C80EZ®-COMPETENT

Competent Cell Cryopreservation Media
(Cat. 701001)

For mammalian and insect cells, please use our other products

I. Introduction to C80EZ®-COMPETENT

C80EZ® achieves predominant formation of nanoscale cubic ice during freezing, in contrast to the formation of large hexagonal ice in traditional cryopreservation media. The nanoscale ice attenuates cell mechanical damage due to extracellular ice formation. For competent cell cryopreservation, it prevents recrystallization during storage in regular deep freezers (-70ºC to -80ºC), significantly reduces the required concentration of cryoprotectants (e.g., glycerol and DMSO) and prolongs the storage period.

II. Cryopreservation Procedures

C80EZ®-COMPETENT is designed to directly suspend the cell pellets and it requires the use of cell culture grade glycerol or DMSO (5% v/v) to form the complete freezing medium. The suggested procedure is described below:

1. Competent cell pellets are obtained from washing in 0.1M $CaCl_2$ solution and centrifugation in cryovials, following the individual user's preferred routine protocol for specific uses.

2. C80EZ®-COMPETENT is mixed with cell culture grade glycerol or DMSO with a volume ratio of 20:1 to form the complete freezing medium, which is then used to resuspend cell pellets in the cryovials.

3. The cryovials are then loaded in a cryovial storage box and directly put into a -80ºC freezer for storage.

4. After thawing in an ice water bath, the cells are centrifuged and washed in 0.1M $CaCl_2$ through standard procedures (dependent on individual user's preferred protocol for specific uses), and they are then ready for transformation.

For any detailed question regarding the use, please contact us through http://www.cryocrate.com/contact.html by submitting a contact form or call 1-573-884-4576.