

Cell Cycle Analysis by Propidium Iodide Staining

Background

This is a method for cell cycle analysis using propidium iodide (PI) that is, using the fluorescent nucleic acid dye PI to identify the proportion of cells that are in one of the three interphase stages of the cell cycle. Please take into account the following when using this method:

1. This method works well to assess cell cycle distribution of a whole cell population when cells are fixed with 70% ethanol.
2. This method can also be used to assess cell cycle distribution of certain GFP transfected cells. The ethanol fixation step is generally not suitable to keep GFP in the cell. The use of membrane localized GFP fusion protein (i.e **Spectrin**) provides excellent results employing this ethanol fixation procedure and is highly recommended to assess the cell cycle distribution in GFP transfected cells. Otherwise consider a live cell DNA stain such as Hoechst 33342 or Draq5. Aldehyde fixation (e.g. PFA), which cross links cellular

