

# Produktinformation



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Diagnostik & molekulare Diagnostik



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# Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

# Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# **Screening Libraries**

# **Product** Data Sheet

## 6-CFDA

Cat. No.: HY-D0721 CAS No.: 3348-03-6 Molecular Formula:  $C_{25}H_{16}O_{9}$ Molecular Weight: 460.39

Target: Fluorescent Dye

Pathway: Others

-20°C, protect from light Storage:

\* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

## **SOLVENT & SOLUBILITY**

In Vitro

DMSO: 100 mg/mL (217.21 mM; Need ultrasonic)

| Preparing<br>Stock Solutions | Solvent Mass<br>Concentration | 1 mg      | 5 mg       | 10 mg      |
|------------------------------|-------------------------------|-----------|------------|------------|
|                              | 1 mM                          | 2.1721 mL | 10.8604 mL | 21.7207 mL |
|                              | 5 mM                          | 0.4344 mL | 2.1721 mL  | 4.3441 mL  |
|                              | 10 mM                         | 0.2172 mL | 1.0860 mL  | 2.1721 mL  |

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- 1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution
- 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution
- 3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.43 mM); Clear solution

### **BIOLOGICAL ACTIVITY**

Description 6-CFDA is a common aliphatic luciferin-line organism. CFDA conducts free diffusion into cells, and then it is hydrolyzed into carboxyl fluorescein (CF) by intracellular non-specific lipase. CF containing portion contains an additional negative charge

so that it is better retained in cells, compared to fluorescein dyes<sup>[1][2][3][4]</sup>.

In Vitro Preparation of 6-CFDA working solution

1. Preparation of the stock solution

Dissolve 1mg 6-CFDA in 0.2172 mL DMSO to obtain 10 mM of 6-CFDA.

Note: It is recommended to store the stock solution at -20 °C -80 °C away from light and avoid repetitive freeze-thaw cycles.

2. Preparation of 6-CFDA working solution

Dilute the stock solution in serum-free cell culture medium or PBS to obtain 1-10  $\mu$ M of 6-CFDA working solution. Note: Please adjust the concentration of 6-CFDA working solution according to the actual situation.

#### Cell staining

1.Cell preparation:

For suspension cells: Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.

For adherent cells: Discard the cell culture medium, and add trypsin to dissociate cells to make a single-cell suspension.

Centrifuge at 1000 g at 4°C for 3-5 minutes and then discard the supernatant. Wash twice with PBS, 5 minutes each time.

- 2.Add 1 mL of 6-CFDA working solution, and then incubate at room temperature for 30 minutes.
- 3. Centrifuge at 400 g at 4°C for 3-4 minutes and then discard the supernatant.
- 4. Wash twice with PBS, 5 minutes each time.
- 5.Resuspend cells with serum-free cell culture medium or PBS, and then detect by fluorescence microscope or flow cytometer.

#### Precautions

- 1. It is recommended to store the stock solution at -20\omega or -80\omega away from light and avoid repetitive freeze-thaw cycles.
- 2. Please adjust the concentration of 6-CFDA working solution according to the actual situation.
- 3. This product is for R&D use only, not for drug, household, or other uses.
- 4. For your safety and health, please wear a lab coat and disposable gloves to operate.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### **REFERENCES**

- [1]. Yang T, et al. A novel nonradioactive CFDA assay to monitor the cellular immune response in myeloid leukemia. Immunobiology. 2013 Apr;218(4):548-53.
- [2]. Card SD, et al. Assessment of fluorescein-based fluorescent dyes for tracing Neotyphodium endophytes in planta. Mycologia. 2013 Jan-Feb;105(1):221-9.
- [3]. Fang X, et al. Bone marrow-derived endothelial progenitor cells are involved in aneurysm repair in rabbits. J Clin Neurosci. 2012 Sep;19(9):1283-6.

Caution: Product has not been fully validated for medical applications. For research use only.

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