TransGen

TRANSGEN BIOTECH

STAR PRODUCTS
RT·PCR·qPCR Series

Providing Innovative Reagents for Life Sciences since 2006

01

EasyScript® One-Step gDNA Removal and cDNA Synthesis SuperMix (AE311)

- Simultaneous genomic DNA removal and cDNA synthesis in one tube to minimize contamination.
- The product obtained from 15 minutes reaction is used for qPCR; the product obtained from 30 minutes reaction is used for PCR.
- 5 seconds to inactive gDNA remover and RT: gDNA Remover and reverse transcriptase are simultaneously heat-inactivated at 85°C for 5 seconds.
- cDNA up to 8 kb.

References

- Yu Y, Li W, Liu Y, et al. A Zea genus-specific micropeptide controls kernel dehydration in maize[J]. Cell, 2025.(IF 45.5)
- Zheng Q, Xing J, Li X, et al. PRDM16 suppresses ferroptosis to protect against sepsis-associated acute kidney injury by targeting the NRF2/GPX4 axis[J]. Redox Biology, 2024.(IF 10.7)
- Shi Q, Xia Y, Xue N, et al. Modulation of starch synthesis in Arabidopsis via phytochrome B-mediated light signal transduction[J]. Journal of Integrative Plant Biology, 2024.(IF 9.3)
- Han J, Chang W, Fang J, et al. The H9N2 avian influenza virus increases APEC adhesion to oviduct epithelia by viral NS1 protein-mediated activation of the TGF-β pathway[J]. Journal of Virology, 2024.(IF 4.0)
- Lin J L, Chen L X, Wu W K, et al. Single-cell RNA sequencing reveals a hierarchical transcriptional regulatory network of terpenoid biosynthesis in cotton secretory glandular cells[J]. Molecular plant, 2023.(IF 17.1)
- Lin J L, Fang X, Li J X, et al. Dirigent gene editing of gossypol enantiomers for toxicity-depleted cotton seeds[J]. Nature Plants, 2023.(IF 15.8)
- Song M, Yao H, Sun Z, et al. METTL3/YTHDC1-medicated m6A modification of circRNA3634 regulates the proliferation and differentiation of antler chondrocytes by miR-124486-5-MAPK1 axis[J]. Cellular & Molecular Biology Letters, 2023.(IF 9.2)
- Li N, Duan Y, Ye Q, et al. The Arabidopsis eIF4E1 regulates NRT1. 1-mediated nitrate signaling at both translational and transcriptional levels[J]. The New Phytologist, 2023.(IF 8.3)
- Sheng C, Zhao J, Di Z, et al. Spatially resolved in vivo imaging of inflammation-associated mRNA via enzymatic fluorescence amplification in a molecular beacon[J]. Nature Biomedical Engineering, 2022.(IF 26.8)
- Tang S, Guo N, Tang Q, et al. Pyruvate transporter BnaBASS2 impacts seed oil accumulation in Brassica napus[J]. Plant Biotechnology Journal, 2022.(IF 10.1)

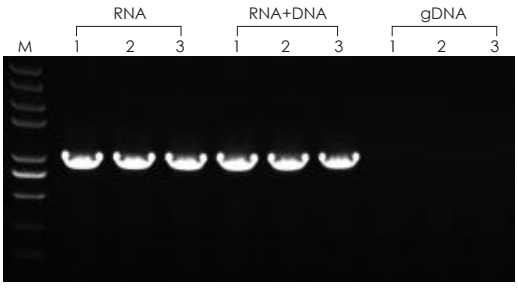
TransScript® One-Step gDNA Removal and cDNA Synthesis SuperMix (AT311)

02

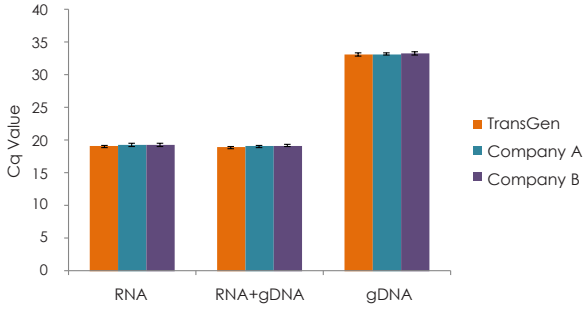
- Simultaneous genomic DNA removal and cDNA synthesis in one tube to minimize contamination.
- The product obtained from 15 minutes reaction is used for qPCR; the product obtained from 30 minutes reaction is used for PCR.
- 5 seconds to inactive gDNA remover and RT: gDNA Remover and reverse transcriptase are simultaneously heat-inactivated at 85°C for 5 seconds.
- Up to 12 kb cDNA in length.

Data

Comparsion with Competitive Products



M: *Trans*2K® Plus II DNA Marker
1: TransGen
2: Company A
3: Company B



RT-PCR was performed with (1), 100 ng of human total RNA, (2), 100 ng of human total RNA and 200 ng gDNA, (3), 200 ng gDNA, using reagents from TransGen, Company A and Company B.

References

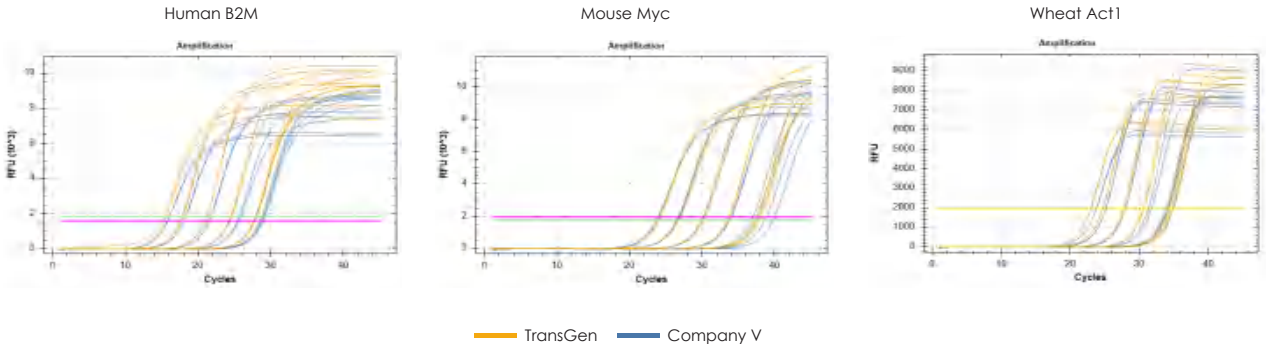
- Wang Y, Wang Y, Zhu Y, et al. Angiomotin cleavage promotes leader formation and collective cell migration[J]. Developmental Cell, 2025.(IF 10.7)
- Zhao K, Zhang J, Fan Y, et al. PSC1, a basic/helix–loop–helix transcription factor controlling the purplish-red testa trait in peanut[J]. Journal of Integrative Plant Biology, 2025.(IF 9.3)
- Wang S, Du Y, Zhang B, et al. Transplantation of chemically induced pluripotent stem-cell-derived islets under abdominal anterior rectus sheath in a type 1 diabetes patient[J]. Cell, 2024.(IF 45.5)
- Zhu J, Zhong X, He H, et al. Generation of human expandable limb-bud-like progenitors via chemically induced dedifferentiation[J]. Cell Stem Cell, 2024. (IF 19.8)
- Hong Y, Yu Z, Zhou Q, et al. NAD+ deficiency primes defense metabolism via 1O2-escalated jasmonate biosynthesis in plants[J]. Nature Communications, 2024. (IF 14.7)
- Zhang H, Ma J, Wu Z, et al. BacPE: a versatile prime-editing platform in bacteria by inhibiting DNA exonucleases[J]. Nature Communications, 2024.(IF 14.7)
- Zuo F, Jiang L, Su N, et al. Imaging the dynamics of messenger RNA with a bright and stable green fluorescent RNA[J]. Nature Chemical Biology, 2024. (IF 12.9)
- Gong Q, Wang Y, He L, et al. Molecular basis of methyl-salicylate-mediated plant airborne defence[J]. Nature, 2023.(IF 50.5)
- Fan H, Quan S, Ye Q, et al. A molecular framework underlying low-nitrogen-induced early leaf senescence in Arabidopsis thaliana[J]. Molecular Plant, 2023.(IF 17.1)

03 *TransScript*® All-in-One First-Strand cDNA Synthesis SuperMix for qPCR (One-Step gDNA Removal) (AT341)

- All SuperMix: Simply add gDNA Remover, RNA template, and water to simultaneously perform cDNA synthesis and genomic DNA removal.
- The optimized ratio of Oligo(dT)18 Primer and Random Primer (N9), along with the SuperMix formulation, ensures consistent reverse transcription efficiency for RNA of varying concentrations and high-efficiency short-strand cDNA synthesis.
- Fast: Reverse transcription takes only 15 minutes.
- High compatibility with qPCR reagents.
- The cDNA is only suitable for qPCR, not for regular PCR.

