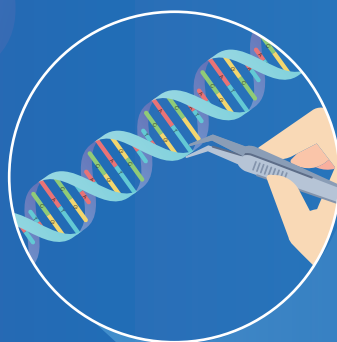





# ATOplex multiplex PCR-based library preparation kit customized platform

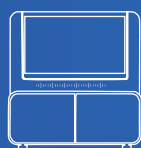
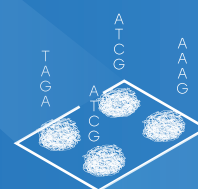
Your accessible expert for target region sequencing



 **Ultra-high multiplex PCR**  
Support up to 20000× panel design

 **Simple Workflow**  
Only two steps PCR in one tube to amplify the targeted region and prepare the library

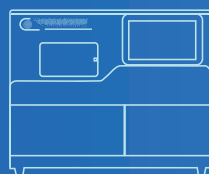
 **Excellent amplification efficiency**  
Prepare library using as low as 0.1 ng nucleic acid



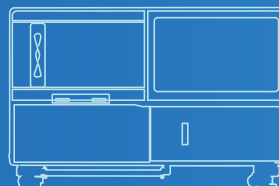
DNBSEQ-G99



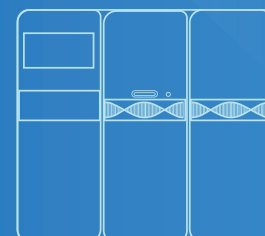
DNBSEQ-E25



DNBSEQ-G50\*



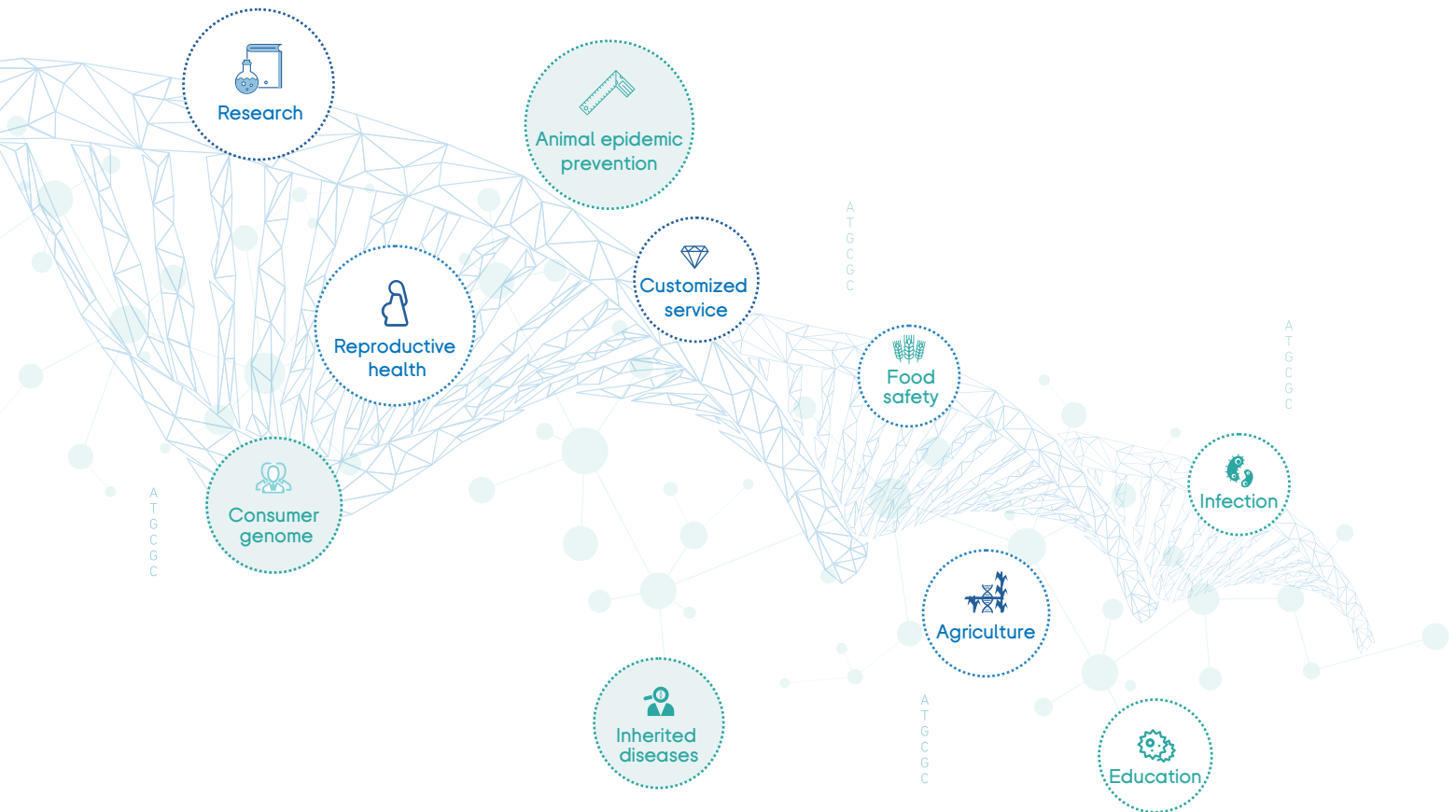
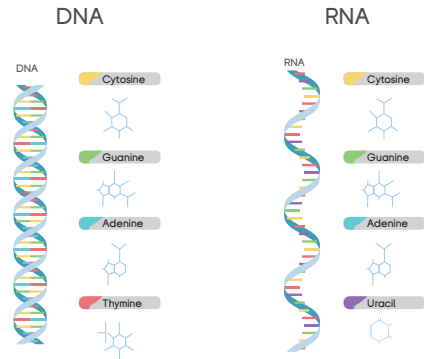
DNBSEQ-G400\*



