

## Pyrylium-8 (Py-8)

<http://www.lumiprobe.com/p/pyrylium-8>

Pyrylium-8 (Py-8, Chromeo™ P429) is a fluorogenic amine-reactive dye that is not fluorescent itself but forms a fluorescent product with emission at 536 nm after conjugation with primary amine groups of peptides and proteins.

Pyrylium-8 displays a weak fluorescence with a quantum yield of less than 0.5% in solution. After conjugation to primary amines, the dye exhibits a color change and undergoes a shortwave spectral shift of more than 28 nm, and the quantum yield rises to 10%. 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-8-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-8 maintain their native charge and isoelectric point.

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### General properties

Appearance: orange-brown powder

Molecular weight: 357.18

Molecular formula:  $C_{16}H_{16}BF_4NOS$

Solubility: good in DMSO, DMF; limited in methanol, acetonitrile

Quality control: NMR  $^1H$  and HPLC-MS (95+%)

Storage conditions: 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.

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