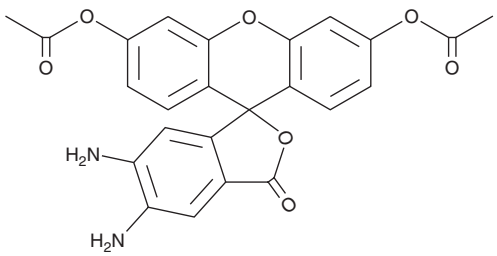
Product Information

DAF-2 diacetate

Item No. 85165

CAS Registry No.: 205391-02-2
Formal Name: 2-(3,6-diacetyloxy-4,5-diamino-9H-xanthen-9-yl)-benzoic acid
Synonym: 4,5-Diaminofluorescein diacetate
MF: $C_{24}H_{18}N_2O_7$
FW: 446.4
Purity: ≥95%
Stability: ≥1 year at -20°C
Supplied as: A solution in DMSO



Laboratory Procedures

For long term storage, we suggest that DAF-2 diacetate be stored as supplied at -20°C. It should be stable for at least one year.

DAF-2 diacetate is supplied as a solution in DMSO. We do not recommend changing the solvent, but when performing biological experiments further dilutions of the stock solution into aqueous buffers or isotonic saline should be made. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

DAF-2 diacetate is a sensitive fluorescent indicator commonly used for the detection and bioimaging of nitric oxide (NO).[1,2] It is a cell-permeable derivative of DAF-2. Upon entry into the cell, DAF-2 diacetate is transformed into the less cell-permeable DAF-2 by cellular esterases thus preventing loss of signal due to diffusion of the molecule from the cell. In the presence of oxygen, DAF-2 reacts with NO to yield the highly fluorescent triazolofluorescein (DAF-2T). Fluorescence is monitored using excitation and emission wavelengths of 485 and 538 nm, respectively.[2] At neutral pH the detection limit for NO is 2-5 nM. DAF-2 diacetate can be utilized in cells which produce small amounts of NO, such as endothelial cells, as well as in cells which generate large amount of NO, such as macrophages.[1,2]

References

1. Kojima, H., Sakurai, K., Kikuchi, K., *et al.* Development of a fluorescent indicator for nitric oxide based on the fluorescein chromophore. *Chem. Pharm. Bull.* **46**, 373-375 (1998).
2. Nakatsubo, N., Kojima, H., Kikuchi, K., *et al.* Direct evidence of nitric oxide production from bovine aortic endothelial cells using new fluorescence indicators: Diaminofluoresceins. *FEBS Lett.* **427**, 263-266 (1998).

Related Products

DAN-1 EE (hydrochloride) - Item No. 85070 • 2,7-Dichlorodihydrofluorescein diacetate - Item No. 85155 • DAF-2 - Item No. 85160

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