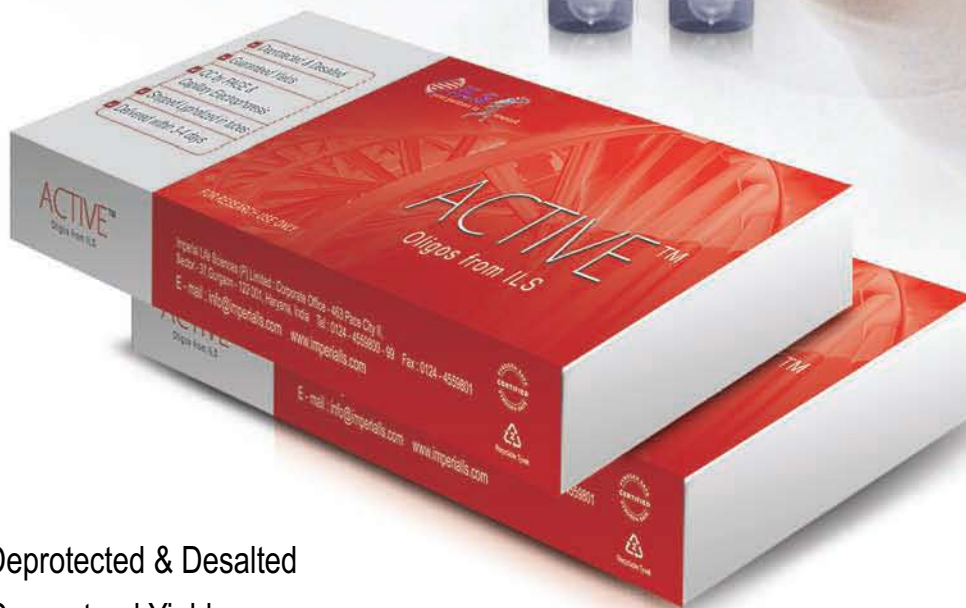




ACTIVE™

Oligos from ILS

ILS proudly introduces their new fast, efficient **Oligonucleotides** for convenient workflow in your lab



- ✓ Deprotected & Desalted
- ✓ Guaranteed Yields
- ✓ QC by PAGE & Capillary Electrophoresis
- ✓ Shipped Lypholized in tubes
- ✓ Delivered within 3-4 days

Our Quality Guarantee

At ILS quality is not just a goal- it is a guarantee. Our oligos are quality checked by either MALDI-TOF mass spectrometry, ESI-MS, or capillary Gel Electrophoresis. For oligos delivered in duplex format, duplex formation is monitored by non denaturing PAGE. Oligo quantity is systematically validated by UV absorbance at 260 nm. We guarantee the oligo sequence you receive is the correct Sequence for your order. If you are dissatisfied with your oligo and report a sequence error within 30 days of order receipt, we will gladly remake your oligo free of charge or provide a credit for the purchase amount.

Guaranteed Minimum yield

The scale of synthesis represents the μ mole of starting material for the first base of synthesis. The overall μ mole yield of full-length oligonucleotide depends on the average coupling efficiency of each base and the length of the oligo. Yields of full-length oligo can vary considerably based on length and type of purification requested. ILS guarantees the following minimum yields for each scale:

Scale(μ mole)	Desalt	RP1	HPLC	PAGE
25 nmol	3 OD	N/A	N/A	N/A
100 nmol	6 OD	1 OD	1 OD	1 OD
250 nmol	15 OD	3 OD	4 OD	2 OD
1 μ mole	45 OD	12 OD	20 OD	10 OD

*Guarantee is for 20-mer or longer. Oligos less than 20 mer- and oligos with modifications may result in a lower yield. Probes and Beacons are ordered by fixed OD, minimum yields by scale do not apply.

Handling of Oligonucleotides

ILS oligonucleotides are provided deprotected and desalted. We recommend resuspension of dried DNA oligos in 1xTE(10mM Tris, pH7.5-8.0.1mM EDTA) or sterile water because the intensity of a fluorescent signal can be impacted by the pH of the solution, resuspend fluorescently labeled DNA oligos in a buffer such as TE. Keep oligos buffered at pH above neutral to avoid degradation due to acidic conditions.

