenase could be degraded after reconstitution. Use ice cold Milli-Q water for reconstitution and place solubilized enzyme on ice immediately.

- ① Connect a syringe filled with **10mL** of ice-cold Milli-Q water to upper female Luer of TDzyme®.
- ② Sterile filter could be attached to opposite male Luer for in-line sterile filtration.
- ③ Inject volume of water in the syringe into TDzyme® cartridge **slowly** before collecting **5mL** of reconstituted enzyme solution in a tube. (Please use only one tube for the collection of 5ml of the reconstituted enzyme.)
- ④ Then make sure the reconstituted enzyme solution are mixed well for its even distribution.
- ⑤ If necessary, aliquot the reconstituted enzyme according to your needs.
- ⑥ Instruction video is available at the product website ([www.tdzyme.com](http://www.tdzyme.com))

※ Inhibitor: EDTA, EGTA, cysteine, mercaptoethanol, protease inhibitors

#### **4. STORAGE AND STABILITY**

- Please store the eluted enzyme solution immediately on ice.
- Freeze unused enzyme solution as needed.
- Frozen enzyme is stable for two months at -70°C.
- Do not freeze and thaw repeatedly. Please keep in mind that repeated freezing and thawing of the enzyme solution may result in decreased enzyme activity.