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Pyrylium-4 (Py-4)

http://www.lumiprobe.com/p/pyrylium-4

Pyrylium-4 (Py-4, Chromeo™ P543) is a fluorogenic amine-reactive dye that is not fluorescent itself but forms a fluorescent product with emision at 590 nm after conjugation with primary amine groups of peptides and proteins.

Pyrylium-4 displays a weak fluorescence with a quantum yield of less than 1% in solution. After conjugation to primary amines, the dye exhibits a color change from blue to red and undergoes a shortwave spectral shift of more than 27 nm, and the quantum yield rises to 15%. The shift of the absorption/emission bands and the increased fluorescence quantum yield significantly eliminate the background from an unbound dye. Also, unbound Pyrylium dyes are hydrolyzed during the labeling procedure. Altogether, these features allow the labeling of amine-containing molecules via a simple one-step, room-temperature incubation without additional purification steps.

Pyrylium-4-labeled peptides and proteins are ready to use immediately after conjugation. They can be used successfully in a number of «no-wash» applications, such as SDS-protein gel electrophoresis, capillary electrophoresis, isoelectric focusing, and as a fluorescent label in receptor binding studies. Proteins labeled with Pyrylium-4 maintain their native charge and isoelectric point.

General properties

Appearance:	dark violet powder
Molecular weight:	383.22
Molecular formula:	$C_{18}H_{18}BF_4NOS$
Solubility:	DMSO, DMF, methanol, acetonitrile
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.

Spectral properties

Excitation/absorption maximum, nm:	570 nm (free); 543 nm (conjugated)
Emission maximum, nm:	Non-detectable (free); 590 nm (conjugated)