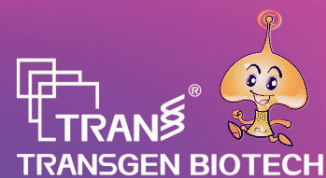




TransGen



STAR PRODUCTS

RT•PCR•qPCR Series

Providing Innovative Reagents for Life Sciences Science 2006



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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 inactivate 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

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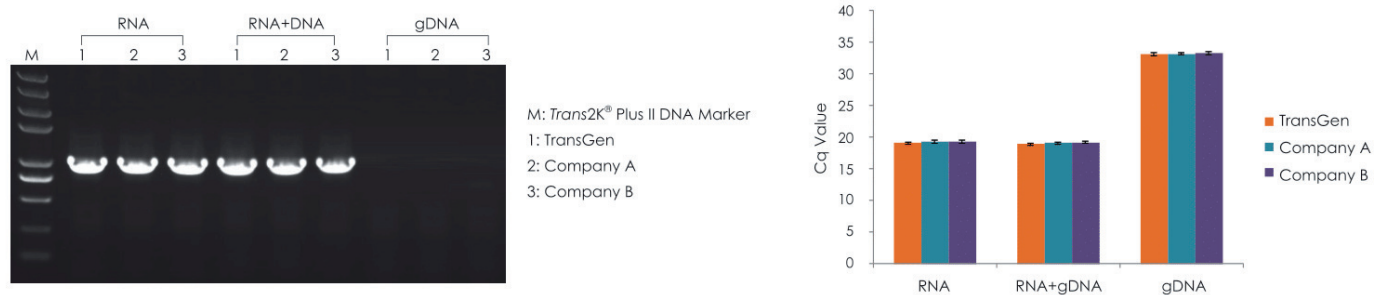
TransScript® One-Step gDNA Removal and cDNA Synthesis SuperMix (AT311)

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 inactivate 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

Comparison with Competitive Products



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

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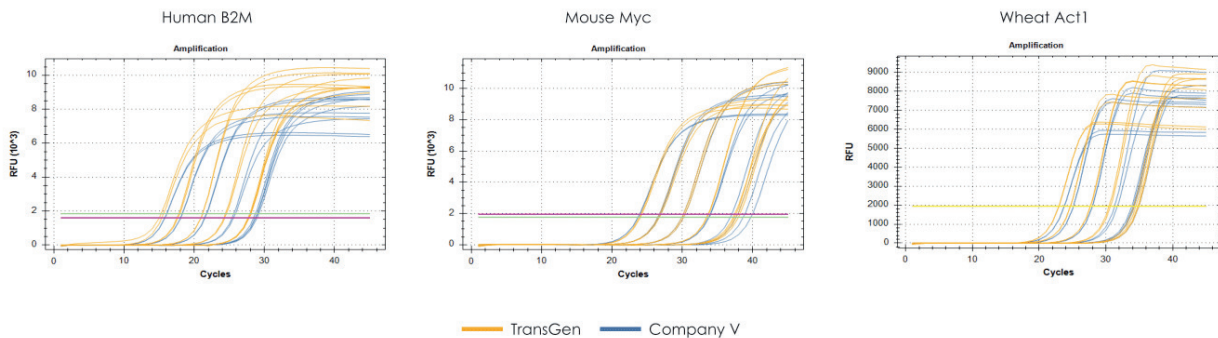
03

