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BDPep 630/650 NHS ester

http://cn.lumiprobe.com/p/bdp-630-650-spps-nhs-ester

BDPep 630/650 NHS ester (Dicyano BDP 630/650 NHS ester) is a versatile fluorescent dye with a range of applications in biological and chemical research. The dye is ideal for high-resolution imaging of cellular structures and dynamic processes, providing bright and distinct signals that enhance visualization. Its strong fluorescence allows for effective cell sorting and phenotyping, making it useful in various immunological and cellular studies.

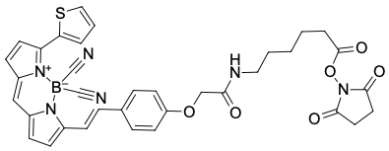
Its remarkable stability in strong acidic TFA media makes it particularly suitable for solid-phase peptide synthesis (SPPS).

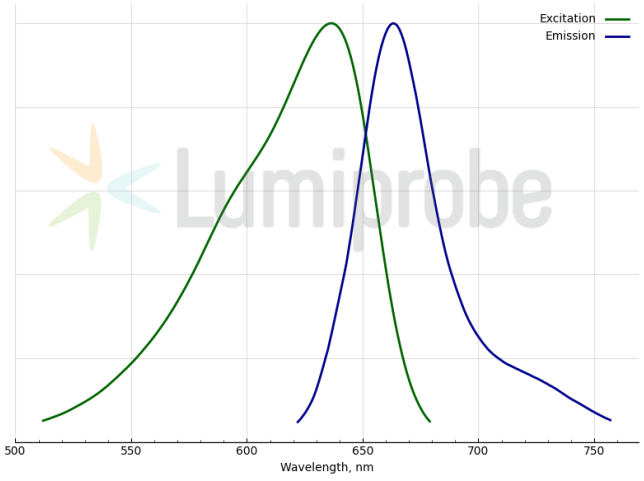
Dicyano BDP 630/650 is employed in Förster Resonance Energy Transfer (FRET) assays to investigate molecular interactions and dynamics with high sensitivity. Due to its long excited-state lifetime, this dye is beneficial for detecting binding interactions between molecules, making it valuable in drug discovery and biochemical assays.

The NHS ester form enables efficient labeling of proteins and other biomolecules, that contain a functional amino group. Presence of the C6 spacer allows for more flexibility in conjugation reactions with various biomolecules, making it easier to label proteins and peptides without compromising the dye's fluorescent properties, particularly C6 spacer reduces negative quenching effects.

The dye is typically dissolved in high-quality anhydrous organic solvents such as dimethylformamide (DMF) and dimethylsulfoxide (DMSO), which facilitate its use in conjugation reactions and other applications. Dicyano BDP 630/650 exhibits hydrophobic characteristics, making it less suitable for direct use in aqueous environments compared to more water-soluble dyes like AF 647 NHS ester. Once conjugated to biomolecules, the resulting dicyano BDP 630/650 conjugates can be used in aqueous applications such as fluorescence microscopy and flow cytometry, where they provide reliable fluorescent signals.

BDP 630/650 is characterized by excellent photostability, allowing for prolonged imaging sessions without substantial loss of signal, making it suitable for applications that require extended observation periods.





外观: 深紫色粉末

分子量: 674.53

分子式: $C_{35}H_{31}BN_6O_6S$

溶解度: 适用于 DMF、DMSO、二氯甲烷

质量控制: NMR ^1H 和 HPLC-MS (95+%)

储存条件: 收到后在 -20°C 黑暗条件下可保存 12 个月。运输：室温下最多可保存 3 周。干燥。

激发/吸收极大值，纳米:	637
ε，摩尔吸光系数 dm^3	84000
发射极大值，纳米:	663
荧光量子产率:	0.44
CF_{260}:	0.17
CF_{280}:	0.18