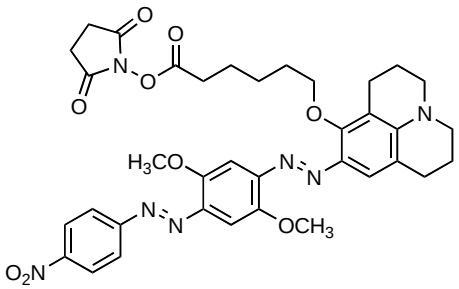
BlackBerry® Quencher 650 NHS Ester (BBQ-650®-*N*-hydroxysuccinimide Ester)
Product No. BL 3010
Product Information



Dissolves in *N*,*N*-dimethylformamide (DMF, as high as ca. 5-10 mg/mL or 7-14 µmol/mL), which is useful for conjugation with water-soluble amine-bearing biomolecules such as aminomodified oligonucleotides. Nearly insoluble in acetonitrile. Partially soluble in DMSO.

Valanne and co-workers[1] have described a novel dual-step FRET-based method for screening caspsace-3 inhibitors. A dual-labeled caspase-3-specific peptide with an N-terminal Alexa Fluor 680 fluorophore, a C-terminal BlackBerry® Quencher 650, and a biotin moiety. This peptide was used in conjunction with a fluorescent europium(III)-chelate-doped nanoparticle donor coated with streptavidin. The BBQ-containing probe was made by incubating the peptide (C-terminal lysine) with a 20-fold excess of BBQ-650® NHS Ester in a mixture of carbonate buffer (50 mM, pH 9.3, 60%) and DMF (40%) overnight at 30 °C. Quenching with Tris-HCl (pH 7.2) and purification by RP-HPLC gave the desired BBQ-650®-labeled peptide.

The lipophilicity of the BBQ-650® moiety may require the use of relatively high concentrations of the organic mobile phase (e.g., acetonitrile) in RP-HPLC purifications.

For quantification, the following extinction coefficients may be useful, which were determined using a simple BBQ-650® chromophore (i.e., no oligonucleotide): At 598 nm in methanol, $\varepsilon = 40{,}667\ M^{-1}cm^{-1}$; at 260 nm in methanol, $\varepsilon = 15{,}077\ M^{-1}cm^{-1}$.

Reference

1. Valanne, A.; Malmi, P.; Appelblom, H.; Niemelä, P.; Soukka, T. *Anal. Biochem*. **2008**, *375*, 71-81.