Enzymes

Product Catalogue

QIAGEN

Sample to Insight

QIAGEN Enzyme Portfolio

Discover our comprehensive enzyme solutions, tailored to meet diverse laboratory needs. Our extensive enzyme portfolio includes a wide array of high-quality, reliable enzymes for various applications, from sample prep, NGS and PCR.

Explore our high-quality enzyme offerings, which are produced in our sites in Germany, Poland, and the US. Elevate your research with our trusted enzyme solutions:

- Proudly providing key ingredients to catalyze your success
- Renowned for the highest standards of quality control and customer satisfaction
- Supporting challenging research and industry advancements needs

Enzymes for molecular biology

Enzyme quality, reliability and consistency are fundamental for successful assays and research. With our expanded portfolio of enzymes for molecular biology applications you can now stock your commercial or research lab with specialized enzymes from our comprehensive product list. We believe that carefully chosen enzymes are key to defining the optimal reaction conditions for your experiments.

Make every DNA or RNA modification count whether you are cloning, labeling, sequencing, joining, exchanging, nicking or repairing. No matter what your research application, we've got you covered.

Enzymes for bioprocessing

A handful of optimized enzymes that can significantly enhance bioprocessing workflows by improving reaction efficiency, reducing processing times, and lowering costs. Our enzymes are engineered for higher specificity and stability under industrial conditions, ensuring consistent performance across various applications.

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Enzymes for molecular biology

Polymerases

Product Name	Cat. No.	Unit Size	Concentration	Product Description
Phoenix™ Hot Start Taq DNA Polymerase	P7590L	500 U	5000 U/mL	Antibody-based Hot Start Taq DNA polymerase delivers robust PCR performance with exceptional pre-PCR cycling room temperature stability
TaqNova HS DNA Polymerase	RP902A	200 U	5 U/µL	Catalyzes DNA synthesis in a 5' → 3' direction, shows no 3' → 5' exonuclease activity, but has a 5' → 3' exonuclease activity
HotStarTaq® DNA Polymerase	203207	5000 U	5 U/µL	A modified form of Taq DNA Polymerase that provides high specificity in hot-start PCR
Taq-B DNA Polymerase	P7250L	10,000 U	5000 U/mL	Industry standard for routine PCR
TaqNova DNA Polymerase	RP702A	200 U	5 U/µL	Catalyzes DNA synthesis in 5' → 3' direction, shows no 3' → 5' exonuclease activity, but has a 5 → 3' exonuclease activity
Taq DNA Polymerase	201203	250 – 25,000U	5 U/µL	High-quality recombinant enzyme that is suitable for general and specialized PCR applications
TaqIT	P7620L	5000 U	50,000 U/mL	TaqIT is a thermostable derivative of Taq DNA polymerase lacking 3' → 5' and 5' → 3' exonuclease activity
Stoffel DNA Polymerase	RP810	1000 U	2000 U/mL	Increased thermal stability may lead to superior amplification of excessively GC-rich templates and templates with secondary structure by allowing denaturation temperatures as high as 98°C
VeraSeq 2.0 High-Fidelity DNA Polymerase	P7511L	500 U	2000 U/mL	High fidelity, speed and robustness in PCR delivered by an engineered, thermostable DNA polymerase
VeraSeq ULtra DNA Polymerase	P7520L	500 U	2000 U/mL	High fidelity, speed and robustness in PCR delivered by an engineered, thermostable DNA polymerase that tolerates uracil templates, nucleotides and primers
φ29 DNA Polymerase (High Concentration)	P7020-HC-L	2000 U	100,000 U/mL	A highly processive DNA polymerase for accuracy and speed with exceptional strand displacement, fidelity and processivity
φ29 DNA Polymerase (Low Concentration)	P7020-LC-L	2000 U	10,000 U/mL	A highly processive DNA polymerase for accuracy and speed with exceptional strand displacement, fidelity and processivity
Bst X DNA Polymerase	P7390L	40,000 U	40,000 U/mL	Thermostable Bacillus DNA polymerase for better isothermal amplification. Strong strand displacement and high salt and detergent tolerance
Manta 1.0 DNA Polymerase (High Concentration)	P7140-HC-L	100,000 U	400,000 U/mL	Thermostable Bacillus DNA Polymerase, strong strand displacement
Manta 1.0 DNA Polymerase (Low Concentration)	P7140-LC-L	100,000 U	40,000 U/mL	Thermostable Bacillus DNA Polymerase, strong strand displacement
DNA Polymerase I	P7050L	5000 U	10,000 U/mL	Mesophilic DNA polymerase with 5' → 3' synthesis, 5' → 3' and 3' → 5' exonuclease activities
Klenow Fragment	P7060L	2500 U	5000 U/mL	Useful for end-filling prior to blunt-end ligation. An *E.coli* DNA polymerase retaining 3' → 5' exonuclease activity but lacks 5' → 3' activity

