

# WellRED Oligos

for the CEQ\* Genetic Analysis Systems from Beckman Coulter.

## WellRED Oligos

- High-quality oligos
- Reliable service
- Competitively priced

Proligo® is licensed by Beckman Coulter, Inc., to supply WellRED oligos designed for use with the CEQ\* Genetic Analysis Systems and are excited to fluoresce using diode lasers. These oligonucleotides may be used for direct hybridization or in PCR<sup>1</sup> amplification. WellRED oligos are DNA oligonucleotides labeled with WellRED dyes, D2-PA, D3-PA or D4-PA, at the 5' end:

- Deprotected and desalted
- Purified by PAGE, RPC or RP-HPLC
- Available in lengths of 7 to 100 mers
- Delivered dried in individual, opaque tubes
- Shipped within 4 to 5 working days of receiving your order, pending successful QC validation
- Systematic QC by PAGE or mass spectrometry analysis
- Competitively priced



### Benefits of WellRED Chemistry used with the CEQ\* Genetic Analysis Systems

1. WellRED oligos use cyanine-based fluorescent dyes with high extinction coefficients that absorb in the near-infrared region, thereby reducing background noise from biological materials, resulting in highly sensitive detection.
2. The CEQ\* Genetic Analysis Systems enable DNA samples to be kept in linear form during the complete experiment. The CEQ\* Genetic Analysis Systems' online denaturation process prevents any reformation of secondary structures, especially during a long run without any manual additional step.
3. The WellRED chemistry enables the CEQ\* Genetic Analysis System to resolve complex structures, where other systems fail.

## Guaranteed Yields and Estimated Assays for WellRED Oligos

	PAGE	RPC			RP-HPLC		
Guaranteed yield (OD)	1	2	4	5	10	50	100
Approximate yield (nmols <sup>1</sup> )	5	10	20	25	50	250	500
Estimated assays (reactions)	500 - 1,000	1,000 - 2,000	2,000 - 4,000	2,500 - 5,000	5,000 - 10,000	25,000 - 50,000	50,000 - 100,000

<sup>1</sup> Estimate 1 OD = 5 nmols = 30 µg, for a 20 mer oligo  
Please enquire for alternative quantities.

## Spectral Properties of WellRED Oligos

WellRED oligo	Excitation maximum (nm)	Emission maximum (nm)	Molar extinction coefficient
D2-PA	750	770	170,000
D3-PA	685	706	224,000
D4-PA	650	670	203,000

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## Specifications<sup>‡</sup> of the WellRED Oligos

Quality control	All our oligonucleotides undergo vigorous process monitoring and strict quality control. Length and labeling are systematically controlled by PAGE or mass spectrometry analysis. Quantity is systematically validated by UV absorbance at 260 nm.
Purification	Fully deprotected, desalted and purified by PAGE, RPC or RP-HPLC
Length	7 to 100 mers
Bases	DNA (A, C, G or T), analog (i or dU) or degenerate base (wobbles)
Backbone	Phosphodiester bond
Labels	D2-PA, D3-PA or D4-PA at the 5'end
Format	Delivered in dry form
Turn-around time (TAT)	Shipped within 4 to 5 working days of receiving your order, pending successful QC validation. Turn-around time does not include delivery time. Please check with your Proligo representative for local turn-around times.
Storage and stability	Proligo recommends that WellRED oligos are stored dry, in the dark at -20°C (for up to 1 year) or diluted at 100 μM in TE buffer (pH 8.0) and stored in the dark at -20°C (6 months). Repetitive freeze-thaw cycles should be avoided by storing as aliquots.
Shipment	Shipped dried, in individual, opaque tubes
Oligonucleotide Technical Data Sheet	Oligonucleotides are delivered with an Oligonucleotide Technical Data Sheet, which includes oligonucleotide name, sequence, concentration, precise quantity in OD and nmols, T <sub>m</sub> , MW, size, extinction coefficient and purification data.
Services available upon request	<ul style="list-style-type: none"> <li>• Conditioning package (microplate, etc)</li> <li>• Aliquoting</li> <li>• Additional services may increase turn-around time</li> </ul>
Pricing	Please contact your local Proligo representative
Ordering	On-line at <a href="http://www.proligo.com">www.proligo.com</a> , by email or by fax

## Three Good Reasons to Order from Proligo Primers & Probes™

### 1. Quality

The efficiency of the synthesis procedure, in particular the base coupling efficiency, is the most significant factor to influence the final quality of an oligonucleotide, even if it is subsequently purified. Our patented automated synthesis platform provides superior coupling efficiency, enabling us to offer high-quality oligonucleotides.