Data

High amplification efficiency



RT was performed with 10 fold diluted RNA (1 μg to 100 pg) from different species as template, using reagents from TransGen and Company V. The resulting cDNA was used as template for qPCR using dye-based qPCR reagent (AQ601) from TransGen. The result showed that TransGen product exhibited high amplification efficiency.

References

- Yu Z, Deng P, Chen Y, et al. Pharmacological modulation of RB1 activity mitigates resistance to neoadjuvant chemotherapy in locally advanced rectal cancer[J]. Proceedings of the National Academy of Sciences, 2024.(IF 9.4)
- Zhang L, Xu Y, Cheng Z, et al. The EGR1/miR-139/NRF2 axis orchestrates radiosensitivity of non-small-cell lung cancer via ferroptosis[J]. Cancer Letters, 2024.(IF 9.1)
- Xiao K, Liu L, He R, et al. The Snf5-Hsf1 transcription module synergistically regulates stress responses and pathogenicity by maintaining ROS homeostasis in Sclerotinia sclerotiorum[J]. New Phytologist, 2024.(IF 8.3)
- Sun H, He Z, Gao Y, et al. Polyoxyethylene tallow amine and glyphosate exert different developmental toxicities on human pluripotent stem cells-derived heart organoid model[J]. Science of The Total Environment, 2024. (IF 8.2)
- Huang Y, Ji Z, Tao Y, et al. Improving rice nitrogen-use efficiency by modulating a novel monoubiquitinating machinery for optimal root plasticity response to nitrogen[J]. Nature Plants, 2023.(IF 15.8)
- Chen Y, Liu J, Kang S, et al. A palisade-shaped membrane reservoir is required for rapid ring cell inflation in Drechslerella dactyloides[J]. Nature communications, 2023.(IF 14.7)
- Chen Z H, Tian Y, Zhou G L, et al. CMTM7 inhibits breast cancer progression by regulating Wnt/β-catenin signaling[J]. Breast Cancer Research, 2023.(IF 8.4)
- Yuan F, Cai J, Wu J, et al. Z-DNA binding protein 1 promotes heatstroke-induced cell death[J]. Science, 2022.(IF 44.7)
- Zhang Y, Gao Y, Wang H L, et al. Verticillium dahliae secretory effector PevD1 induces leaf senescence by promoting ORE1-mediated ethylene biosynthesis[J]. Molecular plant, 2021.(IF 17.1)
- Wu H, Qu X, Dong Z, et al. WUSCHEL triggers innate antiviral immunity in plant stem cells[J]. Science, 2020.(IF 44.7)

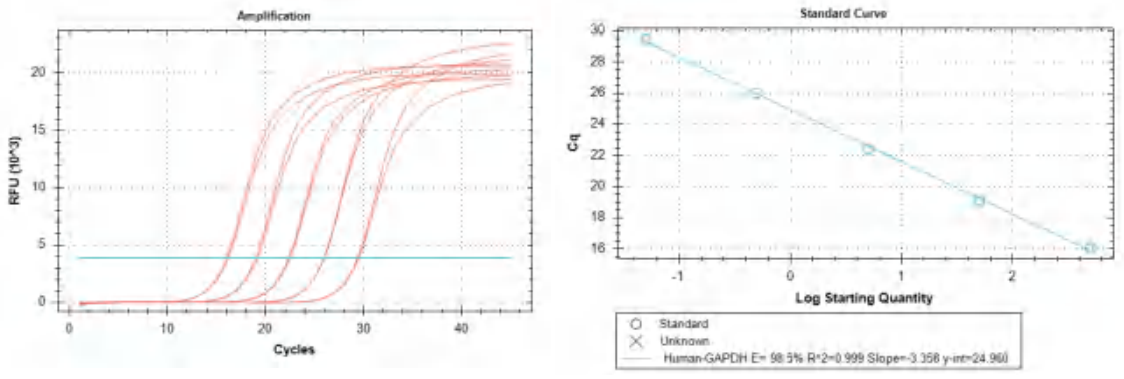
TransScript® Uni All-in-One First-Strand cDNA Synthesis SuperMix for qPCR (One-Step gDNA Removal) (AU341)

- High thermal stability: reverse transcription reaction temperature at 42°C - 65°C.
- Fast: Reverse transcription takes only 5 minutes.
- Simple: Simultaneously completes cDNA synthesis and genomic DNA removal.
- Precision: Offers a wide linear range, detecting templates as low as picogram (pg) levels.

