Datasheet

Dispase

Enzyme for Cell Dissociation

Product	Description	Catalogue-No.	Size
Dispase	**Purified neutral protease from *Bacillus Polymyxa,* lyophilized powder**	**LS0002100**	**10 mg**

Product description

Dispase (purified neutral protease) is a non-mammalian animal origin free neutral metallo protease, produced by *Bacillus Polymyxa*. Dispase hydrolyses N-terminal peptide bonds of non-polar amino acid residues and is classified as an aminoendopeptidase. Its mild proteolytic action makes the enzyme especially suitable for the preparation of primary cells and secondary (subcultivation) in cell culture since it is gentle on cell membranes. This protease is also used as a secondary enzyme in cell isolation and tissue dissociation applications, commonly used with collagenase.

Solubility and storage conditions

Storage: 2-8 °C (prepared Dispase solution store at - 20 °C)
Stability: as stated on the Certificate of Analysis
Size: 10 mg
pH-Optimum: pH 4 – 9
Activators: Divalent cations including Ca^{2+}, Mg^{2+}, Mn^{2+}, and Fe^{2+}
Inhibitors: EDTA, EGTA, 1-10-phenanthroline and heavy metals

Suitability

Commonly used to separate skin epidermis from dermis (leaving intact epithelial sheets), and stem cell, hepatocyte and other cell isolation applications. However, due to the diversity of the variables involved, exact isolation conditions should be determined empirically for each cell/tissue application.

Instructions for Use

1. Dissolve Dispase in DPBS (w/o: Ca^{2+} and Mg^{2+}) to a concentration of 10 mg/ml, further dilute with DPBS to a final concentration of 0.6 – 2.4 U/ml (concentrations higher than 2.4 U/ml are not recommended)
2. Filter sterilize with a 0.2 µm filter
3. Submerge tissue fragments in Dispase solution and incubate it at 37 °C under slow stirring until the tissue is sufficiently dissolved. (for compact tissue we recommend incubation for 1 hour)
4. Separate the dispersed cells from residual tissue through a sterile stainless steel or nylon mesh.
5. Pellet cells by centrifugation and discard the supernatant.
6. Resuspend the cells in appropriate culture medium and incubate under predetermined conditions. (more efficient dissociation of tissue is obtained by mixing the Dispase at 0.3 – 0.6 U/ml with Collagenase (60 – 100 U/ml)

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) or phone +49-8543-601630.

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