

## QGel™ Protocol

# Live/Dead Assay to Investigate Cell Viability in QGel™ MT 3D Matrix

### ABOUT THIS PROTOCOL

This is an example of Live/Dead assay protocol that can be also found in published literature (e.g. Raeber, Biophysical Journal 2005). Note that the protocol below is only a guideline. Volumes and concentrations of the different chemicals and incubation times require to be optimized for your specific experimental conditions.

### PRODUCT SUPPORT

Brochures and videos on:  
[www.qgelbio.com/support](http://www.qgelbio.com/support)

### Required chemicals/solutions for this assay:

- LIVE/DEAD® Viability/Cytotoxicity Kit, for mammalian cells (from Molecular Probes™, Invitrogen detection technologies). This kit contains two vials of Calcein AM (4mM) and two vials of Ethidium homodimer-1 (2mM)

### Prepare the following solutions:

- *Solution A*: 1:40 ratio of Calcein AM and 1:16 Ethidium homodimer-1 in PBS solution
- *Solution B*: pre-warmed culture media (37°C)

### Steps:

1. Transfer desired gel samples with encapsulated live cells in a new well plate (under cell culture hood) and wash them once with pre-warmed PBS (i.e. 37°C) at room temperature (RT) for 5-10 min
2. Dilute solution A at 1:50 ratio in solution B and add this staining solution to the well with the gel that was previously washed
3. Incubate 30-45 min in cell culture incubator (37°C)
4. 1x quick wash with PBS. **Protect from light!**
5. Store the gel in PBS and image the sample as soon as possible. **Protect from light!**

### Important note 1:

For efficient staining always make sure that gels with the encapsulated cells are submerged in the different solutions and **not** floating on the solution surface.

### Important note 2:

If you have a large number of samples to image, it is recommended to split the experiment with no more than 2-3 samples to visualize at each time. Best results are achieved with freshly stained samples (max. 30-45 minutes old, before being imaged).