DNBSEQ-T7\*

# INTRODUCTION

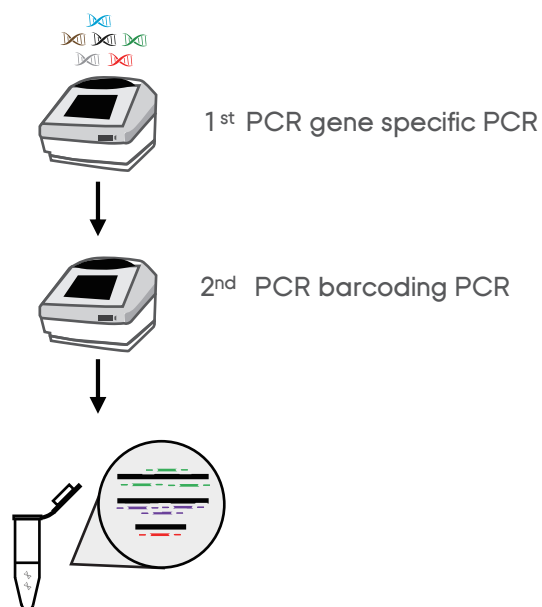
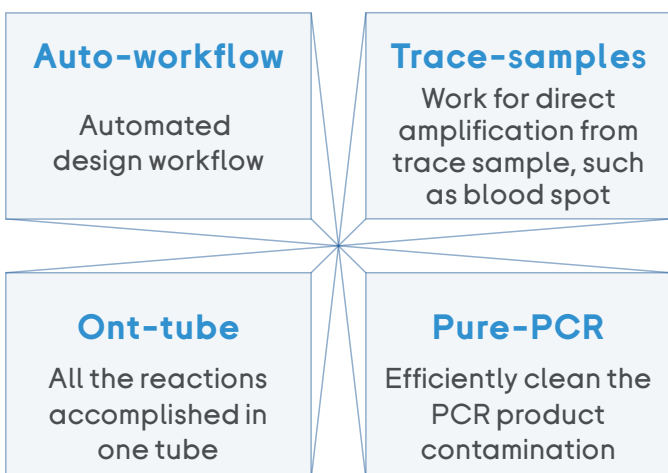
ATOPlex multiplex PCR-based library preparation kit customized platform based on MGI's self-developed ultra-high plex PCR technology, which have the features of auto-design workflow, work for trace sample, all the reactions in one tube and pure PCR products, providing excellent performance library kit for target sequencing. It work for DNA, RNA and can be applied in medicine, research, public health, food safety, DTC (direct to customer) and other scenarios.



# FEATURES

Own many core technologies to achieved primer auto-design, reducing dimer effectively one-tube reactions.

Simple workflow	Library prepared by two steps PCR in one single tube
Ultra-high Panel Size	10-20000X
Less Sample Input	Minimum 0.1 ng or a few cells

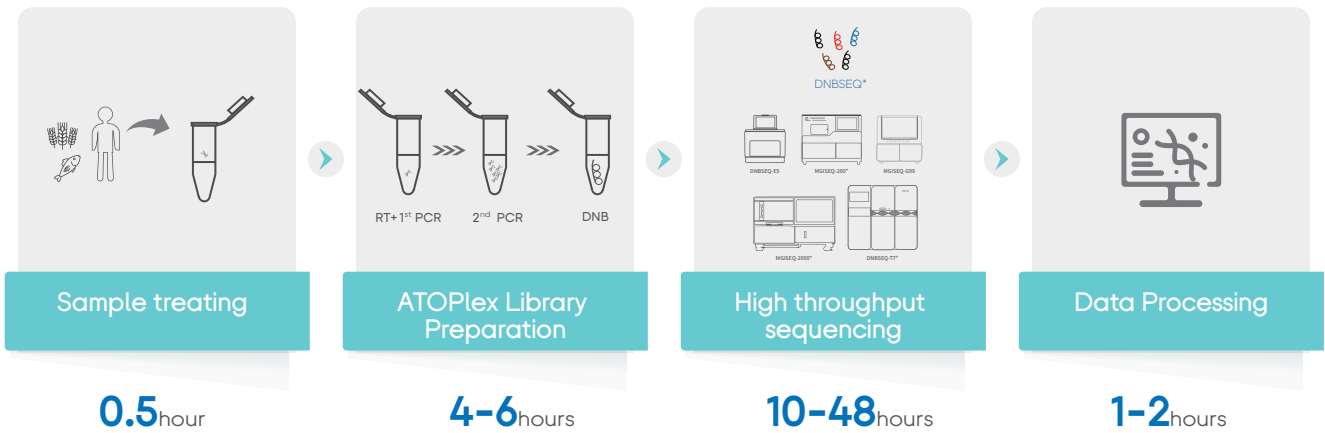


## Parameters

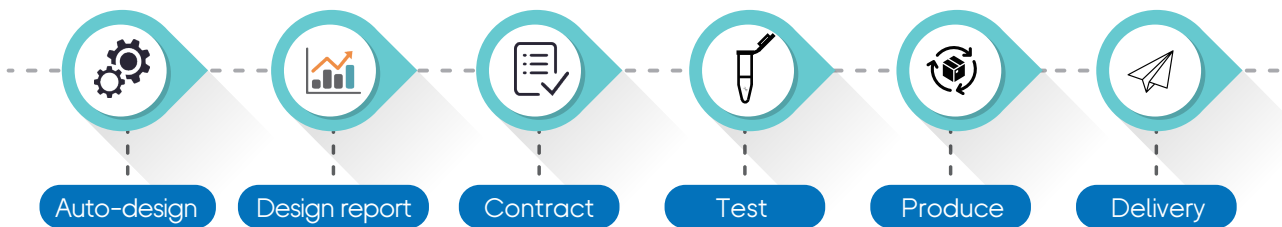
ATOplex multiplex PCR-based library preparation kit customized platform	
Platform	DNBSEQ-E25/DNBSEQ-G99/DNBSEQ-G50/DNBSEQ-G400/DNBSEQ-T7
Input type	DNA and RNA
Sample type	Blood, blood plaque, Cell free nucleic acid, FFPE samples and environmental extracts, etc
Input required	Recommend 10 ng input. Minimum input is 0.1 ng or single cell
Panel size	10-20000X
Sample multiplexing	Up to 4608 barcodes available
Variant types	SNVs, indels, STRs, SNPs, CNV, hotspot fusion
Amplicon size	60-500 bp
Performance	≥95% coverage, ≥95% specificity, ≥90% uniformity

# WORKFLOW

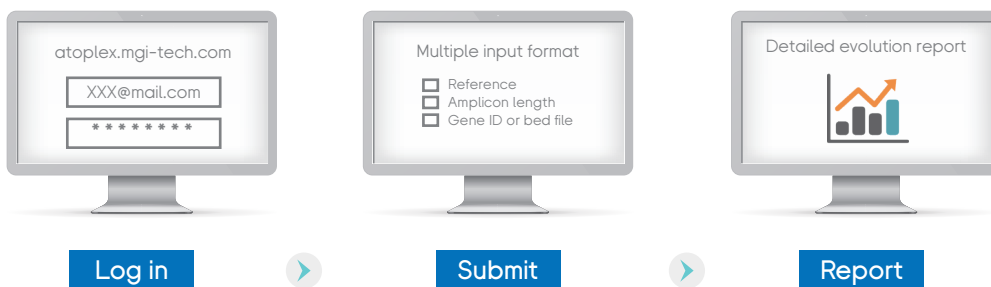
In combination with MGI's sequencer and software to cover from sample to report