04

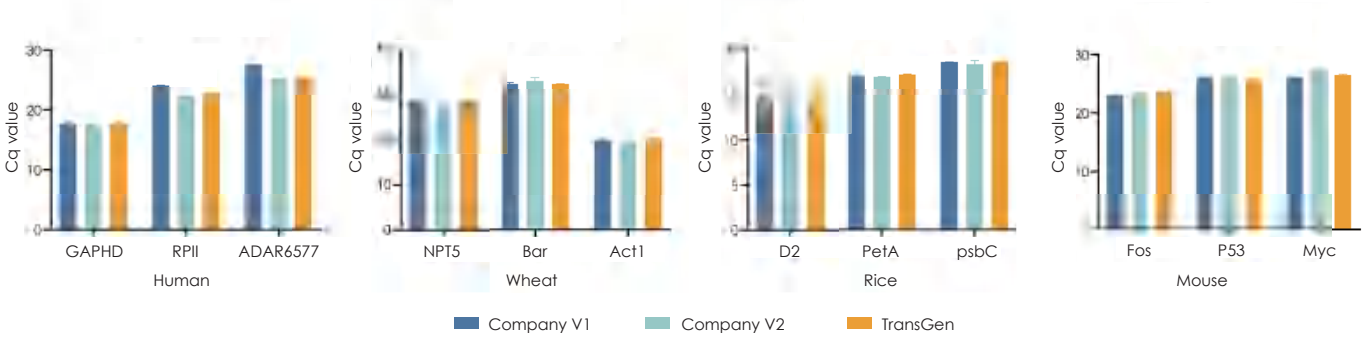
Data

Wide linear range



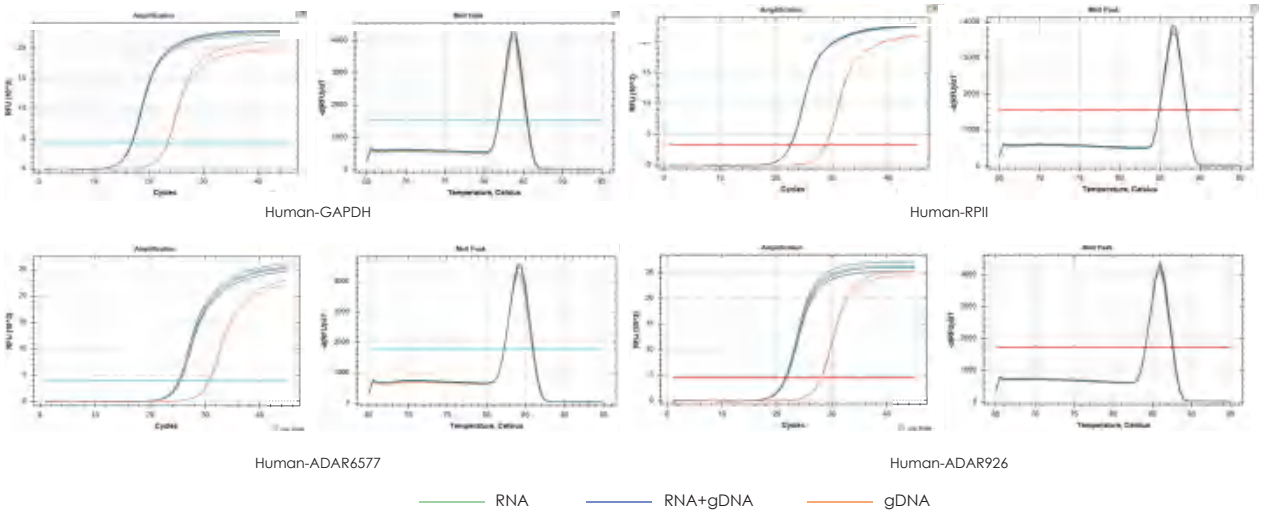
RT was performed with 10 fold diluted RNA (500 ng to 50 pg) as template using reagent from TransGen. The resulting cDNA was used as template for GAPDH gene quantification by qPCR. TransGen product exhibied high reverse transcription efficiency, with a template starting amount as low as 50 pg.

Applicable to a wide range of species



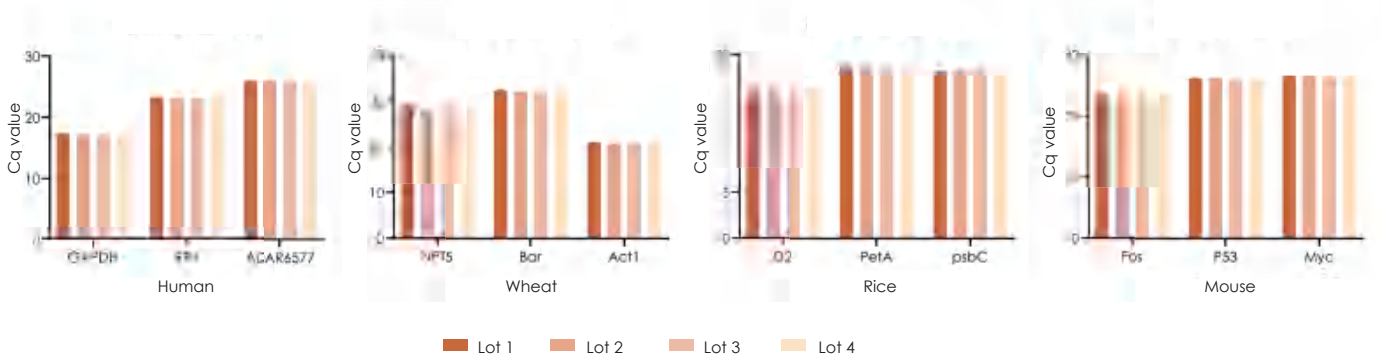
RT was performed with RNA from different species as template using reagents from TransGen, Company V1 and Company V2. The resulting cDNA was used as template for different genes quantification by qPCR. The result showed that TransGen product can apply to various species.

Strong gDNA removal capability



RT was performed with (1), 200 ng RNA, (2), 200 ng RNA and 200 ng gDNA, (3), 200 ng gDNA as templates using reagent from TransGen. The resulting cDNA was used as template for different genes quantification by qPCR. TransGen product showed strong gDNA removal capability.

Lot-to-lot consistency



RT was performed with RNA from different species as template using different batches of TransGen reagents. The resulting cDNA was used as template for different genes quantification by qPCR. TransGen product showed excellent lot-to-lot consistency.

References

- He L, Ma S, Ding Z, et al. Inhibition of NFAT5-Dependent Astrocyte Swelling Alleviates Neuropathic Pain[J]. Advanced Science, 2024.(IF 14.3)
- Yang S, Li W, Bai X, et al. Ginseng-derived nanoparticles alleviate inflammatory bowel disease via the TLR4/MAPK and p62/Nrf2/Keap1 pathways[J]. Journal of Nanobiotechnology, 2024.(IF 10.6)
- Xu A, Wang Y, Luo D, et al. By regulating the IP3R/GRP75/VDAC1 complex to restore mitochondrial dynamic balance, selenomethionine reduces lipopolysaccharide-induced neuronal apoptosis[J]. Journal of Cellular Physiology, 2024.(IF 4.5)
- Qin T, Zhang G, Zheng Y, et al. A population of stem cells with strong regenerative potential discovered in deer antlers[J]. Science, 2023.(IF 44.7)
- Yuan Y, Fu D, Xu Y, et al. Pt (IV) Prodrug as a Potential Antitumor Agent with APE1 Inhibitory Activity[J]. Journal of Medicinal Chemistry, 2022.(IF 6.8)

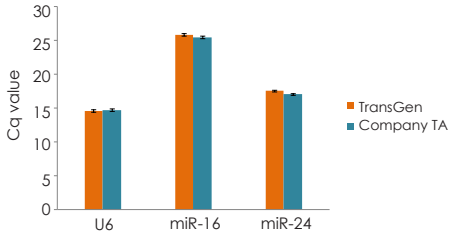
05

TransScript® miRNA First-Strand cDNA Synthesis SuperMix (AT351)

- Optimized buffer for poly(A) polymerase and reverse transcriptase in optimized buffer, ensuring overall efficiency.
- Poly(A) tailing and cDNA synthesis in one reaction.
- Applicable for miRNA detection.

Data

High reverse transcription efficiency



qRT-PCR was performed for miRNA extracted from human plasma using reagens from TransGen and Company A respectively.

References

- Huang R, Jia B, Su D, et al. Plant exosomes fused with engineered mesenchymal stem cell-derived nanovesicles for synergistic therapy of autoimmune skin disorders[J]. Journal of Extracellular Vesicles, 2023.(IF 15.5)
- Zhao J, Zeng X, Liu J, et al. Marasmius androsaceus mitigates depression-exacerbated intestinal radiation injuries through reprogramming hippocampal miRNA expression[J]. Biomedicine & Pharmacotherapy, 2023.(IF 6.9)
- You L Y, Lin J, Xu H W, et al. Intragenic heterochromatin-mediated alternative polyadenylation modulates miRNA and pollen development in rice[J]. New Phytologist.2021.(IF 8.3)
- Wang X, Li X, Li J, et al. Mechanical loading stimulates bone angiogenesis through enhancing type H vessel formation and downregulating exosomal miR-214–3p from bone marrow-derived mesenchymal stem cells[J]. FASEB journal: official publication of the Federation of American Societies for Experimental Biology, 2021 (IF 4.4)
- He X, Yang L, Huang R, et al. Activation of CB2R with AM1241 ameliorates neurodegeneration via the Xist/miR-133b-3p/Pitx3 axis[J]. Journal of cellular physiology, 2020.(IF 4.5)

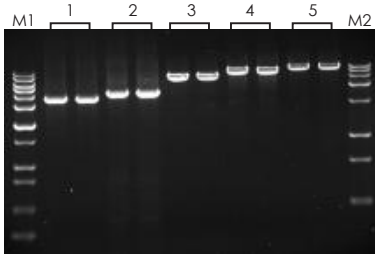
TransStart® *FastPfu* DNA Polymerase (AP221)

01

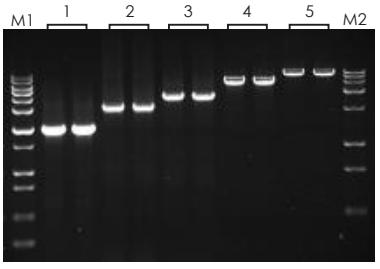
- Fast: Extension rate of 4 kb/min.
- High fidelity: 54 times higher than EasyTaq and 8 times higher than EasyPfu.
- High specificity: By using the "TransStart" double-blocking hot-start technology, it can block primers and templates simultaneously to prevent non-specific amplification at lower temperature.
- Strong amplification ability: With the unique PCR Stimulant enhancing the enzyme's ability to amplify complex templates.
- Long sequence amplification: Using genomic DNA and plasmid DNA as templates, the amplification fragment lengths can reach up to 15 kb and 20 kb, respectively.
- Blunt-ended product: Directly cloned into *pEASY*® -Blunt series vectors without the need for purification.

