

Part of the Guaranteed Oligos™ range of products.

Mass Oligos™

- High-throughput capacity for thousands of oligos
- Reliable and consistent

Order Mass Oligos™ for a reliable source of oligonucleotides for high-throughput applications, available with or without labels and modifications, at very competitive prices.

High-throughput

Our highly automated synthesis platform, together with our worldwide manufacturing capacity, allows us to rapidly synthesize thousands of oligonucleotides for your high-throughput application.

Reliable and consistent

We ensure consistent quality and performance through our standardized, highly-automated processes - from order entry, to synthesis, to conditioning - to provide you with reliable oligonucleotides.

- Deprotected and desalted
- Purified by RPC upon request
- Delivered in de-ionized water
- Delivered at specified concentrations, upon request
- Available in lengths of 15 to 40 mers

Guaranteed Yields, Labels and Modifications for Mass Oligos

	Desalted			RPC		
Yields						
Guaranteed yield (OD)	2	5	10	2	5	10
Approx. yield (nmols*)	10	25	50	10	25	50
Labels and modifications						
Amine	◆ ●	◆ ●	-	-	-	-
Biotin	◆ ●	◆ ●	-	-	-	-
6 FAM™, HEX™, TET™	●	●	-	-	-	-
Fluorescein	◆ ●	◆ ●	-	-	-	-
Phosphate	◆ ●	◆ ●	-	-	-	-
Thiol	●	●	-	-	-	-

◆ 3'end ● 5'end

Please enquire for alternative quantities, purification grades, labels and modifications.

* Estimate 1 OD = 5 nmols = 30 µg, for a 20 mer oligo

Turn-around Time for Mass Oligos

	Desalted			RPC		
Turn-around time (TAT)						
Number of plates	1-5	5-10	10-20	1-5	5-10	10-20
Unlabeled oligos						
No. of days	3	4	5	4	5	6
Labeled oligos						
No. of days	+1	+1	-	-	-	-
Concentration adjustment						
No. of days	+1/2	+1	Please enquire	+1/2	+1	Please enquire
Mixed plate preparation						
No. of days	+1/2	+1	Please enquire	+1/2	+1	Please enquire

Please enquire for turn-around times for aliquoting.

Note-1: Turn-around time is dependent upon successful QC validation, and does not include delivery time.

Note-2: Please contact your local Proligo® representative to confirm the turn-around time for your region.

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Proprietary Technology

Prologo Primers & Probes' proprietary technology to manufacture oligonucleotides performs synthesis, post synthesis and conditioning in one unique fully-automated process, with centralized monitoring:

Synthesis

Our proprietary synthesizers (UltraFast Parallel Synthesizers) meet the challenges of oligonucleotide synthesis by means of a series of innovations:

- 3' base errors are eliminated by use of our proprietary Universal CPG for automatic selection of the 3' end base
- Product quality is high, due to high coupling efficiencies
- Faster turn-around times are ensured by shorter coupling times and true parallel synthesis

Post-synthesis

Desalting is performed automatically on our proprietary UltraFast Parallel Deprotectors. Quality control is performed by mass spectrometry or PAGE analysis.

Conditioning

Concentration adjustment, mix preparation and aliquoting are all performed using robotic technology, centrally controlled through the use of barcodes.

Customized Services

We offer the following to meet your research needs:

- Plate formatting
- Concentration adjustment
- Plate mix

Plate Formatting

We offer three types of plate formats:

Microtube:	96-well plate with individual removable tubes of 1 ml capacity, capped in strips of eight
Deepwell:	96-well plate with wells of 1 ml capacity, capped with adhesive film
Microtiter:	Standard 96-well plate with wells of 200 μ l capacity, thermo-sealed with aluminum foil

Please enquire for other plate formats (e.g. 384-well plates).