Product Name	Cat. No.	Unit Size	Concentration	Product Description
Klenow (3′→ 5′ exo-) (High Concentration)	P7010-HC-L	10,000 U	50,000 U/mL	Proven choice for DNA labeling, A-tailing. An *E.coli* DNA polymerase lacking 3′→ 5′ and 5′→3′ exonuclease activity
Klenow (3′→ 5′ exo-) (Low Concentration)	P7010-LC-L	10,000 U	5000 U/mL	Proven choice for DNA labeling, A-tailing. An E.coli DNA polymerase lacking 3′→ 5′ and 5′→3′ exonuclease activity
T4 DNA Polymerase	P7080L	2000 U	3000 U/mL	Proven choice for polishing 5′ and 3′ of ends during DNA cloning. Retains 3′→ 5′ exonuclease activity but lacks 5′→3′ activity
T7 DNA Polymerase	P7260L	3500 U	10,000 U/mL	Highly processive DNA polymerase with exceptionally high rate of synthesis and replication fidelity. Retains 3′→ 5′ exonuclease activity
T7 RNA Polymerase	P7180L	50,000 U	50,000 U/mL	DNA-dependent RNA polymerase with the high specificity for T7 promoter used in IVT
Poly(A) Polymerase	P7460L	1000 U	5000 U/mL	Addition of a polyadenylate tail to the 3′ end of RNA molecules, enhancing their stability and translation efficiency
Terminal deoxynucleotidyl Transferase (TdT)	P7070L	6000 U	20,000 U/mL	Efficiently extends blunt, 5′-overhanging, single- stranded DNA, and RNA. Useful for 3′ labeling

Reverse Transcription

Product Name	Cat. No.	Unit Size	Concentration	Product Description
EnzScript™ (MMLV Reverse Transcriptase RNase H-)	P7600L	10,000 U	200,000 U/mL	RNA-dependent DNA polymerase with no detectable RNase H activity with reaction temperatures up to 50°C
StableScript®	P7720L	250 U	5000 U/mL	Versatile thermostable reverse transcriptase with no detectable RNase H activity and reaction temperatures from 50°C to 65°C
M-MuLV Reverse Transcriptase	P7040L	100,000 U	200,000 U/mL	Useful polymerase for first-strand DNA synthesis
RNase Inhibitor Hu	RT35-020	40,000 U	40,000 U/mL	Thermally resistant recombinant human placental protein that inhibits RNase activity of common eukaryotic enzymes such as RNase A, B, C
RNase Inhibitor	Y9240L	20,000 U	40,000 U/mL	Porcine-derived non-competitive inhibitor of RNAse A, B, and C. Does not inhibit RNAse H activity
RNAse H	Y9220L	5000 U	5000 U/mL	Cleaves RNA strand of DNA:RNA hybrids. Useful for removing mRNA during second-strand cDNA synthesis

