

## 6-Carboxy-H<sub>2</sub>DCFDA (6-carboxy-2',7'-dichlorodihydrofluorescein)

<http://cn.lumiprobe.com/p/6-carboxy-h2dcfda>

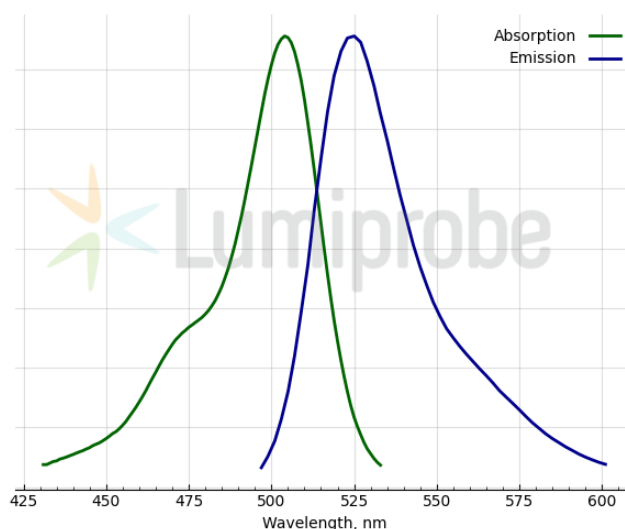
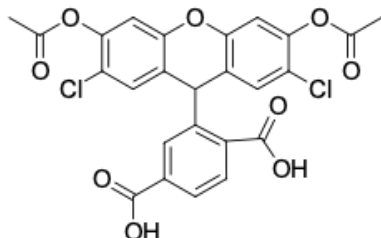
6-Carboxy-H<sub>2</sub>DCFDA is a chemically reduced, acetylated form of fluorescein used as an indicator for reactive oxygen species (ROS) in living cells. This reagent is not suitable for working with fixed samples.

6-Carboxy-H<sub>2</sub>DCFDA is a non-fluorescent compound that begins to fluoresce after the cleavage of acetyl groups by cellular esterases and its oxidation by reactive oxygen species inside the cell. The resulting 6-carboxy-2',7'-dichlorofluorescein has a bright fluorescence in the green channel (absorption maximum at 504 nm, emission maximum at 525 nm), that can be detected using various methods, such as flow cytometry, plate reading, or fluorescent microscopy.

Acetyl groups in 6-carboxy-H<sub>2</sub>DCFDA increase its lipophilicity and improve the permeability of the indicator through the cell membrane. After deacetylation by cellular esterases, the compound acquires a charge that allows it to be retained inside the cell. This carboxylated H<sub>2</sub>DCFDA analog has two additional negative charges that impede its leakage out of the cell.

## Recommendations for using the reagent:

- Use a freshly prepared reagent solution (the working solution is not intended for long-term storage because of gradual reagent oxidation).
- Select an optimal working concentration of the reagent and incubation time required for reagent deacetylation and oxidation for the specific cell line and assay conditions.  
If no protocols are recommended for the specific cell line, start with a concentration from 1 to 10  $\mu$ M and incubation for 30 min.
- Do not incubate the dye with the cells in the presence of serum because it contains enzymes that cleave H<sub>2</sub>DCFDA.



外观:  
分子 531.30  
量:  
CAS 247044-02-6  
编号:  
分子 C<sub>25</sub>H<sub>16</sub>Cl<sub>2</sub>O<sub>9</sub>  
式:  
溶解  
度:  
质量  
控制:  
储存  
条件:

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激发/ 504

吸收  
极大  
值，  
纳米:

$\epsilon$ , 摩 83500

尔吸  
光系  
数  $m^2$

发射 525

极大  
值，  
纳米:

荧光 0.79

量子  
产率:

$CF_{260}$ : 0.23

$CF_{280}$ : 0.16