Data

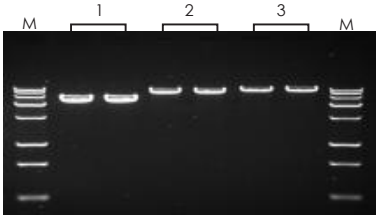
PCR Using different types of template and amplify fragments of various length



M1: 1Kb Plus DNA Ladder
M2: *Trans*15K DNA Marker
1: ACTR 3.5 kb;
2: VIN 4.6 kb;
3: Pol 6.8 kb;
4: APC 8.5 kb;
5: Dynein 12.3 kb;
cDNA: Amplification of cDNA with *TransStart*® FastPfu DNA Polymerase



M1: 1Kb Plus DNA Ladder
M2: *Trans*15K DNA Marker
1: Rhod 2.0 kb;
2: β-globin 3.0 kb;
3: Rhod 4.17 kb;
4: Factor IX 7.5 kb;
5: Serum albumin 12.4 kb;
Genomic DNA: Amplification of Genomic DNA with *TransStart*® FastPfu DNA Polymerase



M: *Trans*15K DNA Marker
1: UDG 7.0 kb;
2: LN 10.0 kb;
3: Fang 14.7 kb;
Plasmid DNA: Amplification of Plasmid DNA with *TransStart*® FastPfu DNA Polymerase

Note: For simple operation, choose 2×*TransStart*® FastPfu PCR SuperMix (AS221)with the enzyme, dNTP and buffer premixed. Simply add the template, primers, and water to save time and reduce the potential for errors during reaction set up.

References

- Yang J, Zhao T, Fan J, et al. Structure-guided discovery of bile acid derivatives for treating liver diseases without causing itch[J]. Cell, 2024.(IF 45.5)
- Zhu C, Hu Z, Hu C, et al. SlCPK27 cross-links SlHY5 and SlPIF4 in brassinosteroid-dependent photo-and thermo-morphogenesis in tomato[J]. Proceedings of the National Academy of Sciences, 2024,(IF 9.4)
- Wang Y, Zhang S, Yang X, et al. Mesoscale DNA feature in antibody-coding sequence facilitates somatic hypermutation[J]. Cell, 2023.(IF 45.5)
- Fan J, Ran H, Wei P L, et al. Pretrichodermamide A Biosynthesis Reveals the Hidden Diversity of Epidithiodiketopiperazines[J]. Angewandte Chemie, 2023.(IF 16.1)
- Fan J, Ran H, Wei P L, et al. An ortho-Quinone Methide Mediates Disulfide Migration in the Biosynthesis of Epidithiodiketopiperazines[J]. Angewandte Chemie International Edition, 2023.(IF 16.1)
- Song Z, Zhou S, Zhang H, et al. Fungal secondary metabolism is governed by an RNA-binding protein CsdA/RsdA complex[J]. Nature Communications, 2023.(IF 14.7)
- Ni P, Zhao Y, Zhou X, et al. Efficient and versatile multiplex prime editing in hexaploid wheat[J]. Genome Biology, 2023.(IF 10.1)
- Lei Z, Meng H, Liu L, et al. Mitochondrial base editor induces substantial nuclear off-target mutations[J]. Nature, 2022.(IF 50.5)
- Zhang H, Zhu Y, Liu Z, et al. A volatile from the skin microbiota of flavivirus-infected hosts promotes mosquito attractiveness[J]. Cell, 2022.(IF 45.5)
- Zong Y, Liu Y, Xue C, et al. An engineered prime editor with enhanced editing efficiency in plants[J]. Nature Biotechnology, 2022.(IF 33.1)
- Lin Q, Jin S, Zong Y, et al. High-efficiency prime editing with optimized, paired pegRNAs in plants[J]. Nature Biotechnology, 2022.(IF 33.1)
- Lei Y, Fei P, Song B, et al. A loosened gating mechanism of RIG-I leads to autoimmune disorders[J]. Nucleic acids research, 2022.(IF 16.6)
- Zhang H, Li Z, Zhou S, et al. A fungal NRPS-PKS enzyme catalyses the formation of the flavonoid naringenin[J]. Nature Communications, 2022.(IF 14.7)
- Li Y, Zhao L, Zhang Y, et al. Structural basis for product specificities of MLL family methyltransferases[J]. Molecular Cell, 2022.(IF 14.5)

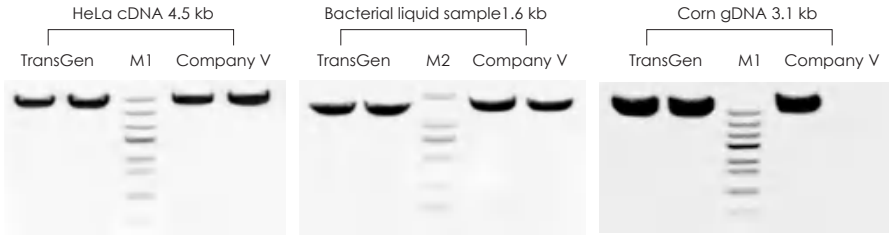
TransStart® *FastPfu* Fly DNA Polymerase (AP231)

02

- Fast: Ultra-fast extension at 12 kb/min (for amplicon≤5 kb) , high-speed extension at 6 kb/min (for amplicon> 5 kb).
- High fidelity: 108 times higher than EasyTaq and 16 times higher than EasyPfu.
- High specificity and sensitivity: By using the "TransStart" double-blocking hot-start technology, it can block primers and templates simultaneously to prevent non-specific amplification at lower temperature. Detect templates as low as 1 pg.
- Strong amplification ability: With the unique PCR Stimulant enhancing the enzyme's ability to amplify complex templates.
- Long sequence amplification: Using genomic DNA and plasmid DNA as templates, the amplification fragment lengths can reach up to 15 kb and 20 kb, respectively.
- Direct amplification: Blood, bacterial liquid, and colony samples can be used directly as template without the need for DNA extraction.
- Robust Stability: Amplification performance shows no significant change after being stored at 37°C for one week.
- Blunt-ended product: directly cloned into *pEASY*® -Blunt series vectors without the need for purification.

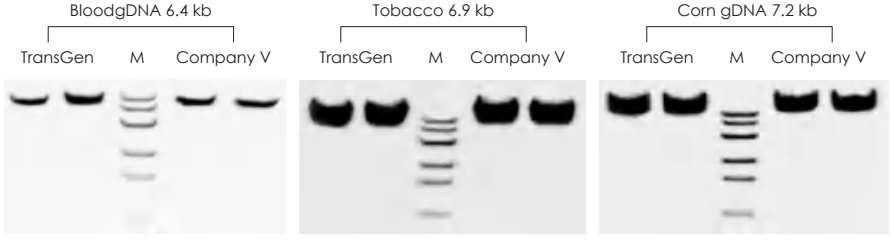
Data

Extension at 12 kb/min



M1: *Trans*5K DNA Marker M2: Trans2K® DNA Marker

Extension at 6 kb/min



Note: For simple operation, choose 2×*TransStart*® FastPfu Fly PCR SuperMix (AS231) with the enzyme, dNTP and buffer premixed. Simply add the template, primers, and water to save time and reduce the potential for errors during reaction set up.

