



## Product Specifications

Custom Oligo Synthesis, antisense oligos, RNA oligos, chimeric oligos, Fluorescent dyes, Affinity Ligands, Spacers & Linkers, Duplex Stabilizers, Minor bases, labeled oligos, Molecular Beacons, siRNA, phosphonates Locked Nucleic Acids (LNA); 2'-5' linked Oligos

## Oligo Modifications

For research use only. Not for use in diagnostic procedures for clinical purposes.

### Yakima Yellow 5'

Category	Fluorescent Dyes
Modification Code	YYel-5
Reference Catalog Number	26-6700
5 Prime	Y
3 Prime	N
Internal	N
Molecular Weight(mw)	718.33

#### Epoch Products License

See detailed license restrictions and provisions below.

**Click here for a list of fluorophores.**

The Epoch dyes add to the portfolio of the increasing availability of numerous fluorescent dyes covering the visible spectra that suitable for incorporation in oligonucleotides. Yakima Yellow is a substitute for Hex and Vic fluorophores

Single-dye labeled oligonucleotides are routinely used for PCR for fragment analysis, DNA sequencing and FISH analysis. Dual-dye labeled oligos are particularly useful in fluorescence resonance energy transfer (FRET) experiments for determination of intra- and intermolecular distances at very high resolution (1-10 nm). In addition, dual-labeled oligos containing fluorescent dye/dark quencher pairs are now routinely used in quantitative and qualitative real-time PCR experiments and assays (5'-nuclease assay, Molecular Beacon, Scorpions, etc. Details of how such dual-labeled probes work for detection of minute amounts of target are found in the Quenchers modifications category.

Fluorophores can be used to label DNA oligos for use as hybridization probes in a variety of in vivo and in vitro research or diagnostic applications, as well as for structure-function studies of DNA, RNA, and protein-oligonucleotide complexes. Fluorescent modifications can also be combined with non-fluorescent modifications in a wide variety of combinations for use in highly specializing applications or research projects.

**Epoch Products License Label & Provisions** Our agreement with Glen Research a reseller for Epoch Biosciences, Inc. allows us to sell you Epoch Products incorporated into oligonucleotides which will be used by end users for

research purposes. Epoch Products include Yakima Yellow, Eclipse™ Dark Quencher, Super G (PPG), Benzaldehyde Phosphoramidite, Redmond Red and Gig Harbor Green. The end user agrees to the 'Research Use Only' provision by placing and order for Epoch Products incorporated into oligonucleotides.

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**2. License Provisions:**

(i) that such oligonucleotides are for research purposes only, and may not be used for commercial, clinical, diagnostic or any other use,

(ii) that such oligonucleotides are subject to proprietary rights of Epoch Biosciences, Inc.

and are made and sold under license from Epoch Biosciences, Inc.,

(iii) that there is no implied license for commercial use with respect to such oligonucleotides,

(iv) that a license must be obtained directly from Epoch Biosciences, Inc. with respect to any other proposed commercial use of such oligonucleotides, and

(v) that 'commercial use' includes but is not limited to the sale, lease, license or other transfer of such oligonucleotides or any material derived or produced from it, the sale, lease, license or other grant of rights to use such oligonucleotides or any material derived or produced from it, or the use of such oligonucleotides to perform services for a fee for third parties (including contract research). In the event that you have a separate agreement with Epoch regarding Epoch Products which explicitly states that the foregoing is not applicable to you, your use of oligonucleotides containing such compounds will be governed by the terms of such agreement.