We recommend resuspension of dried siRNA in sterile water. siRNA and RNA oligos are susceptible to RNase and nuclease contamination and need to be handled with special care. Wearing gloves and using RNase free solutions and pipette tips is strongly recommended for all applications.

Once suspended, stocks may be stored at -20 C for several weeks. To minimize degradation due to freeze/thaw, aliquots may be kept at 4C for short-term use. For long-term storage, stocks should be dried and stored desiccated at -20C.

For additional information please contact : primer@imperialls.com.





Oligonucleotide

Desalted DNA Oligos

- At no extra Charge
- Every Oligo is deprotected and desalted to remove small molecules impurities
- Oligos are quantitated twice by UV Spectrophotometry to provide an accurate measure of yield.
- Quality control for each primer by MALDI-TOF MASS spec.
- Delivery: 4 - 6 Business days

Tube Format

Product Description	Synthesis Scale nmols	Available Lengths	Guaranteed Yield	Price/ Base
Desalted Oligonucleotides	25 nmol	15-45 Bases	3 ODs	Rs.23.00
Desalted Oligonucleotides	100 nmol	10-80 Bases	6 ODs	Rs.34.00
Desalted Oligonucleotides	250 nmol	5-100 Bases	15 ODs	Rs.68.00
Desalted Oligonucleotides	1 umole	5-100 Bases	45 ODs	Rs.130.00
Plate Format				
Desalted Oligonucleotides	25 nmol	15-45 Bases	3 ODs	Rs.16.00
Desalted Oligonucleotides	100 nmol	10-80 Bases	6 ODs	Rs.24.00
Desalted Oligonucleotides	250 nmol	5-100 Bases	15 ODs	Rs.50.00
Desalted Oligonucleotides	1 umole	5-100 Bases	45 ODs	Rs.99.00

If ordering more than 30 oligos, can be ordered into 96 well plate format.
Delivery 15 - 20 Business Days

Oligonucleotide Purification

- Purification is recommended for all oligos greater than 40 bases in length and for many modified oligos
- For demanding applications such as multiplex PCR, cloning, Mutagenesis or antisense /RNAi methods, additional purification will significantly improve Oligonucleotide performance
- Every purified oligos upto 60 bases in length receives by capillary eletrophoresis to document final purity.
- Delivery 15 - 20 Days.

Product Description	Synthesis Scale nmols	Guaranteed	Price
PAGE Purification	100 nmol	1 OD	Rs.1600.00
PAGE purified	250 nmol	2 ODs	Rs.1600.00
	1 umole	10 ODs	Rs.2200.00
HPLC Purification	100 nmol	1 OD	Rs.1600.00
HPLC Purified	250 nmol	4 ODs	Rs.1600.00
	1 umole	20 ODs	Rs.2200.00

DNA Modifications

Modifications	100 nmole	250 nmole	1umol nmole	
6-FAM (5' end)	4,800	7,200	10,900	DST, RP1, HPLC, PAGE
3' Biotin (3' end)	4,800	6,600	9,600	HPLC, PAGE
3' Fluorescein (3' end)	4,800	7,200	10,900	HPLC, PAGE
5' Biotin (5' end)	4,200	6,000	8,400	DST, RP1
5' Fluorescein (5' end)	4,800	7,200	10,900	DST, RP1
Cy3 (5' end)	12,100	18,100	25,400	CARTRIDGE, HPLC
CY5 (5' end)	12,100	18,100	25,400	CARTRIDGE, HPLC
CY5.5 (5' end)	13,300	19,900	27,800	CARTRIDGE, HPLC
Digoxigenin (5' & 3' end)	16,900	21,800	30,200	HPLC
HEX (5' end)	4,800	7,200	10,900	DST, RP1, HPLC, PAGE
JOE (5' end)	4,800	7,200	10,900	HPLC
ROX (5' & 3' end)	12,100	18,100	25,400	HPLC
TAMRA (5' & 3' end)	17,500	24,200	35,000	DST, RP1
TET (5' end)	4,800	7,200	10,900	DST, RP1
Texas Red (5' & 3' end)	12,100	18,100	25,400	HPLC
5' Amine C6MMT	4800	6000	8400	RP1, HPLC
5' Amine TFA (USA)	4300	6200	7700	RP1, HPLC
5' Amine C12	15700	18100	26600	RP1, HPLC
5' BHQ-1	5800	8700	11600	HPLC
5' BHQ-2	6300	9500	14300	HPLC
5' Phosphorylation	3600	4800	7200	DST, PAGE
5' Thiol C6 S-S	4200	6000	8400	RP1, HPLC
3' Amine C7	4800	6000	8400	DST, RP1
3' BHQ-1	5800	8700	11600	HPLC
3' BHQ-2	6300	9500	14300	HPLC
3' Dabcyl	7200	10900	14500	RP1, HPLC, PAGE
3' Phosphorylation	3600	4800	7200	DST, RP1, HPLC, PAGE
3' Thiol C3 S-S	4800	6600	9600	DST, RP1