References

- Huang M E, Qin Y, Shang Y, et al. C-to-G editing generates double-strand breaks causing deletion, transversion and translocation[J]. Nature Cell Biology, 2024.(IF 17.3)
- Wang J L, Wang M, Zhang L, et al. WAV E3 ubiquitin ligases mediate degradation of IAA32/34 in the TMK1-mediated auxin signaling pathway during apical hook development[J]. Proceedings of the National Academy of Sciences, 2024.(IF 9.4)
- Zhang A, Shan T, Sun Y, et al. Directed evolution rice genes with randomly multiplexed sgRNAs assembly of base editors[J]. Plant Biotechnology Journal, 2023.(IF 10.1)
- Zhang Y F, Yun J H, Zhang G Y, et al. Efficient biosynthesis of 3-hydroxypropionic acid from glucose through multidimensional engineering of Escherichia coli[J]. Bioresource Technology, 2023.(IF 9.7)
- Tan Y, Yan X, Sun J, et al. Genome-wide enhancer identification by massively parallel reporter assay in Arabidopsis[J]. The Plant Journal, 2023.(IF 6.2)
- Jiang L, Yao B, Zhang X, et al. Salicylic acid inhibits rice endocytic protein trafficking mediated by OsPIN3t and clathrin to affect root growth[J]. The Plant Journal, 2023.(IF 6.2)
- Xu Y, Zhu T F. Mirror-image T7 transcription of chirally inverted ribosomal and functional RNAs[J]. Science, 2022.(IF 44.7)
- Wang D, Yan F, Wu P, et al. Global profiling of regulatory elements in the histone benzoylation pathway[J]. Nature Communications, 2022.(IF 14.7)
- Niu L, Shen W, Shi Z, et al. Three-dimensional folding dynamics of the Xenopus tropicalis genome[J]. Nature Genetics, 2021.(IF 31.7)
- Jin S, Fei H, Zhu Z, et al. Rationally designed APOBEC3B cytosine base editors with improved specificity[J]. Molecular cell, 2020.(IF 14.5)

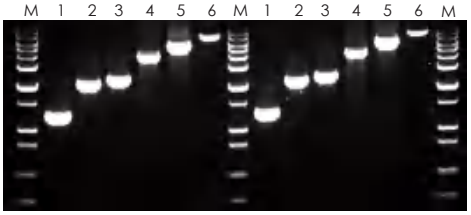
2×*TransStart*® *FastPfu* PCR SuperMix (AS221)

03

- Simply add primers, template, and Nuclease-free Water to perform PCR reaction, saving PCR setup time and preventing contamination.
- *TransStart*® FastPfu PCR SuperMix offers 54-fold fidelity as compared to *EasyTaq*® DNA Polymerase.
- Rapid amplification with an extension rate of up to 4 kb/min.
- Amplification of genomic DNA fragment up to 15 kb, amplification of plasmid DNA fragment up to 20 kb.
- PCR products with blunt-end can be directly cloned into pEASY®-Blunt vectors.

Data

High amplication efficiency



TransStart® *FastPfu* DNA Polymerase 2×*TransStart*® *FastPfu* PCR SuperMix

M: 1Kb Plus DNA Ladder

Lane 1: β-globin 1.3 kb	Human genomic DNA
Lane 2: Rhod 2.0 kb	Human genomic DNA
Lane 3: NCBP 2.5 kb	Human cDNA
Lane 4: VIN 4.6 kb	Human cDNA
Lane 5: Pol 6.8 kb	Human cDNA
Lane 6: LN 10.0 kb	Plasmid DNA

PCR was carried out for 35 cycles using 50 ng of human genomic DNA, cDNA synthesized from 100 ng of human total RNA, and 10 ng of plasmid DNA as templates. The amplification products were analyzed by 1% agarose gel electrophoresis.

References

- Li X, Zhang S, Wang C, et al. Efficient in situ epitope tagging of rice genes by nuclease-mediated prime editing[J]. The Plant Cell, 2025.(IF 10.0)
- Liu M, Chen P, Wei B, et al. FN1 shapes the behavior of papillary thyroid carcinoma through alternative splicing of EDB region[J]. Scientific Reports, 2025.(IF 3.8)
- Song R, Guo P, Ren X, et al. A novel polypeptide CAPG-171aa encoded by circCAPG plays a critical role in triple-negative breast cancer[J]. Molecular Cancer, 2023.(IF 27.7)
- Jin S, Lin Q, Gao Q, et al. Optimized prime editing in monocot plants using PlantPegDesigner and engineered plant prime editors (ePPEs)[J]. Nature Protocols, 2023.(IF 13.1)
- Li M, Yang L, Qian W, et al. A novel rat model of Dravet syndrome recapitulates clinical hallmarks[J]. Neurobiology of Disease, 2023. (IF 5.1)
- Feng K, Ge H, Chen H, et al. Novel exon mutation in SYCE1 gene is associated with non-obstructive azoospermia[J]. Journal of Cellular and Molecular Medicine, 2022. (IF 4.3)
- Wang Y, Wang Z, Chen Y, et al. A highly efficient CRISPR-Cas9-based genome engineering platform in Acinetobacter baumannii to understand the H2O2-sensing mechanism of OxyR[J]. Cell Chemical Biology, 2019.(IF 6.7)
- Chen K, Hu Z, Song W, et al. Diversity of O-glycosyltransferases contributes to the biosynthesis of flavonoid and triterpenoid glycosides in Glycyrrhiza uralensis[J]. ACS Synthetic Biology, 2019.(IF 3.7)

2×*TransStart*® *FastPfu* Fly PCR SuperMix (AS231)

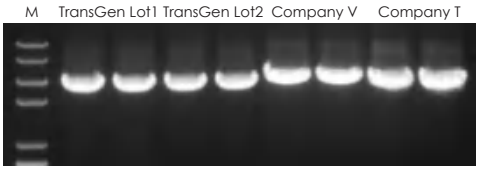
04

- Fast: Ultra-fast extension at 12 kb/min (for amplicon≤5 kb) , high-speed extension at 6 kb/min (for amplicon> 5 kb).
- High fidelity: 108 times higher than EasyTaq.
- High sensitivity: Capable of detecting template amounts as low as 1 pg.
- Direct amplification: Blood, bacterial liquid, and colony samples can be used directly as template without the need for DNA extraction.
- Robust Stability: Amplification performance shows no significant change after being stored at 37°C for one week.
- Long sequence amplification: Using genomic DNA and plasmid DNA as templates, the amplification fragment lengths can reach up to 15 kb and 20 kb, respectively.
- Blunt-ended product: Directly cloned into *pEASY*® -Blunt series vectors without the need for purification.

Data

High inhibition resistance

Sample: Rice; Fragment size: 2833 bp



Sample: Tobacco; Fragment size: 1680 bp

M: *Trans*2K® Plus II DNA Marker

Different genes were amplified from alkaline-lysed crude extracts of rice and tobacco using reagents from TransGen, Company V, and Company T, respectively. The results showed that TransGen reagent effectively amplified target genes in both rice and tobacco, exhibiting sharp bands without non-specific amplification, and high yield.

High specificity

M: *Trans*2K® Plus II DNA Marker

PCR was performed with mouse genomic DNA as template using different lots of reagents from TransGen, Company V, and Company T, respectively. TransGen reagent showed sharp bands without non-specific amplification, and high yield.

References

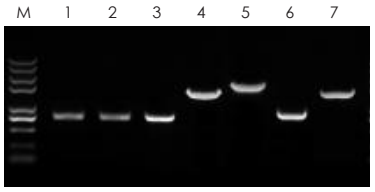
- Zhao S, Han X, Zhu Y, et al. CRISPR/CasΦ2-mediated gene editing in wheat and rye[J]. Journal of Integrative Plant Biology, 2024.(IF 9.3)
- Pan J, Zhou R, Yao L L, et al. Identification of a third myosin-5a-melanophilin interaction that mediates the association of myosin-5a with melanosomes[J]. eLife, 2024.(IF 6.4)

TransDirect® Animal Tissue PCR Kit (AD201)

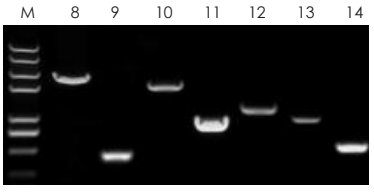
05

- Direct amplification from unpurified lysate. Suitable for high throughput screening.
- Suitable for mammalian cells, blood, saliva, hair and animal tissues (mammals, marine animals, insects) etc.
- Amplicon size ≤3 kb.

Data



M: *Trans*2K® Plus II DNA Marker
Lane 1: Hair 0.8 kb
Lane 2: Saliva 0.8 kb
Lane 3: HeLa cell 0.8 kb
Lane 4: HeLa cell 2 kb
Lane 5: HeLa cell 3 kb
Lane 6: Mouse ear 0.9 kb
Lane 7: Mouse ear 1.8 kb



M: *Trans*2K® Plus II DNA Marker
Lane 8: Mouse ear 3 kb
Lane 9: Drosophila 0.4 kb
Lane 10: Drosophila 2 kb
Lane 11: C. elegans 0.9 kb
Lane 12: Shrimp 1.1 kb
Lane 13: Crab 1 kb
Lane 14: Razor clam 0.5 kb

References

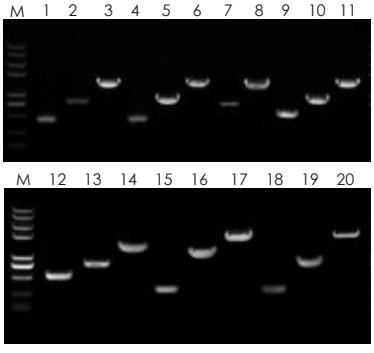
- Hu Y X, You H M, Bai M R, et al. Macrophage P2Y12 regulates iron transport and its inhibition protects against atherosclerosis[J]. Journal of Advanced Research, 2024. (IF 11.4)
- Zhang S, Chen Y, Dong K, et al. BESST: a novel LncRNA knockout strategy with less genome perturbance[J]. Nucleic Acids Research, 2023.(IF 16.6)
- Hou G, Zhou T, Xu N, et al. Integrative Functional Genomics Identifies Systemic Lupus Erythematosus Causal Genetic Variant in the IRF5 Risk Locus[J]. Arthritis & Rheumatology, 2023.(IF 11.4)
- Wang S, Teng D, Li X, et al. The evolution and diversification of oakleaf butterflies[J]. Cell, 2022.(IF 45.5)

TransDirect® Plant Tissue PCR Kit (AD301)

06

- Direct amplification from unpurified lysate. Suitable for high throughput screening.
- Suitable for non-polysaccharide, non-polyphenol plant.
- Amplicon size ≤2 kb.

Data



M: *Trans*2K® Plus II DNA Marker
Lane 1: Maize 0.4 kb
Lane 2: Maize 0.8 kb
Lane 3: Maize 1.5 kb
Lane 4: Wheat 0.4 kb
Lane 5: Wheat 0.9 kb
Lane 6: Wheat 1.5 kb
Lane 7: Soybean 0.9 kb
Lane 8: Soybean 1.5 kb
Lane 9: Arabidopsis 0.5 kb
Lane 10: Arabidopsis 0.9 kb
Lane 11: Arabidopsis 1.5 kb
Lane 12: Tobacco 0.5 kb
Lane 13: Tobacco 0.9 kb
Lane 14: Tobacco 1.5 kb
Lane 15: Cotton 0.3 kb
Lane 16: Cotton 1 kb
Lane 17: Cotton 1.6 kb
Lane 18: Rice 0.3 kb
Lane 19: Rice 0.9 kb
Lane 20: Rice 2.1 kb

References

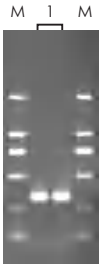
- Gong P, Song C, Liu H, et al. Physalis floridana CRABS CLAW mediates neofunctionalization of GLOBOSA genes in carpel development[J]. Journal of Experimental Botany, 2021.(IF 5.6)

TransDirect® Blood PCR Kit (AD401)

07

- Direct amplification from blood. Suitable for high throughput screening.
- Application: Fresh or frozen blood stored in EDTA, heparin, or citric acid; fresh or dried blood without anticoagulant; human oral epithelial cells.
- Amplicon size ≤4 kb.

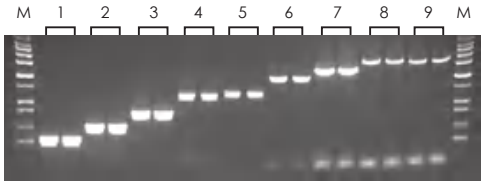
Data



M: *Trans*2K® Plus II DNA Marker

Human oral epithelial cells as templates to amplify Hdt gene (0.32 kb) in 20 μl reaction

Human frozen blood (EDTA anticoagulated)

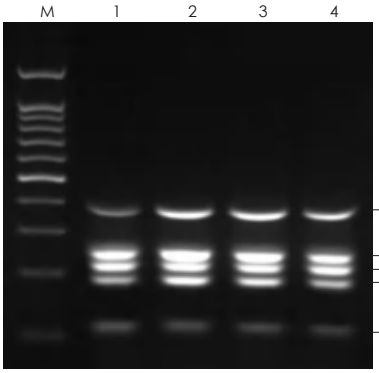


TransDirect® Mouse Genotyping Kit (AD501)

08

- Direct PCR amplification from crude lysate. Easy-to-use and suitable for high-throughput applications.
- Suitable for multiplex PCR, up to 5-plex PCR amplification. Apply tp PCR-based rapid mouse genotyping.

Data



M: 100 bp DNA Ladder
Lane1: Purified gDNA template
Lane2: Mouse ear
Lane3: Mouse tail
Lane4: Mouse toe

References

- Li M, Yang L, Qian W, et al. A novel rat model of Dravet syndrome recapitulates clinical hallmarks[J]. Neurobiology of Disease, 2023.(IF 5.1)

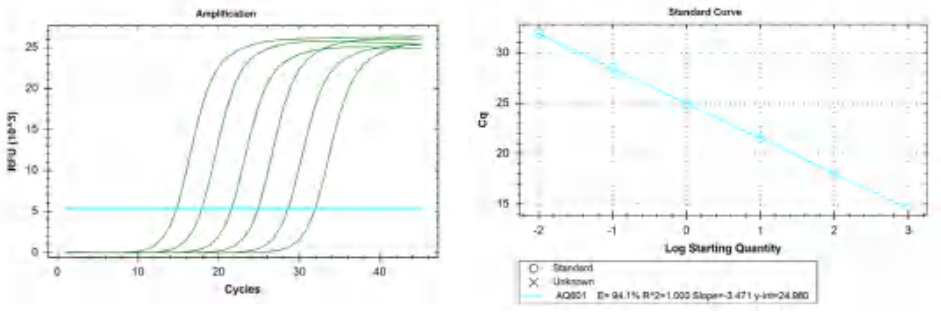
PerfectStart® Green qPCR SuperMix (AQ601)

01

- Three types of antibody for blocking Taq DNA Polymerase, high specificity, high sensitivity, strong amplification efficiency and a wide range of applicable species.
- Double cation buffer to enhance specificity, reduce primer dimer formation, and ensure accurate data.
- Including Universal Passive Reference Dye compatible with different instruments to correct inter-tube differences caused by PCR pipetting errors and calibrate inter-well signal discrepancies.

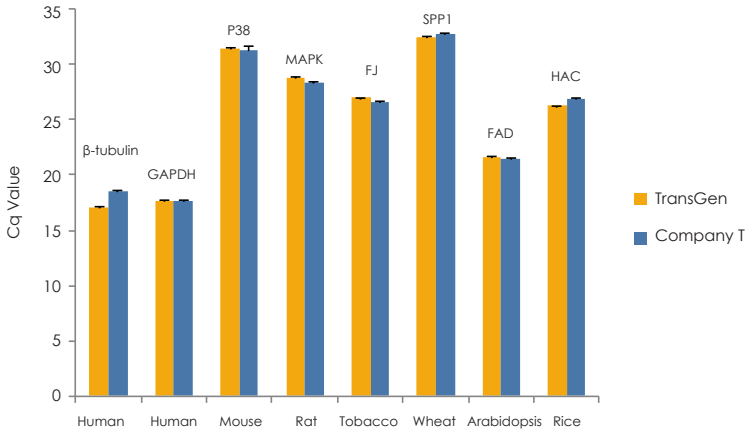
Data

High amplification efficiency



Amplification curves and standard curves are obtained using plasmid DNA with gradient dilution (10 ng to 0.1 pg, 10-fold dilution) as the template. The results show that AQ601 has high amplification efficiency, producing clear and well-defined amplification and standard curves.