PCR & RT-PCR Mixes

Product Name	Cat. No.	Unit Size	Product Description
ZipScript® One-Step RT-qPCR Kit	P7640L	1000 reactions	Highly sensitive and reproducible RT-qPCR solution optimized for real-time PCR. The 25X enzyme mix is accompanied by a 2X buffer
ZipScript® WarmX One-Step RT-qPCR Kit	Y9460L	250 reactions	Highly sensitive and reproducible RT-qPCR solution optimized for real-time PCR. The aptamer based warm-start feature reduces non-specific reverse transcription during reaction setup and improves assay specificity and consistency
StableScript® One-Step RT-qPCR Kit	P7730L	250 reactions	A thermostable RT-qPCR solution that is optimized for real-time PCR especially with challenging inhibitors. The 10X enzyme mix contains our reverse transcriptase with higher thermostability (StableScript) and 4X reaction buffer
QuantiNova® RT-PCR Kits	208352	100 to 2500 reactions	A highly sensitive and specific one-step qRT-PCR and multiplex qRT-PCR using sequence-specific probes or one-step qPCR using SYBR® Green for gene expression analysis
TaqNova Master Mix 2X	RP85T	100 or 1000 reactions	A 2x concentrated, ready-to-use PCR master mix that facilitates an easy and rapid PCR reaction setup
2X HiFi PCR Master Mix	P7670L	24 reaction	A high efficiency, high fidelity, and low bias PCR master mix for NGS library amplification
VeraSeq® PCR Mix	P7610L	250 reactions	Provides efficient, high-fidelity DNA amplification for cloning and synthetic biology applications
UltraRun® LongRange PCR Kit	206442	100 or 500 reactions	Highly specific and long-range PCR for up to 30 kb using any DNA or cDNA template
QIAGEN Multiplex PCR Kit	206143	100 or 1000 reactions	A ready to use master mix that facilitates highly specific and sensitive multiplex PCR without optimization requirements
PCR Anti-Inhibitor	RP50	100 or 500 µL	A carefully composed mixture of alkaline proteins which counteracts substances inhibiting the PCR reaction

Ligases

Product Name	Cat. No.	Unit Size	Concentration	Product Description
T4 DNA Ligase (Standard)	L6030-LC-L	150,000 U	120,000 U/mL	Joins blunt and cohesive ends, repairs single stranded nicks in duplex RNA, RNA or DNA-RNA hybrid. Low concentration overnight ligation format
T4 DNA Ligase (Rapid)	L6030-HC-L	240,000 U	600,000 U/mL	High concentration and rapid buffer for rapid ligation protocols (incubation periods >10 minutes)
WGS Ligase	L6030-W-L	24 reactions	600,000 U/mL	Optimized for ligation following WGS fragmentation. It efficiently joins blunt and cohesive ends and repairs single stranded nicks in duplex RNA, RNA, or DNA/RNA
T4 DNA Ligase MBG	EN11-050	500 - 5000 U	5000 U/mL	Joins both blunt-ended and cohesive-ended restriction fragments of DNA and repair single-stranded nicks in duplex DNA, RNA or DNA/RNA hybrids
T3 DNA Ligase	L6010L	900,000 U	3,000,000 U/mL	Joins blunt and cohesive ends and repairs single stranded nicks in duplex DNA. ATP dependent. Increased salt tolerance
T7 DNA Ligase	L6020L	900,000 U	3,000,000 U/mL	Efficiently joins cohesive-end termini and repairs single-stranded nicks in duplex DNA
E. coli DNA Ligase	L6090L	2500 U	10,000 U/mL	Efficiently ligates DNA at nicks and cohesive termini. Blunt-ended termini ligation is extremely inefficient, but it can be achieved in the presence of PEG. NAD dependent
Taq DNA Ligase	L6060L	20,000 U	40,000 U/mL	Efficiently seals nicks and discriminates against mismatch ligation. Thermostable. NAD dependent
Tth DNA Ligase	EN13-025	250 - 5000 U	5000 U/mL	Catalyzes the NAD-dependent formation of phosphodiester bonds between adjacent 3′-hydroxyl and 5′-phosphate termini in double-stranded DNA
T4 RNA Ligase 1	L6050L	10,000 U	20,000 U/mL	Ligates single stranded RNA and single stranded DNA molecules
T4 RNA Ligase 2	L6080L	4500 U	30,000 U/mL	Ligates nicks on double stranded DNA and from the 3′ OH of RNA to the 5′ phosphate of DNA in double stranded structures
T4 RNA Ligase 2 Truncated	L6070L	500 U	5000 U/mL	Ligates pre-adenylated 5′ phosphate DNA or RNA and 3′ hydroxyl of RNA. Does not require ATP

Next-Generation Sequencing Components

Product Name	Cat. No.	Unit Size	Concentration	Product Description
WGS Fragmentation Mix	Y9410L	24 reactions	5X	Enzyme mix that provides a single tube solution for DNA fragmentation, end-repair and dA-tailing in library preparation for Illumina sequencing platforms
ER/A-Tailing Enzyme Mix	Y9420L	24 reactions	5X	Enzyme mix that provides a single tube solution that combines end repair and dA-tailing for fragmented DNA in library preparation for Illumina sequencing platforms
End-Repair Mix (High concentration)	Y9140-HC-L	200 reactions	High	For converting DNA with 5′- and/or 3′-protruding ends to 5′-phosphorylated, blunt-ended DNA
End-Repair Mix (Low concentration)	Y9140-LC-L	200 reactions	Low	For converting DNA with 5′- and/or 3′-protruding ends to 5′-phosphorylated, blunt-ended DNA
WGS Ligase	L6030-W-L	24 reactions	n/a	Optimized for ligation following WGS fragmentation. It efficiently joins blunt and cohesive ends and repairs single stranded nicks in duplex RNA, RNA, or DNA/RNA
T4 DNA Ligase (Standard)	L6030-LC-L	150,000 U	120,000 U/mL	Joins blunt and cohesive ends, repairs single stranded nicks in duplex RNA, RNA or DNA-RNA hybrid. Low concentration overnight ligation format
2X HiFi PCR Master Mix	P7670L	24 reactions	2X	A high efficiency, high fidelity, and low bias PCR master mix for NGS library amplification

Modifying Enzymes

Product Name	Cat. No.	Unit Size	Concentration	Product Description
T4 Polynucleotide Kinase	Y9040L	10,000 U	10,000 U/mL	Phosphorylation of 5′ ends of DNA prior to ligation
E. coli Pyrophosphatase	Y9380L	50 U	100 U/mL	Enzyme catalyzing the hydrolysis of pyrophosphate to inorganic phosphate (PPi) enhancing the efficiency of nucleotide synthesis
Thermostable Pyrophosphatase	Y9370L	1250 U	2000 U/mL	Catalyzes the hydrolysis of inorganic pyrophosphate to produce orthophosphate
TAGZyme DAPase	34362	2.5 or 50 U	10 U/mL	Efficiently removes dipeptides sequentially from N-terminal His tags

Proteinase K

Product Name	Cat. No.	Unit Size	Product Description
Proteinase K - Lyophilized	RP103B-100	100 g	Highly specific activity allowing highly effective digestion of proteins during nucleic acid preparations.
Proteinase K - Liquid	RP107B-500	500 mL	Highly specific activity allowing highly effective digestion of proteins during nucleic acid preparations, 20 mg/mL. Stable at room temperature.
Proteinase K Ultrapure	RP102N	20 mg - 1 g	Highly specific activity allowing highly effective digestion of proteins during nucleic acid preparations.

Nucleases

Product Name	Cat. No.	Unit Size	Concentration	Product Description
dsDNase	EN33-250	25,000 U	20,000 U/mL	Displays highly specific activity towards double-stranded DNA, leaving single-stranded DNA or RNA undamaged in standard conditions
dsDNase HL	EN31-025	2500 U	2000 U/mL	Heat-labile and displays highly specific activity towards double-stranded DNA, leaving single- stranded DNA or RNA undamaged in standard conditions
Saltonase®	EN32-B	100,000 U	20,000 U/mL	Robust salt-active endonuclease removing DNA and RNA impurities in bioprocessing workflows, highly active over a broad pH range
Lambda Exonuclease	X8030L	10,000 U	5,000 U/mL	Highly processive 5'→3' double stranded exonuclease that degrades one strand of the duplex
T5 Exonuclease	X8040	10,000 U	100,000 U/mL	Cleaves linear or nicked double-stranded DNA from the 5' end in the 5' to 3' direction and acts as both a double-stranded DNA-specific exonuclease and a single-stranded DNA endonuclease
T7 Exonuclease	X8050	1000 U	10,000 U/mL	Removes nucleotides in the 5' to 3' direction, starting at the 5' ends of linear or nicked double-stranded DNA, acting as a double-stranded DNA-specific exonuclease
Endonuclease VIII	Y9080L	10,000 U	10,000 U/mL	Generates and cleaves AP sites leaving 3' and 5' phosphates
Exonuclease I	X8010L	30,000 U	20,000 U/mL	Efficient removal of single stranded primers in PCR reactions
Exonuclease III	X8020L	50,000 U	100,000 U/mL	Effective directional digestion of nucleic acids and analysis of DNA-protein interactions
RNase-free DNase set	79254	50 or 250 reactions	n/a	Guaranteed quality DNase digestion during RNA purification
RNase A	19101	17,500 U	7000 U/mL	Ready-to-use solution for the digestion of RNA in plasmid production
RNase A MBG	RP14	1 g	n/a	Removes RNA during the isolation procedures of plasmid and genomic DNA and exhibits no endonuclease or exonuclease activity toward DNA substrates
RNAse H	Y9220L	5000 U	5000 U/mL	Cleaves RNA strand of DNA:RNA hybrids. Useful for removing mRNA during second-strand cDNA synthesis

Binding Proteins

Product Name	Cat. No.	Unit Size	Concentration	Product Description
E. coli Single-Stranded DNA Binding Protein	Y9030L	1.5 mg	2.75 mg/mL	Binds single-stranded DNA (ssDNA), useful in primer sequestering, thermostable
T4 Gene 32 Protein	Y9130L	1.0 mg	10 mg/mL	Stabilizes ssDNA regions, increases processivity of some DNA polymerases
RecA	Y9260L	1.5 mg	2.0 mg/mL	Coats single stranded DNA and facilitates pairing with same sequence, double stranded DNA

UDGases

Product Name	Cat. No.	Unit Size	Concentration	Product Description
Uracil DNA Glycosylase	G5010L	10,000 U	2000 U/mL	Catalyzes the hydrolysis of the N-glycosylic band between uracil and sugar
Thermolabile UNG	G5030L	250 U	1000 U/mL	Hydrolyses the N-glycosidic bond from deoxyuridine to release uracil and removes any uracil incorporated ss or dsDNA
UDGase	EN19-250	2500 U	1000 U/mL	Catalyzation of the release of uracil from uracil-containing single-stranded or double-stranded DNA
Uracil Cleavage System	Y9180L	2 x 0.375 mL	10X	A two-enzyme system that creates an abasic site with an intact phosphodiester backbone and liberating the deoxyribose sugar

Nucleotides

Product Name	Cat. No.	Unit Size	Product Description
dNTP Set PCR Grade	201912	4 x 100 µL or 250 µL	A complete set of highly pure dNTPs for sensitive and reproducible PCR and RT-PCR
dNTP Mix PCR Grade	201900	200 or 800 µL	Premixed dATP, dCTP, dGTP and dTTP in water, essential for successful and reliable PCR

Enzymes for bioprocessing

Product Name	Cat. No.	Unit Size	Concentration	Product Description
Saltonase®	EN32-B	100,000 U	20,000 U/mL	Robust salt-active endonuclease removing DNA and RNA impurities in bioprocessing workflows, highly active over a broad pH range
T7 RNA polymerase	P7180L	50,000 U	50,000 U/mL	DNA-dependent RNA polymerase with the high specificity for T7 promoter used in IVT
E.coli Pyrophosphatase	Y9380L	50 U	100 U/mL	Enzyme catalyzing the hydrolysis of pyrophosphate to inorganic phosphate (PPi) enhancing the efficiency of nucleotide synthesis
Proteinase K Ultrapure	RP102N	20 mg - 1 g	n/a	High purity serine protease effectively digesting all protein impurities in bioprocessing workflows
RNase Inhibitor Hu	RT35-020	40,000 U	40,000 U/mL	Protein protecting RNA molecules from degradation by ribonucleases, ensuring the integrity and stability of RNA
Poly(A) polymerase	P7460L	1,000 U	5000 U/mL	Addition of a polyadenylate tail to the 3' end of RNA molecules, enhancing their stability and translation efficiency

Ordering information

All of our products can be ordered online via the respective catalog number, where you will also find further product information and data. For further details, reach out to your local sales representative.

Click on the QR code or visit **www.qiagen.com/enzymes** to learn more

Our OEM and custom solutions offer bespoke enzyme formulations to match specific research requirements, ensuring optimal performance and efficiency.

Reach out to cooperate with QIAGEN Strategic Partnerships & OEM: **OEM@qiagen.com**

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