WellRED Oligos

Yield (OD)	1 OD PAGE	2 OD RP	4 OD RP	5 OD HPLC
WellRED D2-PA	25,500	15,600	17,500	27,636
WellRED D3-PA	25,500	15,600	17,500	27,636
WellRED D4-PA	25,500	15,600	17,500	27,636

RNA Primers

Custom RNA Synthesis and Purification

Scale	Purification	Quantity	Final Price (Rs) per base
50 nmol	desalted	1 base	700
50 nmol	HPLC	1 base	880
200 nmol	desalted	1 base	1020
200 nmol	HPLC	1 base	1270

Length Restrictions: RNA oligos are available from 10 - 45 bases.

NO SETUP FEES!

Yields (listed for unmodified RNA oligos 20-45 bases in length):

Synthesis Scale	Standard Desalting Guaranteed Yield	HPLC Guaranteed Yields
50 nmole	6 ODs	1 OD
200 nmole	15 ODs	4 ODs
1 μmole	45 ODs	20 ODs

RNA Modifications

Description	Scale	Quantity	Price (Rs)
2'-O-Methyl RNA	50 nmol	Per Modification	800
2'-O-Methyl RNA	200 nmol	Per Modification	1060
DNA (in chimeric Oligos)	50 nmol	Per Modification	145
DNA (in chimeric Oligos)	200 nmol	Per Modification	210
PHO	50 nmol	Per Modification	4000
PHO	200 nmol	Per Modification	4670
FAM	50 nmol	Per Modification	11350
FAM	200 nmol	Per Modification	12410
HEX	50 nmol	Per Modification	12680
HEX	200 nmol	Per Modification	14000
TET	50 nmol	Per Modification	12680
TET	200 nmol	Per Modification	14000
Biotin	50 nmol	Per Modification	7340
Biotin	200 nmol	Per Modification	8670

Active Ready Primers™

The Highest Quality Each primer is > 95% pure to insure optimum performance Identity is confirmed by Mass Spectrometry Purity is established by Capillary Electrophoresis

NEW LOW PRICE: Only Rs.1000.00 each! 10 μg of purified product. Enough for 100 sequencing reactions. Fast turnaround, subject to in-stock availability

