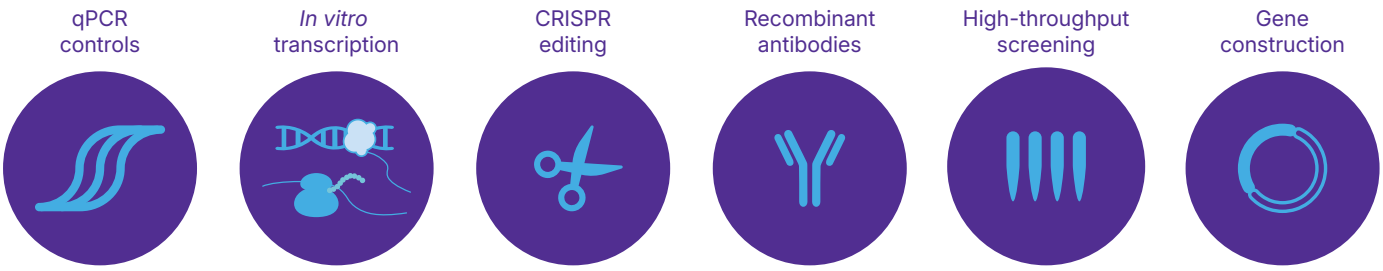
Genes & Gene Fragments

Rapidly advance critical insights

- Fast and dependable delivery times
- Easy-to-use ordering system
- Dedicated support
- Flexible for a wide range of research applications and budgets

Over 35 years of industry-leading DNA synthesis expertise

IDT provides high-quality, high-fidelity, linear and clonal double-stranded DNA fragments and genes that are available for a variety of genomic research workflows and applications.



Gene Fragments

IDT offers three types of double-stranded DNA fragments: **eBlocks™, gBlocks™,** and **gBlocks HiFi Gene Fragments.** These gene fragment products suit a variety of genomic research application needs and are constructed using the highest fidelity Ultramer™ Oligos with error correction measures that deliver high-quality abilities for cloning and gene assembly.

IDT Gene Fragments are compatible with many cloning and assembly kits and automation platforms that require double-stranded DNA as a starting material, allowing easy assembly of the desired construct sequence into your preferred cloning system—whether traditional cloning, Gibson Assembly™, Golden Gate, Gateway™, TOPO™/TA cloning, blunt-end cloning, or others. Rigorous quality control and sequence verification of IDT Gene Fragments ensure that most recombinant colonies obtained from cloning each IDT Gene Fragment will contain the desired insert.

gBlocks Gene Fragment libraries

IDT Gene Fragments can be produced with variable bases (N, K, and more) to generate sequence diversity. Up to 18 sequential variable bases can be incorporated into 500 bp or shorter gBlocks Gene Fragments.

Custom gene synthesis

Rapid Genes and standard genes are NGS-sequence verified, circular double-stranded DNA in a plasmid. DNA sequences 25 bp to 5 kb or longer are provided in an IDT in-house cloning or expression vector without additional cloning fees. Additionally, your custom vector can be easily onboarded in our automated online tool and ordered without reoccurring fees. Plasmids are delivered in tubes or plates and ready-to-use and are accompanied by an NGS QC report.

Product summary

Table 1. eBlocks Gene Fragments reduce the time and expense for screening colonies.

	eBlocks™ Gene Fragments	gBlocks™ Gene Fragments	gBlocks™ HiFi Gene Fragments	Gene synthesis	Rapid Genes
Category	Linear dsDNA fragment	Linear dsDNA fragment	Linear dsDNA fragment	dsDNA cloned in a plasmid	dsDNA cloned in a plasmid
Available lengths (bp)	300–1,500	125–3,000	1,000–3,000	25–5,000+	125–2,000
Median error rate	1:5,000	1:5,000	1:12,000	N/A*	N/A*
Estimated shipping time (business days)	1–3	2–8**	6-10	8-12	5-8
Yield	200 ng	250–1,000 ng	1000 ng	3 µg to 100 µg	1 µg
Format	Plate	Tube or Plate	Tube	Tube or Plate	Plate
Application	Screening and antibody discovery	Gene construction and controls	Gene construction, pathway design, in vitro transcription	Protein expression and large constructs	Screening and antibody discovery

* Clonal genes contain no mutations present above IDT's sequencer-noise threshold.

** This estimated shipping time is for tubes only. Plates estimated ship date is 10–15 business days.

Design and ordering tools

IDT has built a suite of online tools to assist with your ordering needs:

- Complexity Checker—allows for easy ordering of gene and gene fragment products
- Custom vector onboarding tool—easily upload and onboard you own vector online without the need for a quote or a conversation
- Codon Optimization Tool—converts DNA or protein sequence from one organism for expression in another
- Synthetic Biology Order Status—check your order in real-time
- SciTools™ Web Tools—dilution and resuspension calculators, OligoAnalyzer™ Tool for melting temperatures and secondary structures, etc.

Commitment to Sustainability

IDT has implemented sustainable manufacturing practices, including a reagent reuse program to minimize hazardous waste.

For more information, visit **www.idtdna.com/Genes**

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