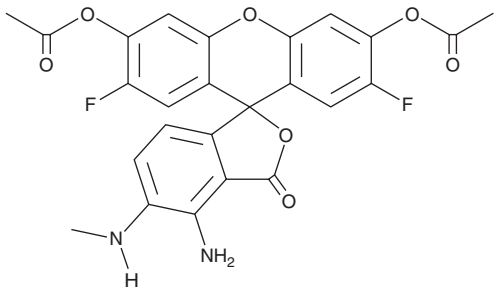
PRODUCT INFORMATION

DAF-FM diacetate

Item No. 18767

CAS Registry No.:	254109-22-3
Formal Name:	3',6'-*bis*(acetyloxy)-4-amino-2',7'-difluoro-5-(methylamino)-spiro[isobenzofuran-1(3H),9'-[9H]xanthen]-3-one
Synonyms:	4-Amino-5-methylamino-2',7'-difluorofluorescein diacetate, DAF-FM DA
MF:	$C_{25}H_{18}F_2N_2O_7$
FW:	496.4
Purity:	≥98%
Em./Ex. Max:	495/515 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

DAF-FM diacetate is supplied as a solid. A stock solution may be made by dissolving the DAF-FM diacetate in the solvent of choice. DAF-FM diacetate is soluble in the organic solvent DMSO, which should be purged with an inert gas.

Description

DAF-FM diacetate is a cell-permeable, fluorescent probe for the detection and bioimaging of nitric oxide (NO) with excitation/emission maxima of 495/515 nm. It passively diffuses across cellular membranes and, once inside cells, is deacetylated by intracellular esterases to become DAF-FM. The fluorescence quantum yield of DAF-FM is ~0.005, but increases about 160-fold, to ~0.81, after reacting with NO.[1] DAF-FM is advantageous over the NO probe, DAF-2 (Item No. 85160) for several reasons: 1) the spectra of the NO adduct of DAF-FM are independent of pH above pH 5.5; 2) the NO adduct of DAF-FM is significantly more photostable than that of DAF-2; 3) the NO detection limit of DAF-FM (~3 nM) is more sensitive than that of DAF-2 (~5 nM).[1,2]

References

1. Kojima, H., Urano, Y., Kikuchi, K., *et al.* Fluorescent indicators for imaging nitric oxide production. *Angew. Chem. Int. Ed. Engl.* **38(21)**, 3209-3212 (1999).
2. Kojima, H., Nakatsubo, N., Kikuchi, J., *et al.* Detection and imaging of nitric oxide with novel fluorescent indicators: Diaminofluoresceins. *Anal. Chem.* **70(13)**, 2446-2453 (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.

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