ReadyMade in Primer™	Sequence
Oligo dT, 20mer	TTTT TTT TTT TTT TTT TTT TT
Random Hexamer	NNN NNN
cDNA Cloning Primer	GGC CAC GCG TCG ACT AGT ACT TTT TTT TTT TTT TT
3'RACE PCR	GGC CAC GCG TCG ACT AGT AC
BGH Reverse	TAG AAG GCA CAG TCG AGG
Bluescript KS	TCG AGG TCG ACG GTA TC
Bluescript SK	CGC TCT AGA ACT AGT GGA TC
EGFP-C CAT	GGT CCT GCT GGA GTT CGT G
EGFP-N CGT	CGC CGT CCA GCT CGA CCA G
M13 Forward (-20)	GTA AAA CGA CGG CCA GT
M13 Forward (-41)	CGC CAG GGT TTT CCC AGT CAC GAC
M13 Reverse (-27)	CAG GAA ACA GCT ATG AC
M13 Reverse (-48)	AGC GGA TAA CAA TTT CAC ACA GG
PCMV Forward	CGC AAA TGG GCG GTA GGC GTG
pET 3'	CTA GTT ATT GCT CAG CCG
pET 5' (T7)	TAA TAC GAC TCA CTA TAG G
pET Upstream	ATG CGT CCG GCG TAG A
pGEX 3'	CCG GGA GCT GCA TGT GTC AGA GG
pGEX 5'	GGG CTG GCA AGC CAC GTT TGG TG
SP6 Promoter	TAC GAT TTA GGT GAC ACT ATA G
SP6 Upstream	ATT TAG GTG ACA CTA TAG
T3 AAT	TAA CCC TCA CTA AAG GG
T7 Promoter	TAA TAC GAC TCA CTA TAG GG
T7 Terminator	GCT AGT TAT TGC TCA GCG G
Oligo dT, 15mer	TTT TTT TTT TTT TTT
Oligo dT, 16mer	TTT TTT TTT TTT TTT T
Oligo dT, 18mer	TTT TTT TTT TTT TTT TTT
Anchored Oligo dT (20)	TTT TTT TTT TTT TTT TTT TV
Anchored Oligo dT (22)	TTT TTT TTT TTT TTT TTT TV N
16S rRNA For	AGA GTT TGA TCC TGG CTC AG
16S rRNA Rev	ACG GCT ACC TTG TTA CGA CTT
G3PDH For	ACC ACA GTC CAT GCC ATC AC
G3PDH Rev	TCC ACC ACC CTG TTG CTG
Neomycin For	CTT GGG TGG AGA GGC TAT TC
Neomycin Rev	AGG TGA GAT GAC AGG AGA



RAPD Primer Kits, Active ILS

RAPD Kit contains 20 individual 10 mer primers useful for Genetic mapping and DNA finger printing. The Sequences were selected randomly with the requirement that their (G+C) content is 60%-70% and they have no self-complimentary ends. Each Kit designed "Kit A" through "Kit Z" and "Kit AA" through "Kit AZ" and "Kit BA" through "Kit BH".

Cat#	Product Description	Price
A	Rapd Kit A (Kit Contains 20, 4.0 Od)	Rs.11,000.00
B	Rapd Kit B (Kit Contains 20, 4.0 Od)	Rs.11,000.00
C	Rapd Kit C (Kit Contains 20, 4.0 Od)	Rs.11,000.00
D	Rapd Kit D (Kit Contains 20, 4.0 Od)	Rs.11,000.00
E	Rapd Kit E (Kit Contains 20, 4.0 Od)	Rs.11,000.00
F	Rapd Kit F (Kit Contains 20, 4.0 Od)	Rs.11,000.00
G	Rapd Kit G (Kit Contains 20, 4.0 Od)	Rs.11,000.00
H	Rapd Kit H (Kit Contains 20, 4.0 Od)	Rs.11,000.00
I	Rapd Kit I (Kit Contains 20, 4.0 Od)	Rs.11,000.00
J	Rapd Kit J (Kit Contains 20, 4.0 Od)	Rs.11,000.00
K	Rapd Kit K (Kit Contains 20, 4.0 Od)	Rs.11,000.00
L	Rapd Kit L (Kit Contains 20, 4.0 Od)	Rs.11,000.00
M	Rapd Kit M (Kit Contains 20, 4.0 Od)	Rs.11,000.00
N	Rapd Kit N (Kit Contains 20, 4.0 Od)	Rs.11,000.00
O	Rapd Kit O (Kit Contains 20, 4.0 Od)	Rs.11,000.00
P	Rapd Kit P (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Q	Rapd Kit Q (Kit Contains 20, 4.0 Od)	Rs.11,000.00
R	Rapd Kit R (Kit Contains 20, 4.0 Od)	Rs.11,000.00
S	Rapd Kit S (Kit Contains 20, 4.0 Od)	Rs.11,000.00
T	Rapd Kit T (Kit Contains 20, 4.0 Od)	Rs.11,000.00
U	Rapd Kit U (Kit Contains 20, 4.0 Od)	Rs.11,000.00
V	Rapd Kit V (Kit Contains 20, 4.0 Od)	Rs.11,000.00
W	Rapd Kit W (Kit Contains 20, 4.0 Od)	Rs.11,000.00
X	Rapd Kit X (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Y	Rapd Kit Y (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Z	Rapd Kit Z (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Aa	Rapd Kit Aa (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ab	Rapd Kit Ab (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ac	Rapd Kit Ac (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ad	Rapd Kit Ad (Kit Contains 20, 4.0 Od)	Rs.11,000.00