## Business workflow



Automized design website [ATOPlex.mgi-tech.com](http://ATOPlex.mgi-tech.com)



## ■ Publication

- [1]. Li, Ran, et al. "Developmental validation of the MGIEasy Signature Identification Library Prep Kit, an all-in-one multiplex system for forensic applications." *International Journal of Legal Medicine* 135.3 (2021): 739-753.
- [2]. Li, Qian, et al. "Prolonged shedding of severe acute respiratory syndrome coronavirus 2 in patients with COVID-19." *Emerging microbes & infections* 9.1 (2020): 2571-2577.
- [3]. Xiao, Minfeng, et al. "Multiple approaches for massively parallel sequencing of SARS-CoV-2 genomes directly from clinical samples." *Genome medicine* 12.1 (2020): 1-15.
- [4]. Yang, Yong, et al. "Serological investigation of asymptomatic cases of SARS-CoV-2 infection reveals weak and declining antibody responses." *Emerging Microbes & Infections* 10.1 (2021): 905-912.
- [5]. Souza, Thiago, et al. "Human endogenous retrovirus K activation in the lower respiratory tract of severe COVID-19 patients associates with early mortality." (2021).
- [6]. Ni, Gaofeng, et al. "Novel Multiplexed Amplicon-Based Sequencing to Quantify SARS-CoV-2 RNA from Wastewater." *Environmental Science & Technology Letters* 8.8 (2021): 683-690.
- [7]. Yang, Lin, et al. "Simultaneous detection of fetal aneuploidy, de novo FGFR3 mutations and paternally derived  $\beta$  - thalassemia by a novel method of noninvasive prenatal testing." *Prenatal diagnosis* 41.4 (2021): 440-448.

## Order information

PN	NAME	SPECIFICATION
940-000944-00	ATOPlex Custom Panel (50x)	1152 RXN
940-000955-00	ATOPlex Custom Panel (50x)	5760 RXN
940-000954-00	ATOPlex Custom Panel (50x)	23040 RXN
940-000960-00	ATOPlex Custom Panel (100x)	1152 RXN
940-000946-00	ATOPlex Custom Panel (100x)	5760 RXN
940-000942-00	ATOPlex Custom Panel (100x)	23040 RXN
940-000941-00	ATOPlex Custom Panel (200x)	1152 RXN
940-000951-00	ATOPlex Custom Panel (200x)	5760 RXN
940-000956-00	ATOPlex Custom Panel (200x)	23040 RXN
940-000949-00	ATOPlex Custom Panel (500x)	1152 RXN
940-000959-00	ATOPlex Custom Panel (500x)	5760 RXN
940-000939-00	ATOPlex Custom Panel (500x)	23040 RXN
940-000943-00	ATOPlex Custom Panel (1000x)	1152 RXN
940-000945-00	ATOPlex Custom Panel (1000x)	5760 RXN
940-000940-00	ATOPlex Custom Panel (1000x)	23040 RXN
940-000958-00	ATOPlex Custom Panel (1500x)	1152 RXN
940-000953-00	ATOPlex Custom Panel (1500x)	5760 RXN
940-000948-00	ATOPlex Custom Panel (1500x)	23040 RXN
940-000952-00	ATOPlex Custom Panel (2000x)	1152 RXN
940-000938-00	ATOPlex Custom Panel (2000x)	5760 RXN
940-000957-00	ATOPlex Custom Panel (2000x)	23040 RXN
940-001188-00	ATOPlex DNA Single BC Library Prep Set	96 RXN
940-001189-00	ATOPlex DNA Single BC Library Prep Set	576 RXN
940-001191-00	ATOPlex DNA Dual BC Library Prep Set	96 RXN
940-001190-00	ATOPlex DNA Dual BC Library Prep Set	576 RXN
940-001332-00	ATOPlex RNA Single BC Library Prep Set	96RXN
940-001336-00	ATOPlex RNA Single BC Library Prep Set	576RXN
940-001337-00	ATOPlex RNA Dual BC Library Prep Set	96RXN
940-001333-00	ATOPlex RNA Dual BC Library Prep Set	576RXN

## ■ More information

Website: <https://www.mgi-tech.com/products/atoplex/>

Email: [mgi\\_atoplex@mgi-tech.com](mailto:mgi_atoplex@mgi-tech.com)



Start ATOPlex Panel Design

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