Concentration Adjustment

The concentrations of each oligonucleotide in every plate can be adjusted within the ranges detailed below, at no additional charge:

Final Concentration Ranges for Mass Oligos (FINCO) Available in μ M or μ g/ μ l

Guaranteed yield (OD)	2	4	5	10
Approx. yield (nmol*)	10	25	25	50
Concentration range (μ M)	20-100	30-400	60-400	100-800
Concentration range (μ g/ μ l)	0.2-1.0	0.3-3.0	0.3-3.0	0.75-6.0

* Estimate | OD = 5 nmols = 30 μ g, for a 20 mer oligo

Plate Mix

Plates containing forward and reverse primers can be mixed automatically, using our robotic technology to ensure complete reliability, in the following mixes:

- A mixed plate with forward and reverse primers, at your requested concentration
- A mixed plate, a mother plate of forward primers and a mother plate of reverse primers
- Any aliquoted plate of the concentrations detailed in the above table

Easy Identification of Your Mass Oligos

Oligonucleotides are dispensed in the plates as follows:

	1	2	3	4	5	6	7	8	9	10	11	12
A	1st oligo	9th oligo	17th oligo	25th oligo								
B	2nd oligo	10th oligo	18th oligo									
C	3rd oligo	11th oligo										
D	4th oligo											
E												
F												
G												
H	8th oligo	16th oligo	24th oligo	32nd oligo	40th oligo	48th oligo	56th oligo	64th oligo	72nd oligo	80th oligo	88th oligo	96th oligo

The plate identification number and position of each oligonucleotide on your master plate will be indicated on the Oligonucleotide Technical Data Sheet sent with your order.

Additional Services

Aliquoting

Any oligonucleotide from a plate can be aliquoted into multiple plates. The number of aliquots is limited only by the final volume in each well.

Secure Plate Tracking and Management

All our plates are automatically labeled with a barcode for continual process monitoring and management. We can also create custom barcodes to provide you with instant access to your own information on each oligonucleotide. An additional fee is charged for this service. Please enquire for further details.

Specifications of Mass Oligos

Quality control	All our Mass Oligos undergo vigorous process monitoring and strict batch control, including OD measurement, concentration calculation and mass spectrometry or PAGE analysis.
Purification	Fully deprotected and desalted Purified by RPC upon request
Guaranteed yield	Desalted: 2, 5 or 10 OD (approx. 10, 25 or 50 nmols*) RPC: 2 or 4 OD (approx. 10 or 20 nmols*)
Length	15 to 40 mers
Bases	DNA (A, C, G or T), inosine, (wobbles) degenerate bases
Backbone	Phosphodiester bond
Format	Delivered in solution in de-ionized water at a specific concentration, if requested
Storage and stability	Although oligonucleotides are stable in solution at 4°C for up to 2 weeks, Proligo recommends storage should be at -20°C. Repetitive freeze-thaw cycles should be avoided by storing as aliquots. Storing at concentrations above 20 µM is recommended. Oligonucleotides with fluorescent labels should be protected from light. Proligo guarantees its oligonucleotides for six months, stored under the above conditions.
Shipment	Shipped by express delivery, in solution, in microtubes, deep well or microtiter plates
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 _m , MW, size, extinction coefficient and purification information. We also provide plate and oligonucleotide identification numbers for Mass Oligos.
Services available upon request	<ul style="list-style-type: none"> • Concentration adjustment • Mixed plate preparation • Aliquoting • Custom plate-tracking • Custom orders • Additional services may increase turn-around time
No. of oligos per order	Multiples of 24 oligonucleotides
Pricing	Please contact your local Proligo representative
Ordering	On-line at www.proligo.com or by email

* Estimate 1 OD = 5 nmols = 30 µg, for a 20 mer oligo

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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. **Note:** Mass oligos are deprotected and desalted. Purification by RPC is available upon request.

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. 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 oligos 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	E@sy Oligo™	Fast Oligo™	Guaranteed Oligos™	Mass Oligos™	siRNA Oligos	LNA™ Oligos	Fluorescent Probes
PCR ¹	•	•	•	•		•	
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 or call your local Proligo representative.

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To Contact Us at Proligo Primers & Probes

North America

T: 1 800 995 0308

F: 1 800 551 5291

oligosales-us@proligo.com

Singapore

T: +65 6873 22 71

F: +65 6873 10 77

oligosales-sg@proligo.com

Europe

T: +33 (0)1 43 56 59 00

F: +33 (0)1 43 56 59 48

oligosales-eu@proligo.com

Australia

T: +61 2 66 22 8614

F: +61 2 66 22 3879

oligosales-au@proligo.com

Japan

T: +81 75 313 19 74

F: +81 75 313 21 79

oligosales-jp@proligo.com

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).

PROLIGO
PRIMERS & PROBES

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