Amplification of templates from different species



cDNA obtained from RNA reverse transcription of different species (TransGen, AT311) is used as a template for amplification with TransGen and Company T products (NTC shows no amplification). The results show that the amplification performance of the TransGen product (AQ601) is essentially consistent with that of the Company T product.

Optional: AQ602, with the Universal Passive Reference Dye already added to the mix, compared to AQ601, where the Dye and mix are separate.

References

- Xiang B, Zhang M, Li K, et al. The epitranscriptional factor PCIF1 orchestrates CD8+ T cell ferroptosis and activation to control antitumor immunity[J]. Nature Immunology, 2025.(IF 27.8)
- Su D, Li M, Xie Y, et al. Gut commensal bacteria Parabacteroides goldsteinii-derived outer membrane vesicles suppress skin inflammation in psoriasis[J]. Journal of Controlled Release, 2025.(IF 10.5)
- Zhao K, Zhang J, Fan Y, et al. PSC1, a basic/helix–loop–helix transcription factor controlling the purplish-red testa trait in peanut[J]. Journal of Integrative Plant Biology, 2025.(IF 9.3)
- Huang C, Jiang T, Pan W, et al. Ubiquitination of NS1 Confers Differential Adaptation of Zika Virus in Mammalian Hosts and Mosquito Vectors[J]. Advanced Science, 2024.(IF 14.3)
- Xiong Y, He C, Lin X, et al. Black phosphorus nanosheets inhibit glioblastoma cell migration and invasion through modulation of WNT/β-catenin and NOTCH signaling pathways[J]. Chemical Engineering Journal, 2024.(IF 13.3)
- Zuo F, Jiang L, Su N, et al. Imaging the dynamics of messenger RNA with a bright and stable green fluorescent RNA[J]. Nature Chemical Biology, 2024.(IF 12.9)
- Zhang B, He P, Lawrence J E G, et al. A human embryonic limb cell atlas resolved in space and time[J]. Nature, 2023.(IF 50.5)
- Huang J, Wu C, Kloeber J A, et al. SLFN5-mediated chromatin dynamics sculpt higher-order DNA repair topology[J]. Molecular Cell, 2023.(IF 14.5)
- Liang Y, Wang J, Xu C, et al. Remodeling Collagen Microenvironment in Liver Using a Biomimetic Nano-Regulator for Reversal of Liver Fibrosis[J]. Advanced Science, 2023.(IF 14.3)
- He F, Cheng K, Qi J, et al. Black phosphorus nanosheets enhance differentiation of neural progenitor cells for improved treatment in spinal cord injury[J]. Chemical Engineering Journal, 2023.(IF 13.3)
- He F, Liu Z, Xu J, et al. Black phosphorus nanosheets suppress oxidative damage of stem cells for improved neurological recovery[J]. Chemical Engineering Journal, 2023.(IF 13.3)

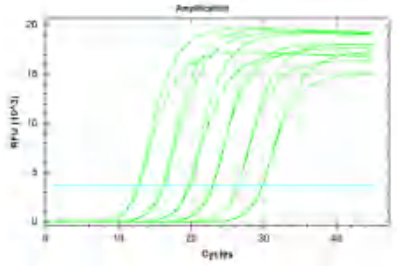
PerfectStart® Visual Green qPCR SuperMix (AQ621)

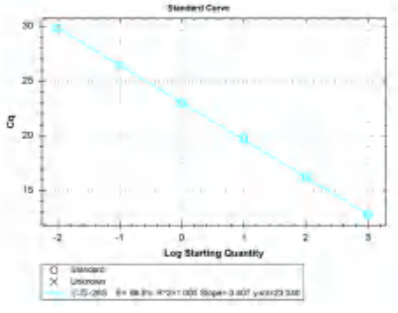
02

- *PerfectStart*® Fast Taq DNA Polymerase: hot-start and blocking by 3 antibodies; high specificity, sensitivity and amplification efficiency; applicable to a wide range of species.
- Contain tracer dye which can clearly display the addition of components in each well, reduce the probability of missing and repeating the sample, and improve the success rate of the experiment.
- Fast amplification with 15 seconds extension time.
- Dual-cation buffer enhances specificity, reduces primer-dimer formation and generates more accurate data.
- Universal Passive Reference Dye for different instruments to correct differences in fluorescence detection between wells.
- Good compatibility, compatible with different instruments.

Data

High amplification efficiency

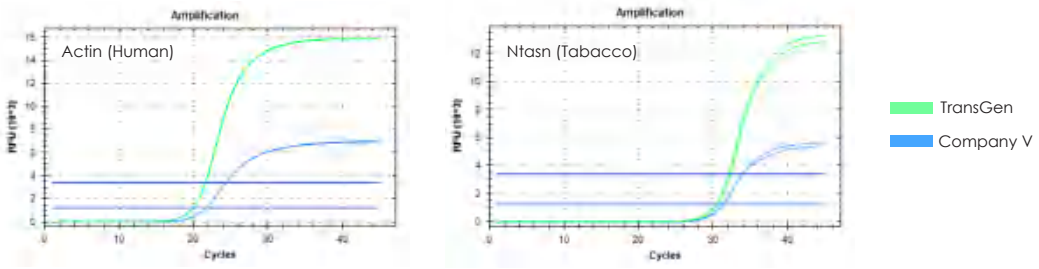




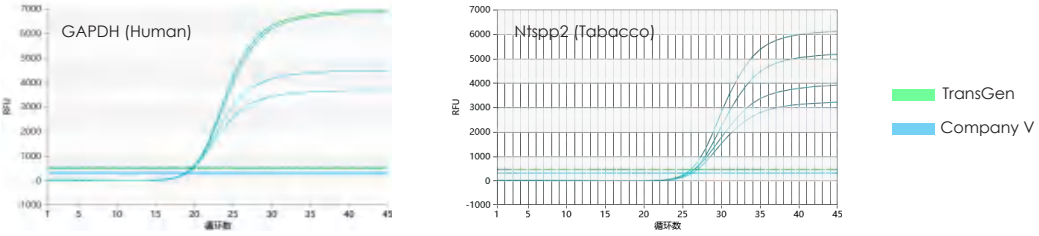
A serial of dilution of plasmid standards (1 ng-0.01 pg, 10-fold dilution) were used as templates to amplify 26S gene using reagent from TransGen. The results showed that the TransGen reagent has high amplification efficiency and good linearity. (qPCR instrument: Bio-Rad CFX96)

Comparsion with competitive product

Bio-Rad CFX96



TIANLONG Gentier-32R



The genomes of human and tobacco were used as templates to amplify different genes in different instruments using reagent from TransGen.

