

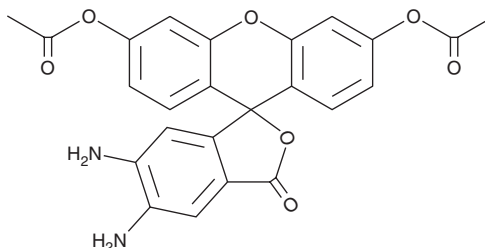
# PRODUCT INFORMATION



## 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<sub>24</sub>H<sub>18</sub>N<sub>2</sub>O<sub>7</sub>  
**FW:** 446.4  
**Purity:** ≥95%  
**Supplied as:** A solution in DMSO  
**Storage:** -20°C  
**Stability:** ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

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.

### Description

DAF-2 diacetate is a sensitive fluorescent indicator commonly used for the detection and bioimaging of nitric oxide (NO).<sup>1,2</sup> 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.<sup>2</sup> 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.<sup>1,2</sup>

### 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(2)**, 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(2)**, 263-266 (1998).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/05/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM