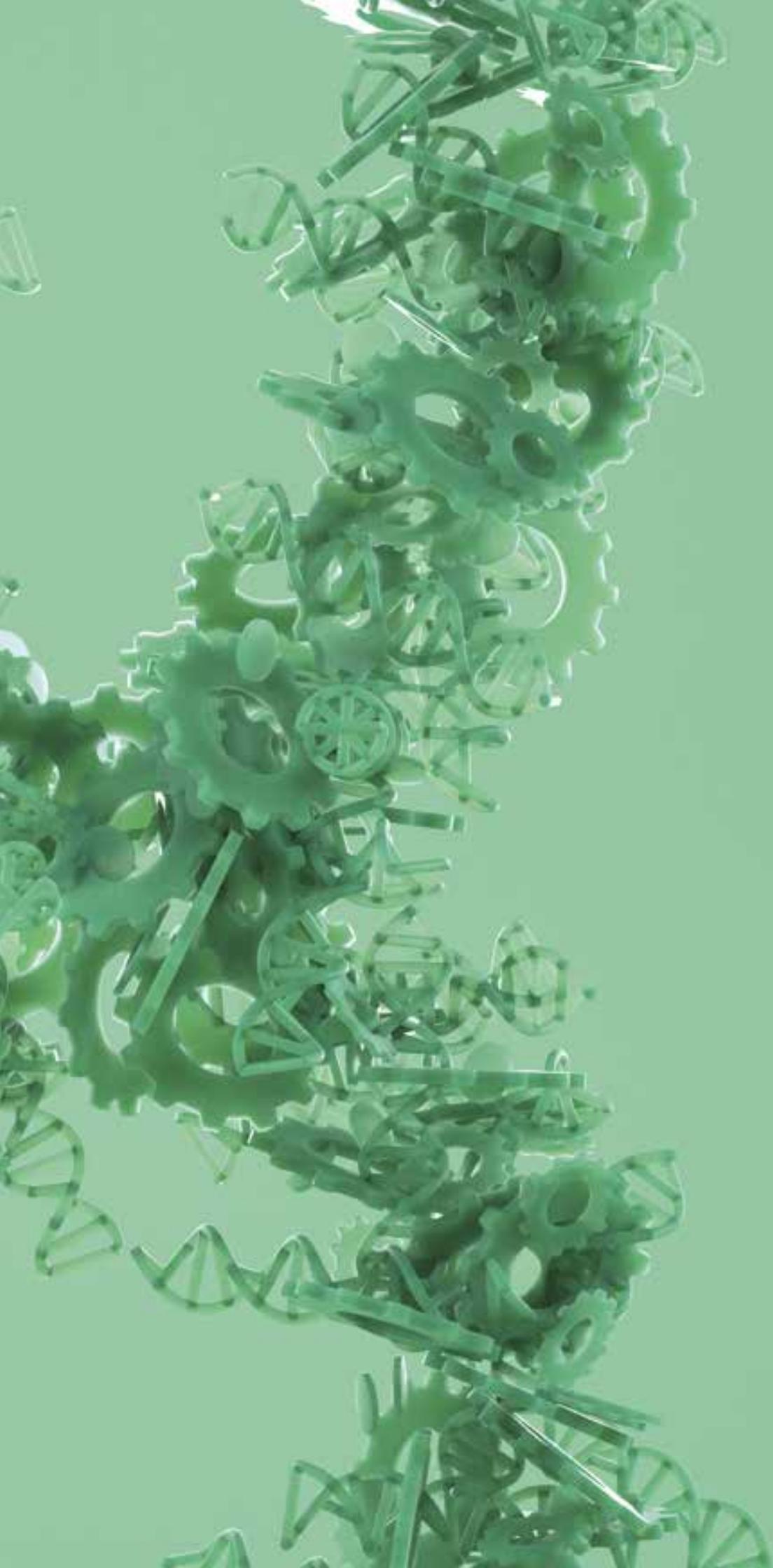


molecular services 2021



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# www.nzytech.com



## Newsletter

Subscribe our newsletter to receive awesome news and promotions.

## NZYWallet

NZYWallet is a prepaid account that offers the flexibility you need to focus on your research. With NZYWallet you can buy any product from our Online Store, check your up-to-date balance and track your latest orders.

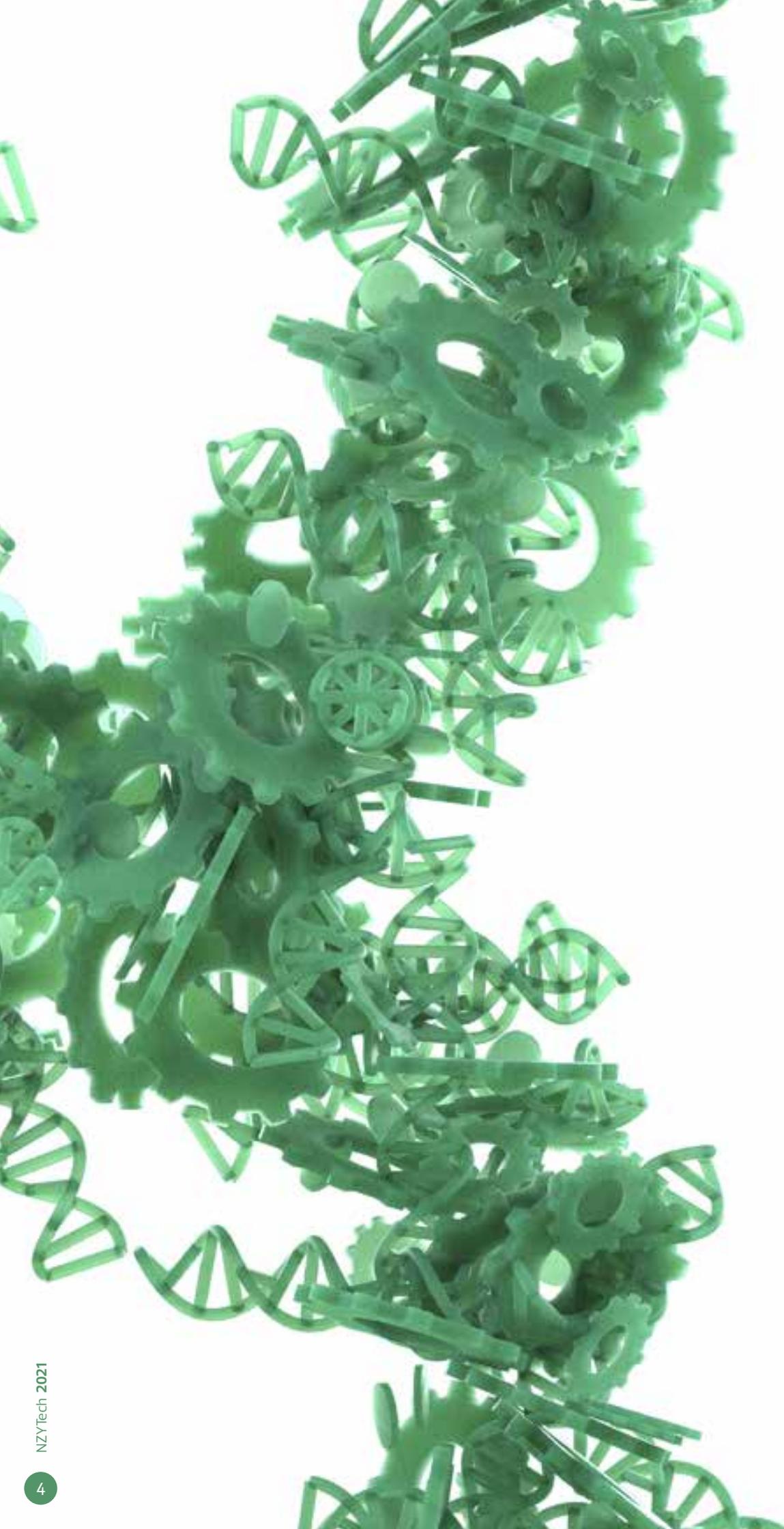
## Instantaneous Quotes

Do you need an urgent quote? Just add your products to Cart, proceed to Checkout, select quote and it's done!

Contact our customer service at [info@nzytech.com](mailto:info@nzytech.com) or your local sales representative for more information.

Follow us:





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@ a glance

# OLIGOS

## OLIGO SYNTHESIS

NZYTech delivers oligos produced following rigorous quality control checks with fast turnaround times. Customers can select from Salt Free, HPSF and HPLC Purifications, from 10 to 1000 nmol scale and the resulting oligos are suitable for most Molecular Biology applications such as PCR, qPCR, sequencing, hybridization and antisense studies. Additionally, NZYTech delivers an extensive series of modifications. Please contact us at [info@nzytech.com](mailto:info@nzytech.com) for pricing.