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

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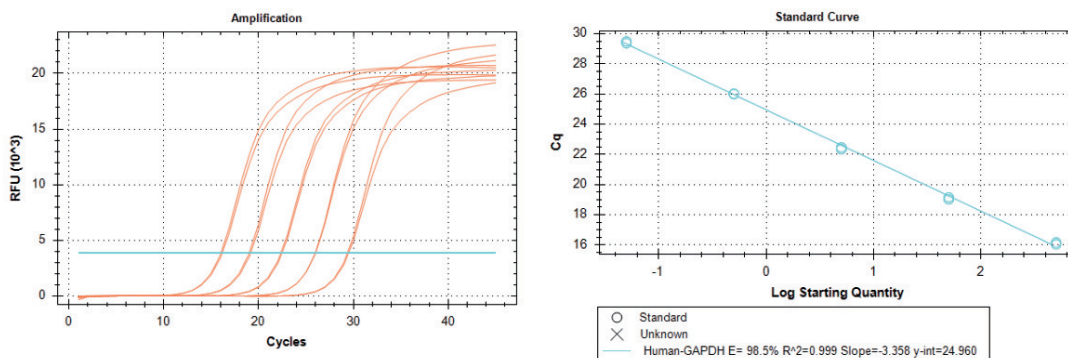
TransScript[®] Uni All-in-One First-Strand cDNA Synthesis SuperMix for qPCR (One-Step gDNA Removal) (AU341)

- 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

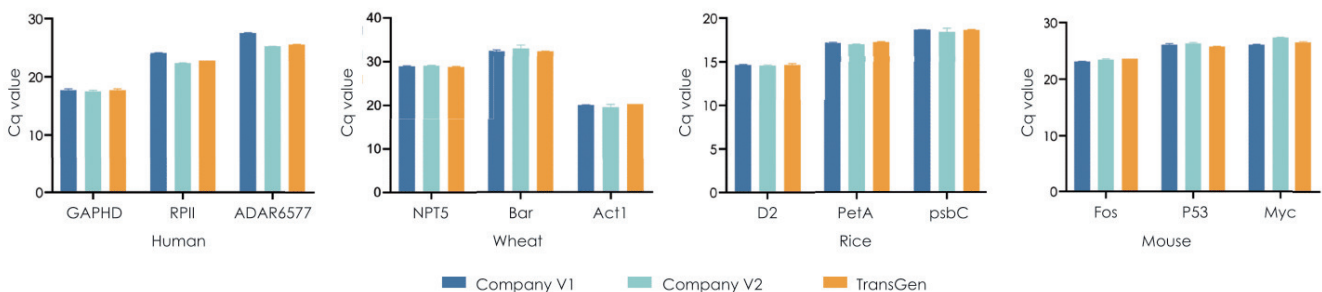
Data

Wide linear range



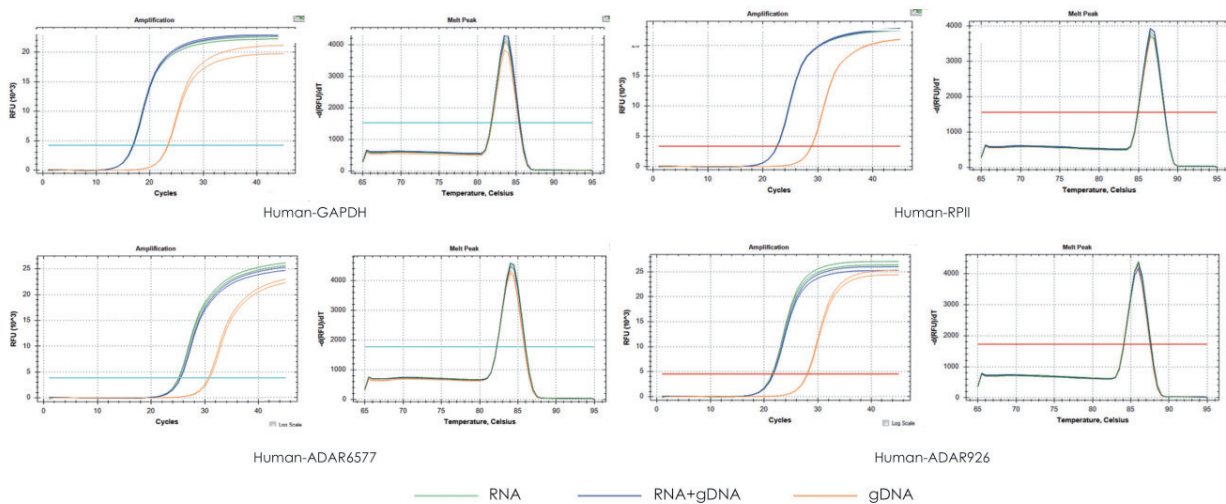
RT was performed with 10 fold diluted RNA (500 ng to 50 pg) as template using reagent from TransGen. The resulting cDNA was used as template for GAPDH gene quantification by qPCR. TransGen product exhibited high reverse transcription efficiency, with a template starting amount as low as 50 pg.

