Data Sheet

PluriSTEM® Dispase-II Solution

Cell Dissociation Reagent

SCM133

Pack Size: 100mL

Store at −20 °C

FOR RESEARCH USE ONLY

Not for use in diagnostic procedures. Not for human or animal consumption.

Background

Proteolytic enzymes such as trypsin, collagenase and pronase are commonly used for dispersing tissues and cells. These enzymes, however, often injure the cells, are unstable during incubation, can be heterogeneous and also a source of mycoplasma contamination. Dispase-II is used for the preparation of cells from a wide variety of different tissues and organs. Dispase-II has proven to be a rapid and effective, yet gentle, agent for separating many tissues and cells grown in vitro. Dispase is especially suitable for tissue disaggregation and sub cultivation procedures since it does not damage cell membranes.

PluriSTEM® Dispase-II has been validated to work alongside PluriSTEM® Human ES/iPS Medium (SCM130) for the culture and passage of human embryonic and induced pluripotent stem cells.

Source

Dispase-II enzyme is produced in *Bacillus polymyxa*.

Appearance

Solution is red and free of particulates.

Quality Control Testing

Solution is red with no particulates present. Solution is sterile and suitable for cell culture applications.

Storage and Handling

Store at −20 °C for up to 4 months from date of receipt. Once thawed, aliquot in smaller working volumes and store at −20 °C. Avoid multiple freeze thaw cycles to maintain proper enzymatic activity.

Presentation

Product is presented in sterile DMEMF12 at 1 mg/mL. Product is filtered through a 0.2-micron filter before freezing.

Protocols

Passaging Protocol for Human ES/iPS Cells using Dispase-II

Optimal passaging technique must be determined by end user and varies depending on cell type and culture conditions.

1. Coat 6-well plates with 1:20 Matrigel coating (1.5 mL per well). Incubate at 2-8 °C overnight or coat at RT for at least 30 minutes to 1-hour before use.
2. Remove Matrigel coating. Add 2 mL of Complete Media per well.
3. Remove areas of differentiation within culture.
4. Aspirate media.
5. Wash once with 2 mL PBS.
6. Add 1.5 mL Dispase II per well. Incubate for 37 °C for 7 minutes.
7. Wash 2X with 2 mL PBS, without Mg and Ca.
8. Add 2 mL Complete Media to each well and use cell scraper to detach colonies.
9. Collect scrapped cells in 15 mL conical tube.
10. Spin 800 rpm for 5 minutes.
11. Resuspend in appropriate volume of complete media. Typical splitting ratio is 1:5-1:6 depending upon cell density. Cells should be ready for passaging in 5-6 days' time using PluriSTEM® Human ES/iPS Medium.

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