## DNA PROBE SYNTHESIS

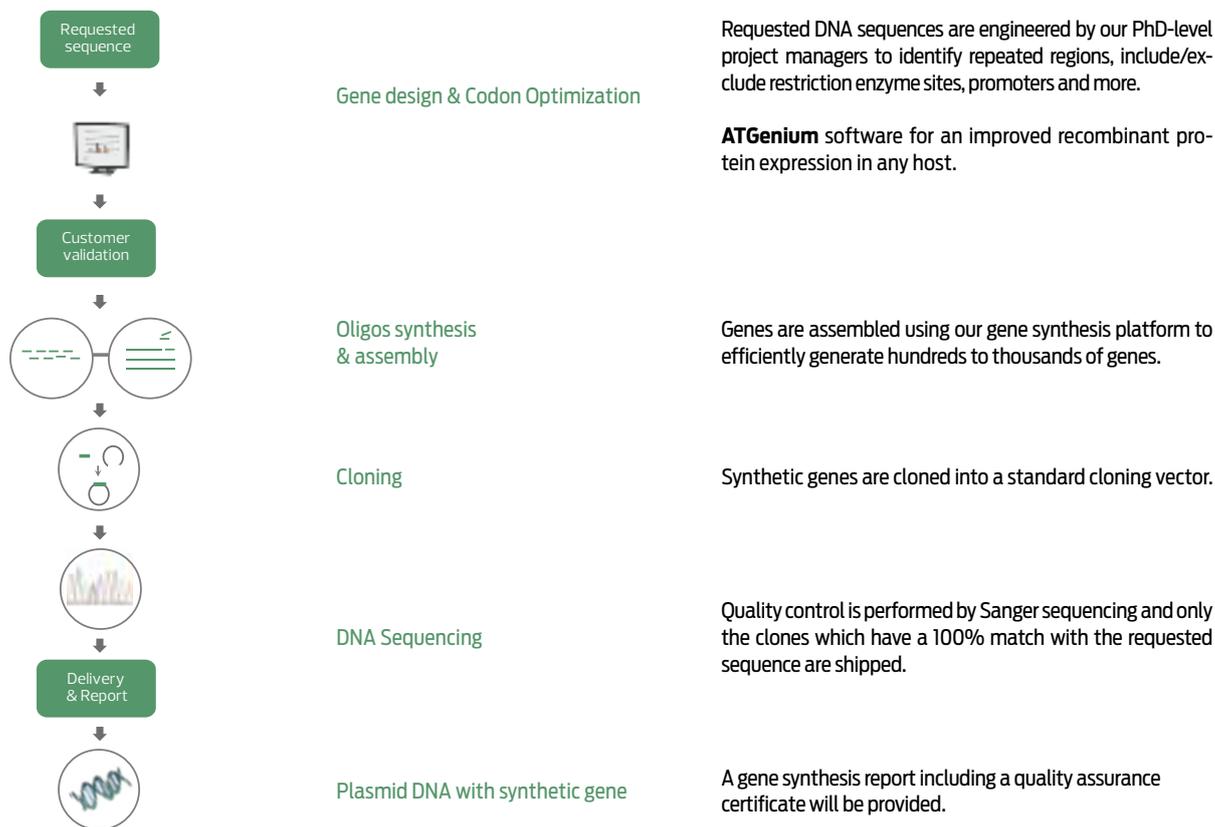
NZYTech offers a comprehensive portfolio of DNA probes that are particularly useful for gene expression, SNP genotyping or end-point genotyping studies. Please contact us at [info@nzytech.com](mailto:info@nzytech.com) for pricing.

Different fluorescent DNA probes available  
Wide collection of quenchers and fluorescent dyes available  
Competitive alternatives to the most known qPCR assays  
Highly sensitive probes

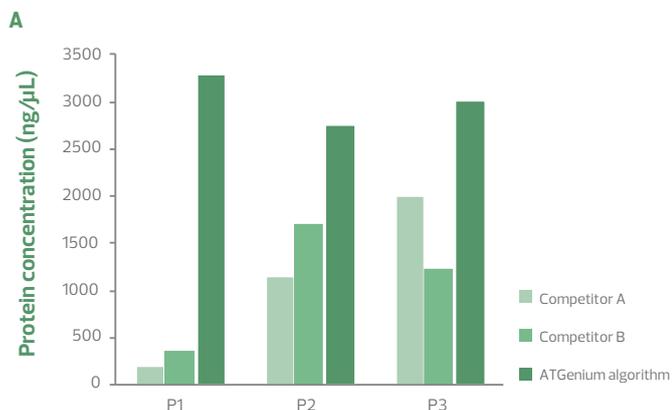


# GENE SYNTHESIS

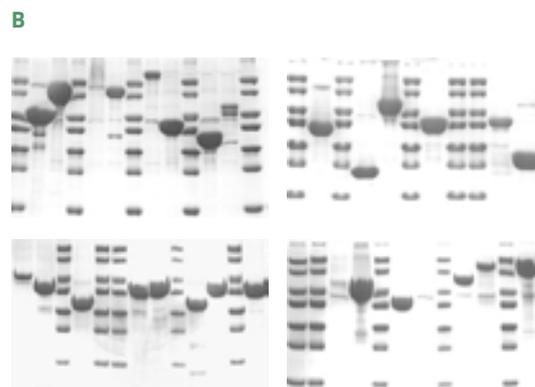
Gene synthesis has become an important tool in many fields of recombinant DNA technology. Whether you have limited cloning experience or simply want to save time, NZYTech's Gene Synthesis service helps you to quickly move your ideas from the planning stage to the laboratory. A highly motivated team is eager to provide you with a very efficient service affording considerable savings of time and money. Either if you select the custom or High-Throughput (HTP) Gene Synthesis service you will be offered a premium service that will deliver high quality and downstream efficacy.



NZYTech's scientists have also developed a highly robust gene design optimization software - **ATGenium** codon optimization algorithm - to maximize protein expression. Our proprietary algorithm comprehensively optimizes critical factors in transcription, translation and co-translational protein folding to deliver highest levels of expression in any host system. This service is offered at no extra cost for all gene synthesis services if required.



**A.** Levels of protein expression of three different eukaryotic proteins in *Escherichia coli* BL21 (DE3). The genes encoding these proteins were optimized by three algorithms for codons optimization, by two different competitors (light green) and using the ATGenium codon optimization algorithm developed by NZYTech (dark green).