Cat#	Product Description	Price
Ae	Rapd Kit Ae (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Af	Rapd Kit Af (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ag	Rapd Kit Ag (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ah	Rapd Kit Ah (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ai	Rapd Kit Ai (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Aj	Rapd Kit Aj (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ak	Rapd Kit Ak (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Al	Rapd Kit Al (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Am	Rapd Kit Am (Kit Contains 20, 4.0 Od)	Rs.11,000.00
An	Rapd Kit An (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ao	Rapd Kit Ao (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ap	Rapd Kit Ap (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Aq	Rapd Kit Aq (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ar	Rapd Kit Ar (Kit Contains 20, 4.0 Od)	Rs.11,000.00
As	Rapd Kit As (Kit Contains 20, 4.0 Od)	Rs.11,000.00
At	Rapd Kit At (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Au	Rapd Kit Au (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Av	Rapd Kit Av (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Aw	Rapd Kit Aw (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ax	Rapd Kit Ax (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ay	Rapd Kit Ay (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Az	Rapd Kit Az (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Ba	Rapd Kit Ba (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Bb	Rapd Kit Bb (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Bc	Rapd Kit Bc (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Bd	Rapd Kit Bd (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Be	Rapd Kit Be (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Bf	Rapd Kit Bf (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Bg	Rapd Kit Bg (Kit Contains 20, 4.0 Od)	Rs.11,000.00
Bh	Rapd Kit Bh (Kit Contains 20, 4.0 Od)	Rs.11,000.00

RNA Interference

RNA Interference

RNA has been used for almost fifteen years to reduce (or interfere with) expression of targeted genes in a variety of systems. Historically, these methods have been called post transcriptional gene silencing (PTGS) in plants, quelling in fungi and RNA interference (RNAi) in higher organisms. Although originally thought to require use of long double-stranded (DS) RNA molecules, the active mediators are now known to be short DS RNAs. Short single-stranded antisense RNA molecules were demonstrated to be effective inhibitors of gene expression over a decade ago but are susceptible to degradation by a variety of nucleases and are therefore of limited utility without chemical modification. DS RNAs are surprisingly stable and, unlike single-stranded DNA or RNA antisense oligos, do not need extensive modification to survive in tissue culture media or even within living cells.

Short interfering RNAs are naturally produced by degradation of long DS by RNase III class enzyme. While these fragments are usually around 21 bases long, synthetic DS RNAs of a variety of lengths (ranging from 18 bases to 30 bases) can be used to suppress gene expression depending on the system studied. These short DS RNAs are bound by the RNA Induced Silencing Complex (RISC), which contains several protein components including a ribonuclease which degrades the targeted mRNA. The antisense strand of the DS RNA directs target specificity of the RISC RNase activity while the sense strand of an RNAi duplex appears to function mainly to stabilize the RNA prior to entry into RISC and is degraded or discarded after entering RISC.

Purity and QC

RNAi pricing includes RNase-Free HPLC purification with a >85% minimum purity guarantee (for unmodified oligos) verified by capillary electrophoresis (CE). In addition, each oligo is examined by mass spectrometry. RNAi sequences must be 100% complementary with up to a 3 base overhang.

RNAi Oligos

Yield	Price
50 nmole	18400.00 / Duplex
50 nmole/ HPLC	24700.00 / Duplex
200 nmole	35600.00 / Duplex
200 nmole/HPLC	42600.00 / Duplex

Dual-Labeled DNA Probes

Prices below include synthesis of the custom oligo (up to 35 bases in length), reporter, quencher and HPLC purification. Inquire for Dual-Labeled DNA Probes >35 bases. OD are listed for Dual-Labeled DNA Probes 18 to 35 bases in length. Turnaround time for Dual-Labeled DNA Probes is 15-20 business days.

