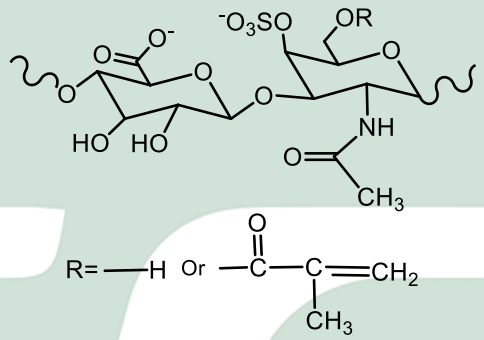
Chondroitin Sulfate Methacryloyl（ChSMA）

Product component

Item	character	Package Size	Notes
A： ChSMA	White spongy	0.5 g/bottle	Keep in dark
B： Photoinitiator LAP	White powder	0.025 g/bottle	

This instruction applies to EFL-ChSMA-001



ChSMA molecular structure

Product introduction

Chondroitin sulfate methacryloyl (ChSMA) is a double bond modified chondroitin sulfate and can be quickly photo-crosslinked and cured into gel through UV and visible light in the presence of a photoinitiator. Due to the portable cross-linking method and good biocompatibility, ChSMA-based material systems have been widely used in many biomedical research fields, including: osteoarthritis treatment, joint cartilage repair, skull repair, etc. ChS is rich in carboxyl groups and hydroxyl groups that are easily modified and can be used to build a variety of biomaterials, such as nanodrug carriers and bioadhesives for tumor diagnosis and treatment.

Applications

3D Cell culture, biological 3D printing, tissue engineering, etc.

Storage

Dry kit： room temperature, 3 months; 4℃, 12 months; -20℃, 18 months. **Sterile solution**： 4°C (in dark), 7 days; -20℃ (in dark), 6 months. **Please note that repeated freezing and thawing of the solution will affect the performance of the product, so it is best to prepare it when using it.**

Tel: 0512-66958483
Address: Room 2202, Building 2, No.888 South Zhujiang Road, Wuzhong District, Suzhou City

period of validity

The date of manufacture is shown in the package。

Scan the QR code on the right for more information

WeChat Tencent

Solution preparation

1. Prepare 0.25% (w/v) standard solution of initiator

(1) Add 10ml PBS into the brown bottle containing initiator LAP (containing 0.025g LAP);

(2) Heat and dissolve the solution in a water bath at 40-50℃ for 15 minutes, shaking several times.

The LAP standard solution can be stored for 12 months at 4°C in dark.

2. Prepare ChSMA solution (4-10% (w/v) is recommended)

(1) Take the required mass of ChSMA into the centrifugal tube/glass bottle/beaker;

(2) Add the initiator standard solution into the above container;

(3) Dissolve the solution in room temperature for 30 minutes, protected in dark, shaking several times;

(4) Sterilize the ChSMA solution with a 0.22μm sterile needle filter, keep in dark.

Suggestions for 2D cell culture

- Inject ChSMA solution into the well plate;

(96-well plate: 50-100 μL/ well, 48-well plate: 100-300 μL/ well, 24-well plate: 300-500 μL/ well)

- Irradiate the wells with 405 nm light for 10-30 seconds to gelate, the gel strength can be adjusted by the time and intensity of the light;
- Add medium to the wells to cover the gel. Place the well plate in a 37℃ incubator for 5 minutes. And then wash the sample and remove the medium;
- Add the cell suspension to the well plate. Change medium, observe, and photograph according to experimental design. (No special requirements for operation procedures).

Suggestions for 3D cell culture

- Cells were collected and resuspended in ChSMA solution to prepare the cell suspension;
- Add cell suspension into the well plates;

(96-well plate: 50-100 μL/ well, 48-well plate: 100-300 μL/ well, 24-well plate: 300-500 μL/ well)

- Irradiate the wells with 405 nm light for 10-30 seconds to gelate, the gel strength can be adjusted by the time and intensity of the light;

- Add medium to the wells. Place the plate in a 37℃ incubator for 5 minutes. And then wash the sample and remove the medium;
- Add fresh medium and incubate for a long time. Change medium, observe, and photograph according to experimental design. (No special requirements for operation procedures).

Tips: Do not look directly at the light source.