**B.** High-throughput recombinant protein expression of CAZymes (Carbohydrate Active enzymes). Genes encoding these proteins were optimized using ATGenium, cloned into pHTPI expression vector and overexpressed in *E. coli* BL21 (DE3). High protein expression yields were obtained.

## CUSTOM GENE SYNTHESIS

NZYTEch's Custom Gene Synthesis service provides in vitro chemical synthesis, cloning and 100% sequence verification of any desired DNA sequence.

Genes are cloned into our standard cloning vectors. Downstream services, including sub-cloning, site-directed mutagenesis, plasmid preparation and protein expression are available upon request.

### Gene Synthesis

Gene Synthesis (DNA fragments <500 bp)	GS00301	129,00€/gene
Gene Synthesis (DNA fragments 501-1000 bp)	GS00302	0,24 €/bp
Gene Synthesis (DNA fragments 1001-2000 bp)	GS00305	0,25 €/bp
Gene Synthesis (DNA fragments 2001-5000 bp)	GS00306	0,28 €/bp
Gene Synthesis (DNA fragments > than 5001 bp)	GS00304	<i>inquire</i>

Flexible, custom gene design  
Free codon optimization – ATGenium  
Sequences 100% verified

### Gene sub-cloning

Gene sub-cloning	MS00204	starts at 99,00 €/gene
Gene sub-cloning into pHTP vectors	MS00205	59,00 €/gene

## HIGH-THROUGHPUT GENE SYNTHESIS

NZYTEch's R&D team has developed a High-Throughput (HTP) Gene Synthesis platform to efficiently generate hundreds to thousands of synthetic genes. We offer a high quality HTP Gene Synthesis service for DNA fragments below 4 kb. HTP Gene Synthesis will allow to tackle difficult research projects such as: determination of structure-function relationships in different proteins, creation of novel antibody libraries, screening of gene variant libraries or optimization of protein function and expression. Our codon optimization technology - ATGenium algorithm - allows obtaining the highest possible levels of gene expression in different expressions hosts while retaining high levels of protein solubility.

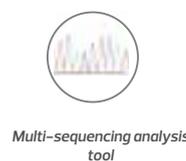
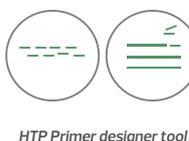
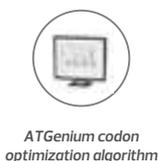
### HTP Gene Synthesis (> 48 genes)

HTP Gene Synthesis (> 48 genes) (DNA fragments <500 bp)	HS00501	109,00 €/gene
HTP Gene Synthesis (> 48 genes) (DNA fragments 501-1000 bp)	HS00502	0,18 €/bp
HTP Gene Synthesis (> 48 genes) (DNA fragments 1001-5000 bp)	HS00503	0,19 €/bp
HTP Gene Synthesis (> 48 genes) (DNA fragments > than 5001 bp)	HS00504	<i>inquire</i>

### HTP Gene Sub-cloning (> 48 genes)

HTP Gene Cloning (> 48 genes)	HS00201	50,00€/gene
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– Flexible gene design process  
– Free codon optimization  
– 100% sequence accuracy guaranteed  
– Sub-cloning into any *E. coli* expression vector from our pHTP library



Pharmacological screening

Vaccine development

Gene therapy

Molecular engineering

# GENE CLONING

## CUSTOM GENE CLONING

NZYTech will customize your plasmid DNA according with your requests. By using next generation cloning techniques, we will quickly join any insert to a plasmid at any location. NZYTech has a comprehensive library of several *E. coli* expression plasmids - pHTP expression vectors - containing different tags known to enhance protein's solubility and/or promote correct protein's folding. This may constitute the best economic and flexible alternative for selecting an appropriate tag for each type of protein. We offer a high performance DNA cloning service allowing you to save time and energy for your research.

### Gene cloning & Sub-cloning

MS00201	into any vector	starts at 199,00 €/gene
MS00202	into pHTP vectors	99,00 €/ gene

Vector	Fusion protein	Fusion tag	Tag size (kDa)
pHTP1	Hexa-histidine	His <sub>6</sub>	2.11
pHTP2	Leader less disulfide-bond isomerase DsbC	LLDsbC-His <sub>6</sub>	25.98
pHTP3	Mutant version of disulfide-bond isomerase DsbC	mutDsbC-His <sub>6</sub>	25.91
pHTP4	Disulfide-bond isomerase DsbC*	DsbC-His <sub>6</sub>	28.01
pHTP7	Disulfide oxidoreductase DsbA*	DsbA-His <sub>6</sub>	25.43
pHTP8	Thioredoxin	Trx-His <sub>6</sub>	14.52
pHTP9	Green fluorescent protein	GFP-His <sub>6</sub>	29.33
pHTP10	N-utilization substance A	NusA-His <sub>6</sub>	57.17
pHTP11	Glutathione S-transferase	GST-His <sub>6</sub>	28.07
pHTP13	Gbl Domain of Protein G	GBl-His <sub>6</sub>	8.54
pHTP14	Ketosteroid isomerase	KSI-His <sub>6</sub>	15.70
pHTP16	<i>R. flavefaciens</i> cellulosomal protein	CpA-His <sub>6</sub>	31.94
pHTP17	<i>R. flavefaciens</i> cellulosomal protein	CpB-His <sub>6</sub>	30.24