Reporter: 5' 6-FAM™

5' Fluorophore	3 Quencher	10D PAGE/HPLC*	3 OD PAGE/HPLC*	5 OD PAGE/HPLC*
6-FAM/HEX/Fluorescein/TET Cy3, Cy5, Cy5.5	BHQ1/TAMRA	16,000	22,500	37,900
JOE	BHQ1/TAMRA	45,800	61,800	93,000
TAMRA/Texas Red	BHQ2	45,800	61,800	93,000

LNA Dual-Labeled Fluorogenic Probes

5' Fluorophore	3 Quencher	10D PAGE/HPLC*	3 OD PAGE/HPLC*	5 OD PAGE/HPLC*
6-FAM/HEX/Fluorescein/TET	TAMRA	34,900	45,300	54,500
6-FAM/HEX/Fluorescein/TET	BHQ1	38,500	49,900	60,000

LNA Molecular Beacons

5' Fluorophore	3 Quencher	10D PAGE/HPLC*	3 OD PAGE/HPLC*	5 OD PAGE/HPLC*
6-Fam	Dabcyl	37,500	93,900	140,800
Hex/Tet/Fluorescein	BHQ1	37,500	93,900	140,800
Hex/Tet/Fluorescein	Dabcyl	37,500	93,900	140,800

Custom Preparative Services

Service	25 nmole	100 nmole	250 nmole	1 umole	5 umole	10 umole
Standard Mixed Base (Degenerate) Sites	04/base	04/base	04/base	04/base	04/base	04/base

Standard Mixed Sites :

R = A,G (puRine)
Y = C,T (pYrimidine)
M = A,C (aMino)
V = G,C,A
K = G,T (Keto)

D = G,A,T
S = G,C (Stong - 3H bonds)
N = A,C,G,T any base
W = A,T (Weak - 2H Bonds)
H = A,C,T
B = G,T,C

Custom Gene Synthesis

Confidential and guaranteed gene synthesis service, ready for use in a variety of applications. For assistance with design, please contact Customer Care at 0124-4559800, Extn. 213.

Gene synthesis service includes:

- Design consultation
- Codon optimization
- Cloned into a plasmid (please inquire for custom vectors)
- Guaranteed sequence verification through use of double-stranded DNA sequencing
- 2 µg purified plasmid DNA
- Sequence information is always confidential at ILS
- Non-disclosure agreements are available through ILS's legal services upon request

Gene Synthesis Applications:

- shRNA expression cassettes
- Regulatory sequence cassettes
- Microarray-ready cDNA
- Gene variants and SNPs
- DNA vaccines and vectors
- Standards for quantitative PCR and other assays
- microRNA genes
- Codon optimized short proteins
- cDNA constructs
- Recombinant antibodies

Genes

Product	Yield	Length	Delivery	Price
Short Standard Genes* Synthesis	2 ug purified plasmid DNA**	5 to 300 base pairs	4-6 week	Inquire
Custom Gene Synthesis	2 ug purified plasmid DNA**	Over 300 base pairs	4-6 week	Inquire

Technical Note

Extra charges may apply for gene segments with added complexity (ex. homopolymeric runs, critical hairpin structures or high G/C content), which can interfere with assembly and/or sequencing performance.

Active Oligo Cards

For Researchers

As with a phone call, a single purchase give the ability to prepay orders, requiring only a single PO or credit card transaction from the purchasing group. No more purchase order delays and redundant paperwork required. Enjoy the full benefit of the grant dollars earned by establishing OligoCard credit near the end of the grant term.

Features :

- Each card has a unique number and PIN
- All transactions are processed over a secure connection

Validity : 1 Year of each card.

The Oligo Card is a simple and easy solution to streamlining the purchasing process

For Purchasing Professionals

Consolidate the ordering of products into one easily traceable and secure system. All of the orders from a lab or group of labs can be tracked and processed far more efficiently. Establishing the balances on each individual card allows for easy enforcement of credit limits.

Ordering Info :

Cat. No.	Product	Price
OC - 25000	Diamond Card	487000.00
OC - 15000	Platinum Card	300000.00
OC - 5000	Gold Card	109000.00
OC - 2000	Silver Card	44500.00