Applicable to a wide range of species



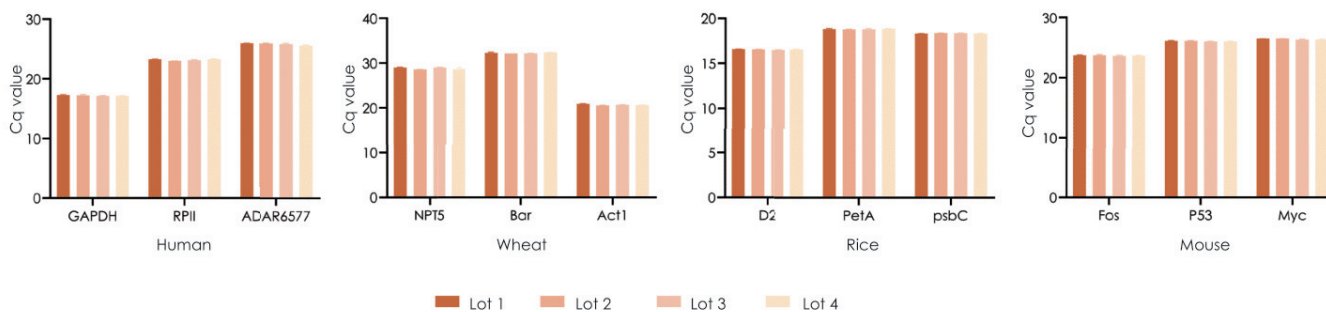
RT was performed with RNA from different species as template using reagents from TransGen, Company V1 and Company V2. The resulting cDNA was used as template for different genes quantification by qPCR. The result showed that TransGen product can apply to various species.

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

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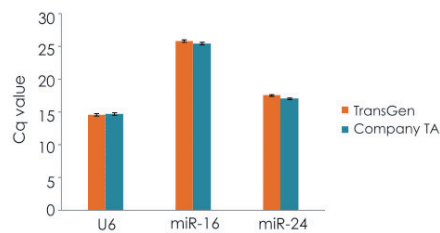
05

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 reagents from TransGen and Company A respectively.

References

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PCR

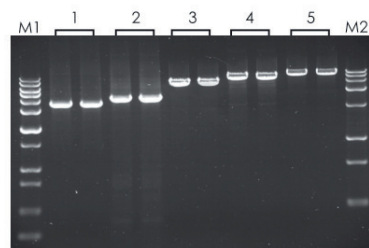
TransStart® FastPfu DNA Polymerase (AP221)

- 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.

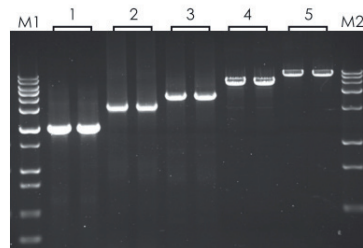
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Data

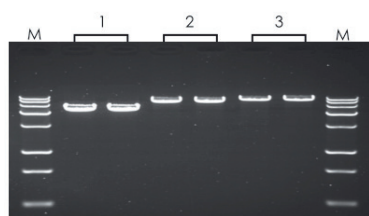
PCR Using different types of template and amplify fragments of various length



M1: 1Kb Plus DNA Ladder
M2: Trans15K 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: Trans15K 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: Trans15K 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