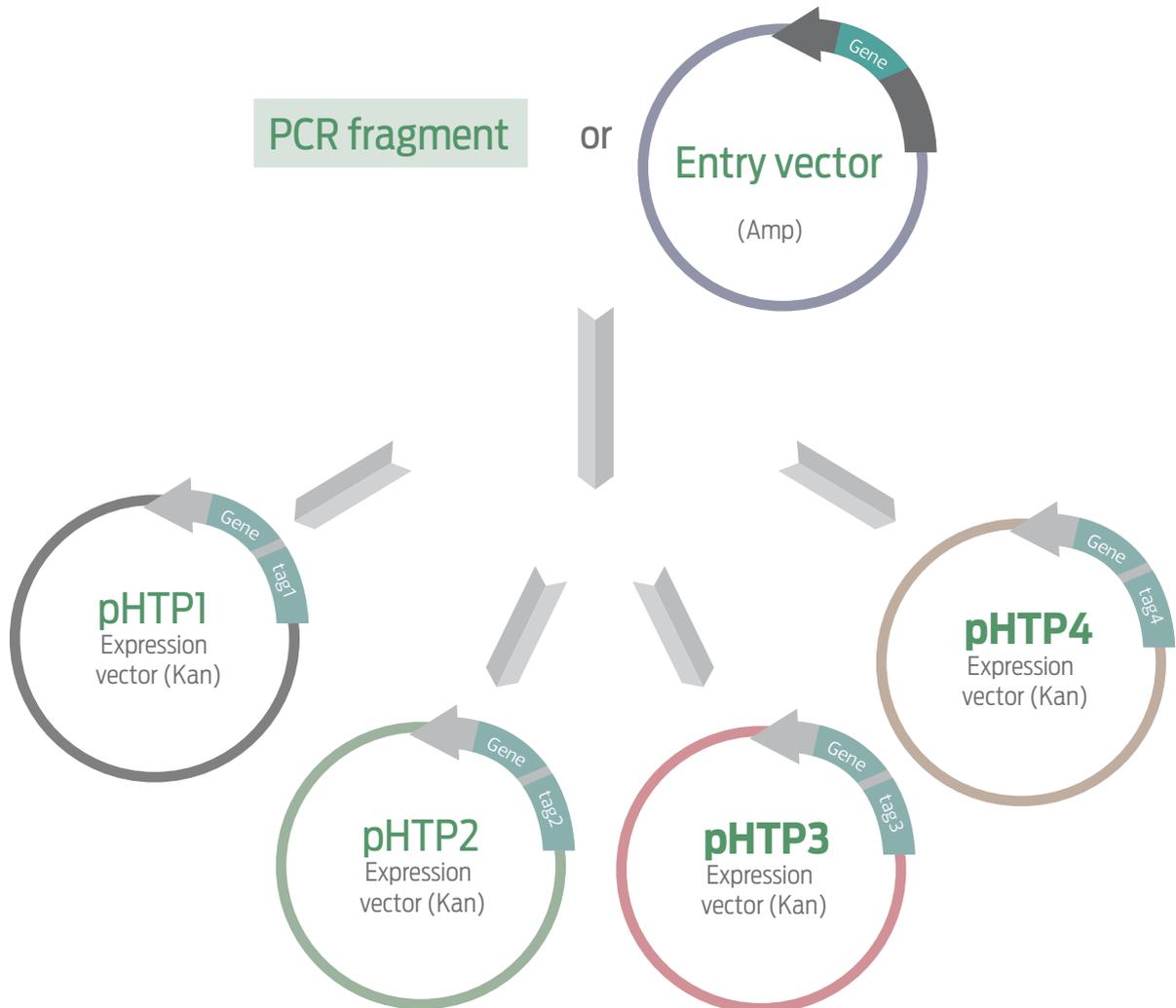
\* fusion tag includes a signal peptide sequence.

# HIGH-THROUGHPUT GENE CLONING

NZYTech offers a high-throughput cloning service for large projects typically involving several hundreds to thousands of genes. A proprietary method is used for cloning your genes into one or more selected pHTP vectors. Our method does not require the use of conventional restriction enzymes and DNA ligases, which increases speed while improving cloning efficiencies. Only the desired DNA fragments are cloned into the destination vector(s) in the correct orientation.

