Curing Ring

Product Introduction

This product serves but is not limited to 2D and 3D cell culture related experiments of biological hydrogels like Gelatin Methacryloyl (GelMA).

The product helps to improve the penetration of nutrients in the hydrogel and enhance cell activity. The structure of the product is easy to operate, which is convenient for observation in the process of cell culture, biological staining, photography and other characterization.

This product set is sterilized by gamma ray irradiation, valid for 2 years, the production date is on the outer package.

Item	Diagram	Application	Additive volume	Adaptive culture plate	Product specification
EFL-SCR-3D-48-1		GM30/60/90 Fluorescent GelMA Porous GelMA AlgMA Other curable materials Cellular hydrogel scaffold	60-80μl	48 well plate	**12 /Kit；1 Antimucous membrane**
					50 /Kit；2 Antimucous membrane
EFL-SCR-3D-24-2		GM30/60/90 Fluorescent GelMA Porous GelMA AlgMA Other curable materials Cellular hydrogel scaffold	180-200μl	24 well plate	**12 /Kit；1 Antimucous membrane**
					50 /Kit；2 Antimucous membrane

This manual is applicable to solidified ring EFL-SCR

Instructions for 2D cell culture

1. Adding solution: the cured ring grid surface is placed horizontally on the anti-mucous membrane, and an appropriate amount of GelMA solution containing initiator is uniformly added into the ring;

2. Curing: Use 405nm light source (portable curing light source EFL-LS-1601-405 is recommended) for proper irradiation time, curing to required strength;

3. Placement: Pick up any vertical support column with tweezers and slowly remove the Curing Ring, with the four supporting cylinders facing downward, placing horizontally into the 24-well plate;

4. Inoculation: 2.5ml medium cell suspension was added into 24 plate holes and placed directly in the incubator for static culture. During the inoculation process, the solidified ring was kept in the bottom state, and the holes were changed horizontally after the cells stuck to the wall;

5. Characterization: The grid surface is close to the bottom of the plate for incubation of antibodies, antibodies or detection reagents are not over the rubber surface for incubation. In the process of washing, the grid faces upward away from the bottom of the plate, so that the washing is more full;

6. Take pictures: take pictures directly with the grid surface close to the slide or confocal dish.

Instructions for 3D cell culture

1. Adding solution: the cured ring grid surface is placed horizontally on the anti-mucous membrane, and an appropriate amount of GelMA solution containing initiator is uniformly added into the ring;

2. Curing: Use 405nm light source (portable curing light source EFL-LS-1601-405 is recommended) for proper irradiation time, curing to required strength;

3. Placement: Pick up any vertical support column with tweezers and slowly remove the Curing Ring, and place the four supporting cylinders of the Curing Ring face down into the culture plate, so that the glue-containing mesh surface is far away from the bottom of the plate for normal culture;

4. Characterization: the mesh surface is close to the bottom of the plate to incubate the antibody, the antibody or detection reagent is not over the rubber surface, the mesh surface is far away from the bottom of the plate during the washing process, so that the washing is more adequate;

5. Take pictures: take pictures directly with the grid surface close to the slide or confocal dish.

Description of cell bearing hydrogel scaffold culture

1. Ring placement: pick up the Curing Ring with tweezers and put it into the culture plate, so that its four supporting columns contact the bottom of the plate;

2. Adding solution: add sufficient medium into the plate hole;

3. Scaffold placement: the cell carrying hydrogel scaffold was placed on the solidified ring grid surface and placed in the incubator for routine culture.

Notes

- Anti-mucous membrane with 75% alcohol wipe after air dry can be reused;
- Do not sterilize at high temperature;
- curing process pay attention to adjust the ultraclean wind speed, avoid dry materials affect the experimental results;
- Non-gelma hydrogel materials can be manipulated according to their gelling properties;
- GelMA lysis solution (EFL-GM-LS-001) covered the solidified ring and cultured at 37℃, the GelMA glue blocks on the solidified ring were rapidly lysed to release cells at about 0.5h;
- It is recommended to use portable 405nm curing light source (EFL-LS-1601) with stable light intensity, adjustable curing time and more stable sample preparation.

Wechat scan code to obtain 2D/3D cell culture operation videos

Wechat scan code to obtain cell carrying hydrogel scaffold culture