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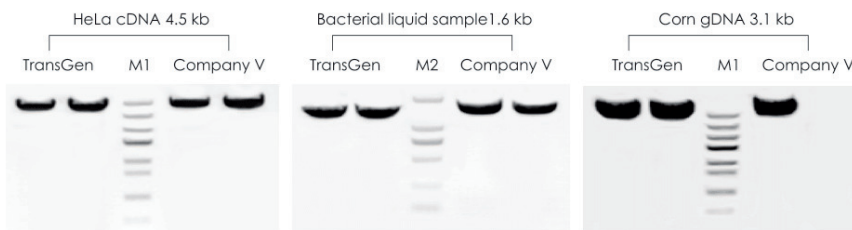
TransStart® FastPfu Fly DNA Polymerase (AP231)

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.

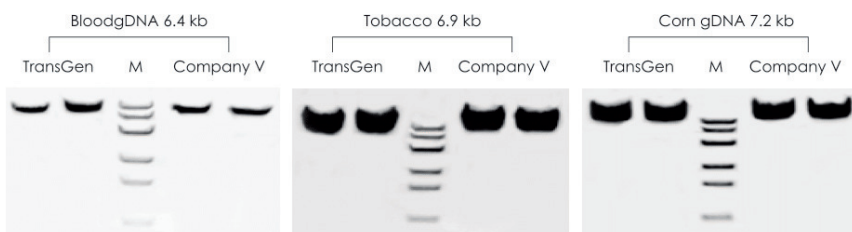
Data

Extension at 12 kb/min



M1: Trans5K 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)
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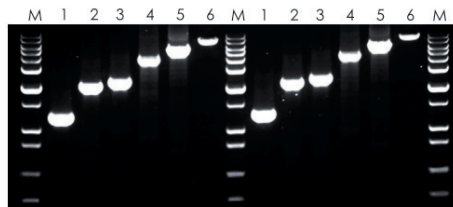
2×TransStart® FastPfu PCR SuperMix (AS221)

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 amplification efficiency



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

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

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

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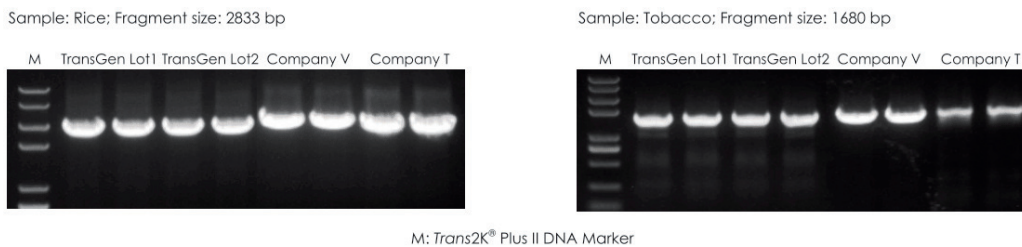
2×TransStart® FastPfu Fly PCR SuperMix (AS231)

- 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.

04

Data

High inhibition resistance



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



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

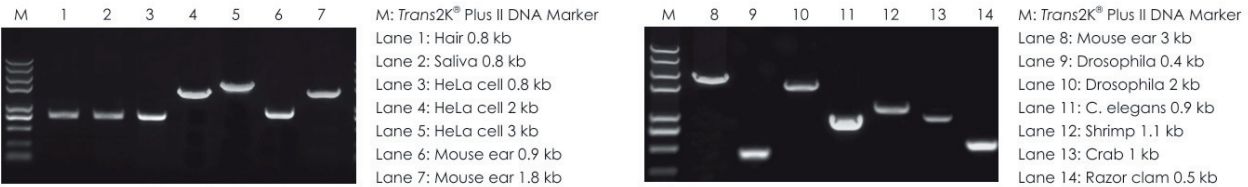
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TransDirect® Animal Tissue PCR Kit (AD201)

