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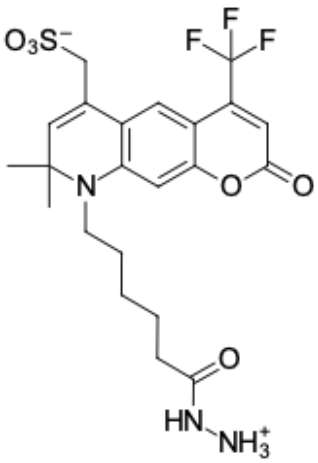
AF 430 hydrazide

http://www.lumiprobe.com/p/af-430-hydrazide

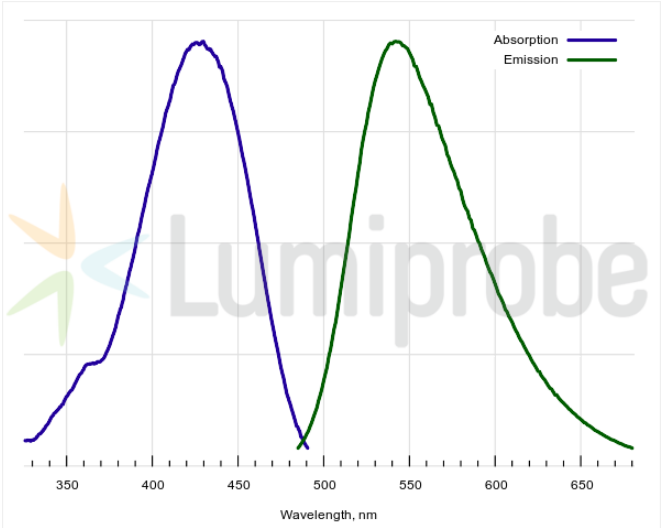
AF 430 is a fluorescent dye with an excitation maximum at 430 nm and an emission maximum at 542 nm. AF 430 is one of the few dyes that absorb between 400 nm and 450 nm. AF 430 fluorescence is photostable and pH-insensitive in a broad range of pH values.

This product is a hydrazide derivative of AF 430 dye. Hydrazides efficiently react with aldehydes and ketones, resulting in hydrazones, so that this compound can be used for conjugation with carbonyl derivatives of biomolecules.

The reaction runs in aqueous conditions, which is important when working with antibodies and proteins. Cys-diol groups in sugars in glycosylated proteins and antibodies can be oxidized into dialdehydes, and cysteine in proteins can be converted with enzymes to formyl glycerol (i. e. reactive groups for conjugation with hydrazides). Carboxyl groups of aspartic and glutamic acids in proteins and peptides can also be conjugated with hydrazides in the presence of activating agents: carbodiimide (EDAC) or methyl morpholine (DMTMM) derivatives.



Structure of AF 430 hydrazide



Absorption and emission spectra of AF 430

General properties

Appearance:	yellow powder
Mass spec M+ increment:	499.1
Molecular weight:	517.52
Molecular formula:	$C_{22}H_{26}N_3F_3O_6S$
Solubility:	good in DMF, DMSO, water
Quality control:	NMR ^1H, HPLC-MS (95%)
Storage conditions:	Storage: 24 months after receival at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Avoid prolonged exposure to light. 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.

Spectral properties

Excitation/absorption maximum, nm:	430
ε, $L \cdot mol^{-1} \cdot cm^{-1}$:	15955
Emission maximum, nm:	542

Fluorescence quantum yield:	0.23