Dabcyl-5

Dabcyl-5 is classified as a dark quencher (a non-fluorescent chromophore), and is typically used to label a Fluorescence Resonance Energy Transfer (FRET) DNA oligonucleotide probe with a quencher moiety at the 5’-end. TaqMan or Molecular Beacon probes labeled with Dabcyl at the 5’-end usually would be labeled with an appropriate fluorescent dye at the 3’-end; other kinds of FRET probes might have the fluorescent dye at an internal position. 5’-end labeling such probes with Dabcyl is unusual. The primary reason for using this inverse-labeling strategy is to take advantage of Dabcyl’s very high hydrophobicity (which is higher than that of a fluorescent dye) to improve subsequent purification of the probe by HPLC or RPC. For example, a molecular beacon with 5’-Dabcyl and 3’-6-FAM is easier to purify (and will subsequently be purer) than a probe with the more common, opposite set-up.

Quencher Spectral Data

Quencher

Absorption Max, nm

Quenching Range, nm  Dabcyl 453 380-530 BHQ1 534 480-580 BHQ2 579 550-650 BHQ3 672 620-730 BBQ-650 650 550-750 Click here for complete list of quenchers **Black Hole Quencher License Agreement
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