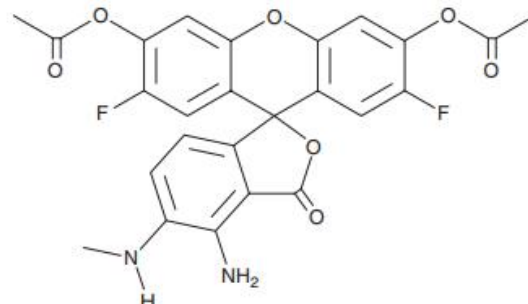


DAF-FM diacetate Item No. PC15573

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: C₂₅H₁₈F₂N₂O₇
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}