## HTP Gene Sub-cloning (> 48 genes)

HS00201                      into pHTP vectors                      50,00€ €/gene

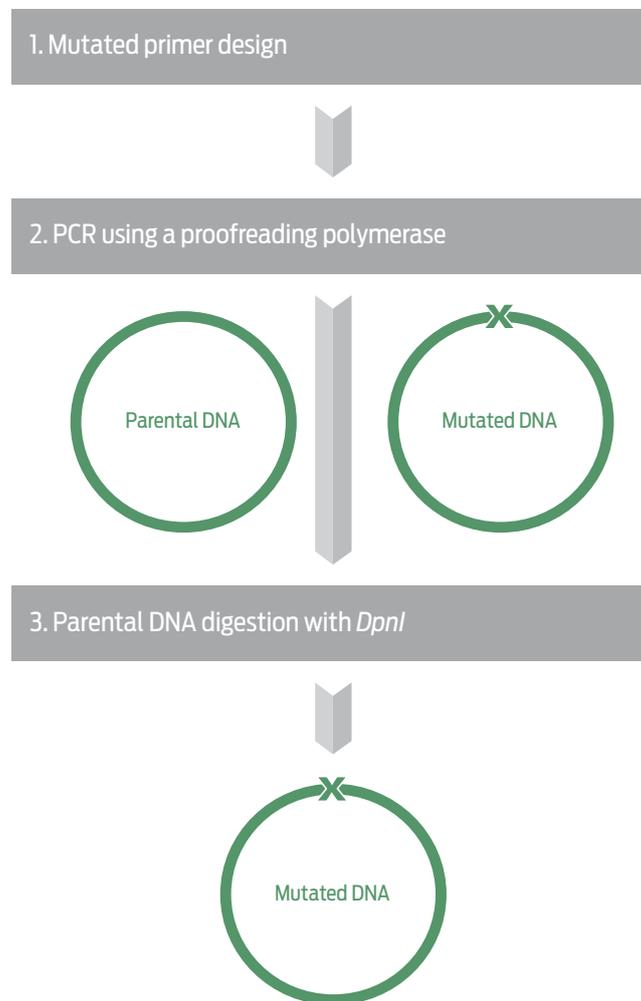


# SITE-DIRECTED MUTAGENESIS

NZYTech offers a site-directed mutagenesis service which includes substitution, deletion or insertion of any base pair into a DNA sequence. The strategy usually involves an oligonucleotide-directed mutagenic approach using the provided DNA template.

## Site-directed mutagenesis

MS00302	Site-directed mutagenesis - Standard - 1 mutant	starts at 299,00 €/gene
MS00303	Site-directed mutagenesis - Standard - 3 mutants	starts at 269,00 €/gene
MS00304	Site-directed mutagenesis - Standard - 5 mutants	starts at 229,00 €/gene
MS00305	Site-directed mutagenesis - Complex and/or Multiple	inquire



Template plasmid DNA supplied by the customer  
Introduce single or multiple mutations  
Fast turnaround time



# PLASMID DNA PREPARATION

NZYTEch's plasmid DNA preparation services are amenable to small research labs and to large-scale biotech or pharmaceutical companies. Our high-quality plasmids obtained from *Escherichia coli* cultures will help you to achieve highly efficient cell transfection, as well as microarray analysis, viral packaging, mammalian cell expression, support DNA vaccine development, antibody production, among others.

## Plasmid DNA Preparation Miniprep (2-10 µg), <24 preps

MS00101 30,00 €/prep

## Plasmid DNA Preparation Miniprep (2-10 µg), 24-48 preps

MS00102 20,00 €/prep

## Plasmid DNA Preparation Miniprep (2-10 µg), >48 preps

MS00103 10,00 €/prep

## Plasmid DNA Preparation Midiprep (25-75 µg)

MS00104 60,00 €/prep

## Plasmid DNA Preparation Maxiprep (100-500 µg)

MS00105 120,00 €/prep



Host strain: *E. coli*  
Large scale plasmid DNA  
Fast, cost-effective service  
Endotoxin-free upon request  
High and low-copy number plasmids

# RECOMBINANT PROTEIN PRODUCTION

## STANDARD PROTEIN PRODUCTION

Our dedicated team of scientists has worked to offer you a high-quality and cost-effective recombinant protein expression service. Protein production can be scaled up from one to several liter volumes of *Escherichia coli* culture. High-quality recombinant proteins are purified through Immobilized Metal Affinity Chromatography (IMAC).

### Recombinant Protein Production in *Escherichia coli*

MS00401

starts at 500,00 €/protein

Expression system: *E. coli*  
High-quality recombinant proteins purified through IMAC  
Proteins are provided from µg to mg scale  
Complementary services – gene synthesis & cloning upon request



## ENHANCED PROTEIN PRODUCTION

NZYTech has designed different strategies to enhance the production of difficult-to-express proteins. With that in mind, we developed a battery of *E. coli* expression vectors – pHTP series – which allow testing expression of any protein in fusion with several tags known to enhance solubility and/or promote correct folding. To overcome solubility problems of challenging proteins, we offer a service that includes a small-scale expression screening stage (stage 1), followed by a second stage for large-scale protein production (stage 2).

### Enhanced Protein Production - Stage 1

MS00402

2500,00 €/protein

### Enhanced Protein Production - Stage 2

MS00403

starts at 200,00 €/protein

#### Stage 1

- PCR & cloning into 10 different pHTP expression vectors containing different tags
- Small-scale protein production trials: growth media and/or induction temperatures, in order to evaluate optimal expression conditions
- Protein purification through IMAC
- SDS-PAGE analysis & protein quantification
- Protein expression report

#### Stage 2

- Scale-up protein production

## HIGH-THROUGHPUT PROTEIN PRODUCTION

NZYTech offers an innovative high-throughput service for large-scale recombinant protein expression and purification. Protein purification is ideally performed through IMAC in an automated platform after expression in *Escherichia coli*.

