MGB 3' CDPI3

Category	Duplex Stability
Modification Code	MGB-CDPI3-3
Reference Catalog Number	26-6456
5 Prime	N
3 Prime	Y
Internal	N
Molecular Weight(mw)	813.27

MGB Probe Design: 5'-Fluorphore 5'-[Fluorophore]...probe sequence...[internal quencher][MGB]-3'
In the 5'-Fluorphore MGB probe design an internal quencher for example BHQ1-dT or BHQ2-dT is placed before the MGB at the 3' end.

MGB Probe Design: 3'-Fluorphore 5'-[MGB] [internal quencher]...probe sequence...[Fluorophore]-3'
In the 3'-Fluorphore MGB probe design an internal quencher for example BHQ1-dT or BHQ2-dT is placed after the MGB at the 5' end.

MGB Probe Pricing MGB probe pricing is the total of the price for [MGB] + [internal quencher]+..probe sequence +[Fluorophore]-3'

The tripeptide of dihydropyrroloindole-carboxylate (CDPI3) is a minor groove binding (MGB) moiety derived from the natural product CC-1065 with strong DNA binding properties. Synthetic oligonucleotides with covalently-attached CDPI3 have enhanced DNA affinity and have improved the hybridization properties of sequence-specific DNA probes. Short CDPI3-oligonucleotides hybridize with single-stranded DNA to give more stable DNA duplexes than unmodified ODNs of similar length. CDPI3 MGβ-oligonucleotide conjugates have been found to be useful in the following applications:
- Arrest of primer extension and PCR blockers
- Short and fluorogenic PCR primers
- Real-time PCR probes
- miRNA Inhibitors

The simplest approach to MGB probe design is to use an MGB support, add a quencher molecule as the first addition and complete the synthesis with a 5'-fluorophore. Alternatively, a fluorophore support could be used with the 5' terminus containing a quencher molecule followed by a final MGB addition at the 5' terminus.
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