### 2. Purity

For no additional fee, all of our custom oligonucleotides are deprotected and desalted. This process is required to remove the by-products of synthesis, making our oligonucleotides suitable for use with most molecular biology applications. However, for more stringent applications, such as site-directed mutagenesis and cloning, additional purification of the oligonucleotide may be required to remove truncated failure (N-) product. Purification can be achieved by RPC (Reverse Phase Cartridge), PAGE (Poly Acrylamide Gel Electrophoresis) or RP-HPLC (Reverse Phase High Pressure Liquid Chromatography). Choice of purification grade depends largely on the application.

### 3. Synthesis Yield

We guarantee the total final yield of an oligonucleotide as a minimum number of OD units, rather than providing the scale of synthesis. The scale of synthesis is only the starting point for synthesis, as the post-synthesis yield can vary according to oligonucleotide length, sequence, purification, modifications and coupling efficiencies.

### To Order

Please order on-line at [www.proligo.com](http://www.proligo.com). Alternatively, complete an email or fax order form, available from our Web site or by contacting your local Proligo representative.

When you order on-line or by email, you will receive an automatic order confirmation by email within a few hours. When your oligonucleotides are ready to be shipped, you will also receive notification by email.

We manage our customers' information with the highest degree of confidentiality.

### Proligo Primers & Probes offers a wide range of custom oligonucleotides

Applications & Techniques	Bi-fluorescent Probes	E@sy Oligo™	Fast Oligo™	Guaranteed Oligos™	LNA™ Oligos	Mass Oligos™	siRNA Oligos	WellRED Oligos
PCR <sup>1</sup>		•	•	•	•	•		•
PCR with proofreading enzymes				•	•	•		•
Allele-specific PCR		•	•	•	•	•		•
Real-time quantitative PCR	•	•	•	•	•	•		
Reverse transcription PCR	•	•	•	•	•	•		•
RACE				•	•	•		•
Sequencing		•	•	•	•	•		•
Cloning				•	•	•		•
Primer extension				•	•	•		•
Site-directed Mutagenesis				•	•			•
AFLP™ analysis		•	•	•	•	•		•
In situ hybridization				•	•			•
Mutation detection	•			•	•	•		•
Gene silencing	•			•	•	•	•	
Genotyping	•			•	•	•		•
Fragment Analysis	•			•		•		•

**For more information** on the wide range of custom oligonucleotides offered by Proligo Primers & Probes, please visit our Web site, [www.proligo.com](http://www.proligo.com) or call your local Proligo representative.

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## Corporate Profile of Proligo

The knowledge of genes and the understanding of their function are the tools to open up a whole new dimension for the diagnosis and curing of diseases. Processing of genetic information is a molecular event that consumes nucleic acid chemicals. Proligo, a dedicated specialist in nucleic acid chemistry, produces the consumables needed to process genetic information. We continually strive to meet our customers' needs through the introduction of novel technologies.

Proligo has production facilities in North America, France, Germany, Japan, Singapore and Australia. Proligo operates two business lines that span the genomics development supply chain: from oligonucleotide synthesis reagents (Proligo Reagents™) to production of oligonucleotides (Proligo Primers & Probes).

OD = optical density

\*CEQ is a trademark of Beckman Coulter, Inc.

<sup>†</sup>Specifications are subject to change. Please refer to our Web site at [www.proligo.com](http://www.proligo.com) for the latest details

WellRED oligos are for research use only.

**PROLIGO**  
PRIMERS & PROBES

<sup>†</sup>PCR (Polymerase Chain Reaction) is patented by Hoffman La Roche Ltd. Copyright 2003 Proligo LLC. All rights reserved. Proligo, Proligo Primers & Probes, Proligo Reagents and their logos, E@sy Oligo, Fast Oligo, Mass Oligos and Guaranteed Oligos are all trademarks of Proligo LLC. LNA oligonucleotides are produced by Proligo under license from Exiqon A/S for research only. Not for resale or for therapeutic use or use in humans. LNA and Locked Nucleic Acid are registered trademarks of Exiqon A/S. siRNA is licensed from the Massachusetts Institute of Technology. 10-111.01