### HTP Protein Production (> 48 proteins)

HS00301

100,00 €/protein

# PEPTIDES

## PEPTIDE SYNTHESIS

NZYTech offers a high-quality peptide synthesis service designed to ensure our customer's complete satisfaction. Every peptide is subjected to a variety of performance control steps to guarantee the highest quality. Peptides may be provided crude, desalted, or with 75% to 98% purity. In addition, NZYTech peptides can be subjected to a variety of chemical modifications upon request.

	PS00107	PS00108	PS00109	PS00110	PS00111	PS00112
Amount	Crude (€/AA)	Desalted (€/AA)	>75% (€/AA)	>85% (€/AA)	>95% (€/AA)	>98% (€/AA)
1 - 3 mg	3,19	3,99	6,38	7,98	11,17	14,36
4 - 7 mg	3,59	4,39	7,10	9,73	12,28	17,47
8 - 10 mg	3,99	4,95	8,37	11,01	14,20	20,02
11 - 15 mg	4,23	5,19	9,42	12,28	16,19	22,98
16 - 20 mg	4,39	5,43	10,37	13,56	18,10	25,84
21 - 25 mg	4,72	5,74	11,32	14,61	19,70	27,52
26 - 30 mg	4,95	6,14	12,28	15,48	21,22	29,11
31 - 40 mg	5,43	6,38	13,32	17,15	22,59	31,35
50 mg	5,74	6,87	14,20	18,75	23,93	33,58
100 mg	7,10	8,13	18,75	23,93	32,30	45,22
1000 mg	19,39	22,49	55,99	67,08	89,49	134,08
Minimal Fee (€)	150,00					

Lyophilized peptide delivered with the required sequence, purity and quantity

Several modifications available: phosphorylation, methylation, acetylation, amidation, fluorescence/dye labeling

Additional discounts for large-scale peptide synthesis orders



# TERMS & CONDITIONS

## Use of Products

NZYTech products, services, kits and reagents are for laboratory research and *in vitro* use only. Customers must read all relevant information about the product before starting the work. Please visit our website to find out more details about the products, Product Brochures and Material Safety Data Sheets (MSDS) available for download. NZYTech products should NOT be used as Agricultural or Pesticide Products, Cosmetics, Drugs, Food Additives or Household Chemicals.

## Warranty

NZYTech warrants that its products conform to the specifications in the accompanying technical brochure as long as the product itself has a valid Certificate of Analysis (CoA). If a product fails to conform to its specifications, NZYTech should be informed as it may choose to replace it free of charge or refund the purchase price.

## Complaints

Complaints regarding product quality will only be accepted as long as the product in question has a valid certificate of analysis (CoA). NZYTech will require the CUSTOMER to provide all the necessary information in order to process the complaint accordingly, i.e., include invoice number or Purchase Order number, batch number, problem description and evidence to sustain the complaint.

## Pricing

Prices are shown in Euro (€). Prices may be subjected to change without prior notice. NZYTech reserves the right to require pre-payment on any order, in NZYTech sole discretion. We guarantee written quotations for 90 days, except for promotions, for which quotations are valid for 30 days.

## Orders

When placing your order, please refer the quote or pro-forma invoice number. NZYTech will not initiate the invoicing process without a Purchase Order. NZYTech will not accept orders by phone. Orders are only accepted via website (online store), e-mail or fax. If you order via our website, we will guarantee the price shown at the website at that time. Prices shown in catalogue and NZYTech website exclude VAT, which might be applied when the invoice is issued. Shipment will be made promptly even if prices have been nominally changed. Price increases and reductions, if any, will be automatically applied to your invoice.

## Payment Terms

For international sales, advanced payment is required and orders are only processed upon bank validation of money transfer. Banking expenses should be fully supported by the client. In specific cases, the production will only take place after bank validation of money transfer.

For Portugal and Spain, invoices will be due within 30 days from issue date. Advanced payment may also be required.

Once an order is accepted by NZYTech, it can only be cancelled in cases where Production on demand did not take place. In the specific cases of Services, including gene synthesis, DNA sequencing and oligonucleotides, services that are only produced on demand, NZYTech will not accept the cancelation of an order and the CUSTOMER will be responsible for payment of the total amount of the invoice. As for returns (Please see return policy below), they can be accepted for items that have been ordered by mistake, but the process may be subjected to a processing fee of 30% to cover costs.

## Shipping Costs

Spain (Main Land): 9 €

Portugal (Main Land): 5 €

All other geographic areas: Upon quotation (in these cases shipping costs are fully supported by the client).

Products that require ultra-low temperature shipping will have an extra cost for dry ice (29 € / shipment).

Custom fees related to the clearance of goods upon product arrival to the destiny country are of CUSTOMER responsibility.