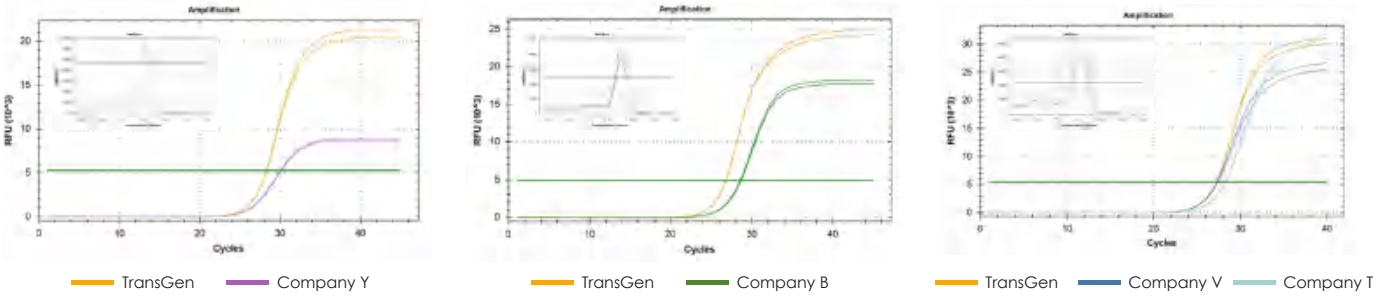
PerfectStart® Universal Green qPCR SuperMix (AQ631)

- High fluorescence signal and excellent amplification curve shape.
- High amplification efficiency and good linearity of the standard curve.
- With strong amplification capability, it easily amplifies various samples, including polysaccharid and polyphenol-rich plant samples.
- With robust stability, it shows no impact on product performance after 10 freeze-thaw cycles or storage at 4°C or 37°C for 7 days.
- With the Universal Passive Reference Dye, already premixed in the reagent, is compatible with different instruments.

03

Data

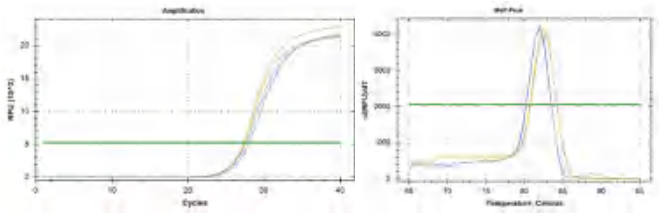
Excellent amplification curve



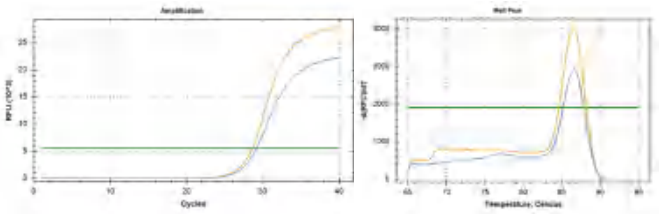
Gene amplification is performed using products from TransGen, Company Y, Company B, Company V, and Company T. The results showed that AQ631 exhibits strong fluorescence intensity (higher plateau phase value)and excellent amplification curve shape.

Compatible with multiple species

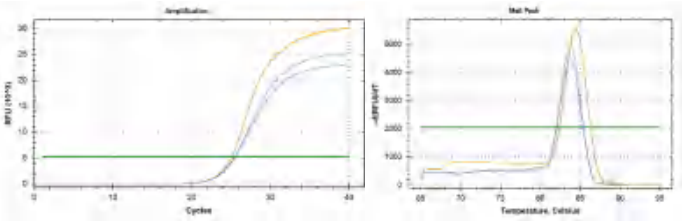
Tobacco



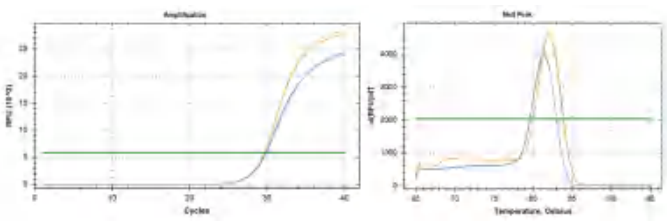
Wheat



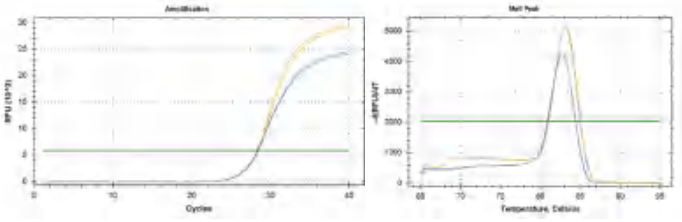
Arabidopsis



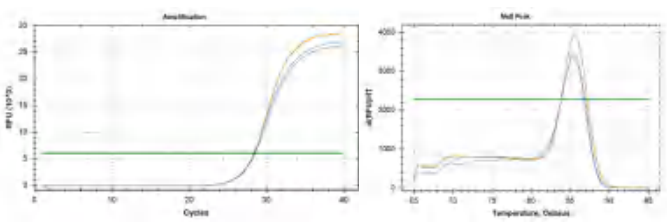
Rice



Mouse



Human



TransGen Company V

Using cDNA from Tobacco, Arabidopsis, Wheat, Rice, Mouse, and human as templates, gene amplification is performed with TransGen and Company V products. The results show that the AQ631 is applicable for amplification of samples from various species, demonstrating strong versatility.

Category	Product Name	Ca. No.	Specification
RT	*EasyScript*® One-Step gDNA Removal and cDNA Synthesis SuperMix	AE311-02	50 rxns×20 μl System
		AE311-03	100 rxns×20 μl System
		AE311-04	500 rxns×20 μl System
	TransScript® One-Step gDNA Removal and cDNA Synthesis SuperMix	AT311-02	50 rxns×20 μl System
		AT311-03	100 rxns×20 μl System
		AT311-04	500 rxns×20 μl System
	TransScript®All-in-One First-Strand cDNA Synthesis SuperMix for qPCR(One-Step gDNA Removal)	AT341-01	50 rxns×20 μl System
		AT341-02	100 rxns×20 μl System
		AT341-03	500 rxns×20 μl System
	TransScript® Uni All-in-One First-Strand cDNA Synthesis SuperMix for qPCR (One-Step gDNA Removal)	AU341-02	100 rxns
	TransScript® miRNA First-Strand cDNA Synthesis SuperMix	AT351-01	20 rxns×20 μl System
		AT351-02	50 rxns×20 μl System
PCR	*TransStart*® *FastPfu* DNA Polymerase	AP221-01	250 units
		AP221-02	500 units
		AP221-03	6×500 units
	TransStart® *FastPfu* DNA Polymerase (with 2.5 mM dNTPs)	AP221-11	250 units
		AP221-12	500 units
		AP221-13	6×500 units
	TransStart® *FastPfu* Fly DNA Polymerase	AP231-21	250 units
		AP231-22	500 units
		AP231-23	6×500 units
	2×*TransStart*® *FastPfu* PCR SuperMix (-dye)	AS221-01	1 ml
		AS221-02	5×1 ml
	2×*TransStart*® *FastPfu* PCR SuperMix (+dye)	AS221-11	1 ml
		AS221-12	5×1 ml
	2×*TransStart*® *FastPfu* Fly PCR SuperMix (-dye)	AS231-01	1 ml
		AS231-02	5×1 ml
	2×*TransStart*® *FastPfu* Fly PCR SuperMix (+dye)	AS231-11	1 ml
		AS231-12	5×1 ml
	TransDirect® Animal Tissue PCR Kit	AD201-01	100 rxns×20 μl System
		AD201-02	500 rxns×20 μl System
	TransDirect® Plant Tissue PCR Kit	AD301-01	100 rxns×20 μl System
		AD301-02	500 rxns×20 μl System
	TransDirect® Blood PCR Kit	AD401-01	100 rxns×20 μl System
		AD401-02	500 rxns×20 μl System
	TransDirect® Mouse Genotyping Kit	AD501-01	100 rxns×20 μl System
		AD501-02	500 rxns×20 μl System
qPCR	*PerfectStart*® Green qPCR SuperMix	AQ601-01	1 ml
		AQ601-02	5×1 ml
		AQ601-03	15×1 ml
		AQ601-04	25×1 ml
	PerfectStart® Green qPCR SuperMix(+Universal Passive Reference Dye)	AQ602-01	1 ml
		AQ602-02	5×1 ml
		AQ602-03	15×1 ml
		AQ602-04	25×1 ml
	PerfectStart® Visual Green qPCR SuperMix	AQ621-01	1 ml
		AQ621-02	5×1 ml
		AQ621-03	15×1 ml
		AQ621-04	25×1 ml
	PerfectStart® Universal Green qPCR SuperMix	AQ631-01	1 ml
		AQ631-02	5×1 ml
		AQ631-03	15×1 ml
		AQ631-04	25×1 ml

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