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DAF-FM diacetate (4-amino-5-methylamino-2',7'-difluorofluorescein diacetate)

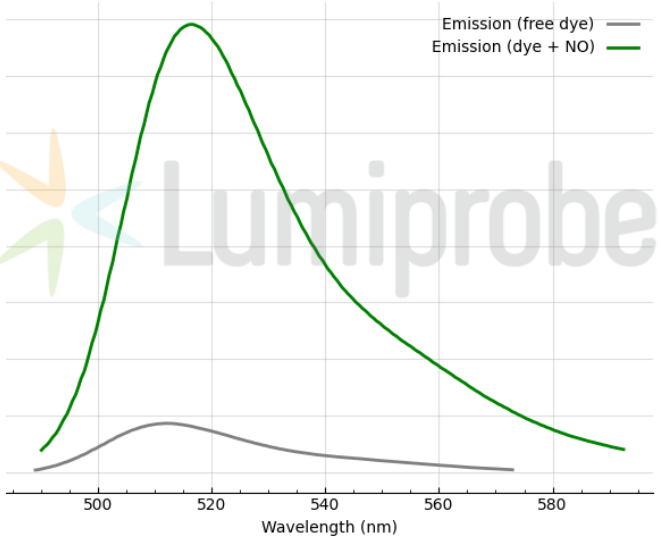
http://www.lumiprobe.com/p/diaminofluorescein-daf-fm-diacetate

DAF-FM diacetate (DAF-FM DA) is a cell-permeant, fluorescent probe for detecting and quantifying low concentrations of nitric oxide (NO). DAF-FM DA passively diffuses across cellular membranes and, once inside cells, is deacetylated by intracellular esterases and converted to cell-impermeant form — DAF-FM.

The fluorescence quantum yield of DAF-FM is ~0.005, but it increases about 160-fold to ~0.81 after reacting with NO and forming a fluorescent benzotriazole (excitation/emission maxima at 495/515 nm) .

The NO detection limit of DAF-FM (~3 nM) is more sensitive than that of DAF-2 (~5 nM). The fluorescence of the NO adduct of DAF-FM is independent of pH above pH 5.5. Moreover, the NO adduct of DAF-FM demonstrates a significantly enhanced photostability compared to that of DAF-2, ensuring reliable results and additional time for imaging.

DAF-FM DA should be dissolved in DMSO and then used to prepare a working solution. Buffers containing bovine serum albumin (BSA) or phenol red can affect the fluorescence and should be used cautiously.



Fluorescence emission spectra of DAF-FM, free and in solution containing nitric oxide (NO)

General properties

Appearance:	beige solid
Molecular weight:	496.42
CAS number:	254109-22-3
Molecular formula:	$C_{25}H_{18}F_2N_2O_7$
Solubility:	DMSO
Quality control:	NMR ^1H and HPLC-MS (95+%)
Storage conditions:	24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.