## Product Shipping and Delivery

All products are transported in appropriate conditions to maintain intact all the properties inherent to their expected output. NZYTech can ship at different temperatures products to be stored at 4 °C or -20 °C, in the cases where this does not affect product quality. Regarding Incoterms, NZYTech works with the Delivery Terms as DAP – Delivered at Place of destination, where

we handle the shipment or EXW - Ex-Works, when using a courier customer's account. In specific cases, like CAZymes, Analytical products, Molecular Diagnostics kits, Molecular Services and bulk orders can take longer to produce and ship the goods. All Services, including gene synthesis, DNA sequencing and oligonucleotides, are only produced on demand and, therefore, each order has its own deadline. For most countries, the delivery occurs within five working days, except in case of stock rupture. In case a customer requires any certification to be sent with the goods, i.e., Certificate of Origin or ATR forms, these requirements must be stated upon placement of the order, as these documents will be provided at an additional cost.

### Return Policy

NZYTech Customer Service is available to assist you in every way possible if a problem arises with your order. The CUSTOMER must inspect all packages immediately upon receipt and store the goods at the designated storage temperature. CUSTOMER will only have 10 working days to notify NZYTech if any damage or discrepancy occurs. After this time, NZYTech will assume that the products were delivered without incidents and no longer accepts any complaint regarding packaging or delivery. In case of any damage occur, please retain the damaged goods, packing material and shipping documents and please notify our Quality Department through e-mail at [info@nzytech.com](mailto:info@nzytech.com). If the damage requires you to return the goods to NZYTech, our Customer Service will provide assistance, shipping instructions and authorizations. If an item is shipped to you incorrectly, as the result of a mistake from our Logistics team, please contact our Customer Service through e-mail at [info@nzytech.com](mailto:info@nzytech.com), and we will take a quick and appropriate action to correct the problem. Returns may be accepted for items that have been ordered by mistake, but may be subjected to a processing fee of 30% to cover costs.

### Discontinuation of Products

We reserve the right to discontinue any product without prior notice.

### Gene Synthesis and Custom Cloning: Representations and Indemnities

All services requests will be formalized in a project and quote that will be sent to the CUSTOMER for approval. Services will only be initiated following CUSTOMER's acceptance and the arrival of the purchase order at NZYTech. If the service is to be paid through NZYWallet, the CUSTOMER only needs to indicate its ID.

NZYTech can clone synthetic genes into custom vectors for an additional cost. CUSTOMER will provide the custom vectors necessary for the requested services. Such custom vectors shall remain the property of CUSTOMER throughout the cloning and sequencing process. CUSTOMER hereby grants NZYTech a limited, non-exclusive, royalty-free license to use the custom vectors and the gene sequences for the purpose of performing the services. By agreeing to the terms and conditions of this Agreement and providing NZYTech with the custom vectors and the gene sequence, CUSTOMER represents and warrants that it has the power and authority to grant the foregoing license, or otherwise has obtained all licenses and rights, including all intellectual property rights, necessary for NZYTech to provide the requested services.

NZYTech will not transfer or provide the materials provided by the CUSTOMERS, in whole or in part, to any third party, other than a subcontractor, without the CUSTOMER's prior written approval.

NZYTech will validate the DNA sequence of the custom vectors previous to the start of the project free of charge. In case the sequence is not accordingly, an additional fee of 50 € will be charged and a project delay cannot be assigned to NZYTech. The template DNA must be sent within a maximum period of 10 business days starting from project approval. In case this is not fulfilled, NZYTech reserves the right to cancel the project. For custom cloning projects, no turnaround guarantee is offered. If NZYTech fails to clone the DNA fragment in three attempts, NZYTech reserves the right to ship the gene cloned into an in-house vector or as a linear PCR fragment and to charge a fee of 50 € for production costs.

In case the DNA sequence contains several complexities (repeated sequences, high GC content, homopolymers), it may result in extended manufacturing time and/or an increase in the cost.

All genes resulting from gene synthesis and/or cloning services are stored at NZYTech for a three-month period. After this period, nucleic acids provided to CUSTOMERS are destroyed, unless otherwise requested by the CUSTOMERS.

## Project

For custom cloning projects, no turnaround guarantee is offered. If NZYTech fails to clone the DNA fragment in three attempts, NZYTech reserves the right to ship the gene cloned into an in-house vector or as a linear PCR fragment and to charge a fee of 50 € for production costs.

In case the DNA sequence contains several complexities (repeated sequences, high GC content, homopolymers), it may result in extended manufacturing time and/or an increase in the cost.

All genes resulting from gene synthesis and/or cloning services are stored at NZYTech for a three-month period. After this period, nucleic acids provided to CUSTOMERS are destroyed, unless otherwise requested by the CUSTOMERS.

## Recombinant Protein Expression

In case recombinant protein expression fails, a second attempt will be performed. If the second attempt fails NZYTech reserves the right to cancel the service and the total price quoted for Recombinant Protein Production will be replaced by a 50€ fee to cover production costs. Molecular biology services - gene synthesis & gene cloning - will be 100% charged and all plasmids produced within the service will be delivered. All custom proteins produced are not stored in-house after dispatch to clients.





## Catalogues by NZYTech



**nzytech**  
genes & enzymes

Customer Service Team  
+351 21 364 35 14

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[info@nzytech.com](mailto:info@nzytech.com)