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



References

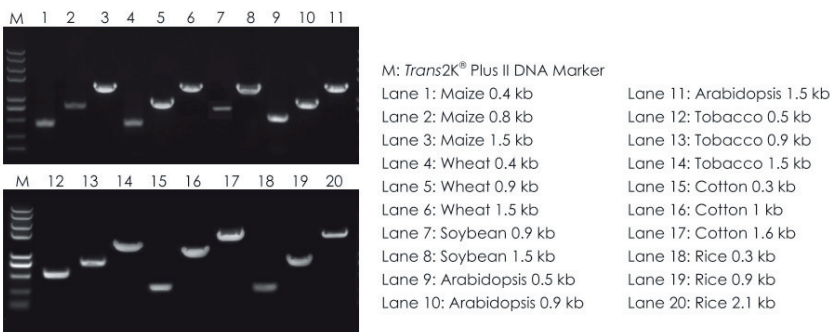
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- Wang S, Teng D, Li X, et al. The evolution and diversification of oakleaf butterflies[J]. *Cell*, 2022. (IF 45.5)

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



References

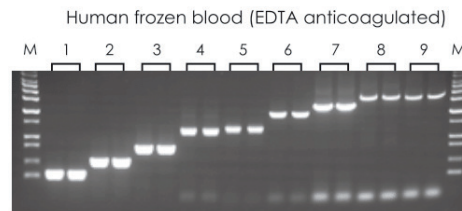
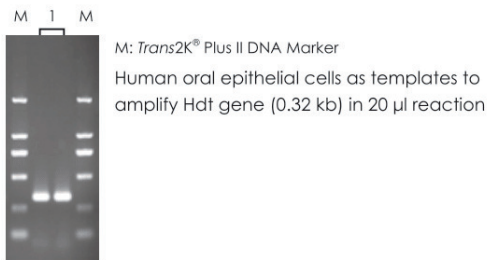
- Gong P, Song C, Liu H, et al. Physalis floridana CRABS CLAW mediates neofunctionalization of GLOBOSA genes in carpel development[J]. *Journal of Experimental Botany*, 2021. (IF 5.6)

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

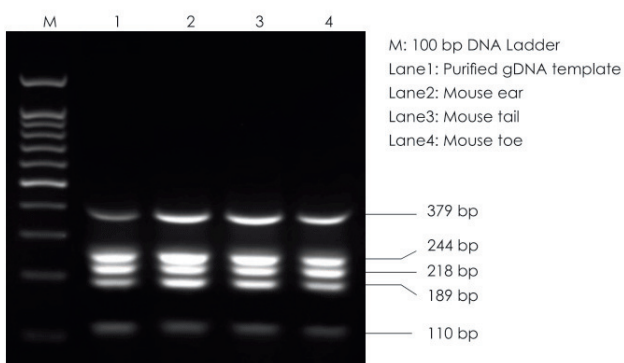


TransDirect® Mouse Genotyping Kit (AD501)

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 to PCR-based rapid mouse genotyping.

Data



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)

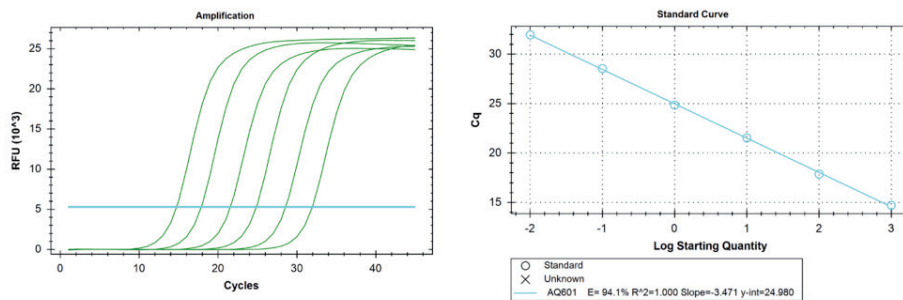
PerfectStart® Green qPCR SuperMix (AQ601)

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.

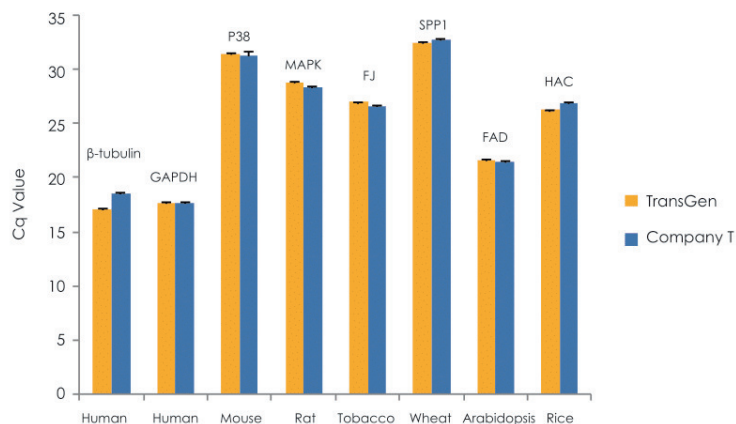
Data

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)

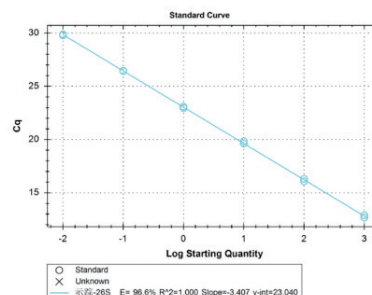
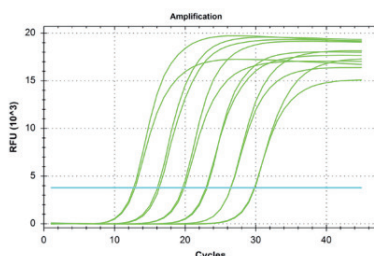
PerfectStart[®] Visual Green qPCR SuperMix (AQ621)

- 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.

02

Data

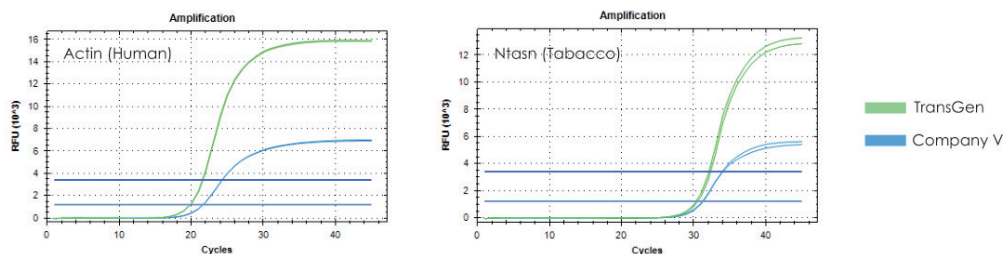
High amplification efficiency



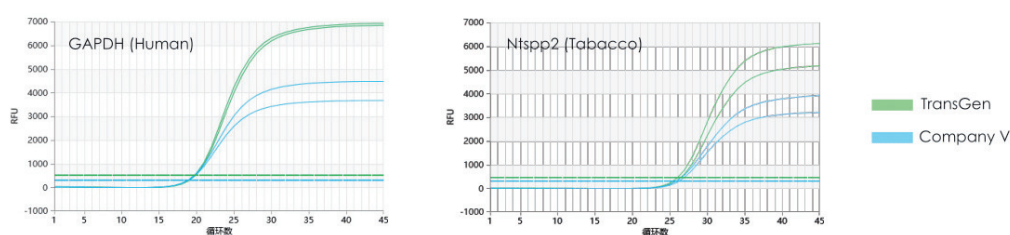
A serial of dilution of plasmid standards (1 ng-0.01 pg, 10-fold dilution) were used as templates to amplify 26S gene using reagent from TransGen. The results showed that the TransGen reagent has high amplification efficiency and good linearity. (qPCR instrument: Bio-Rad CFX96)

Comparison 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.

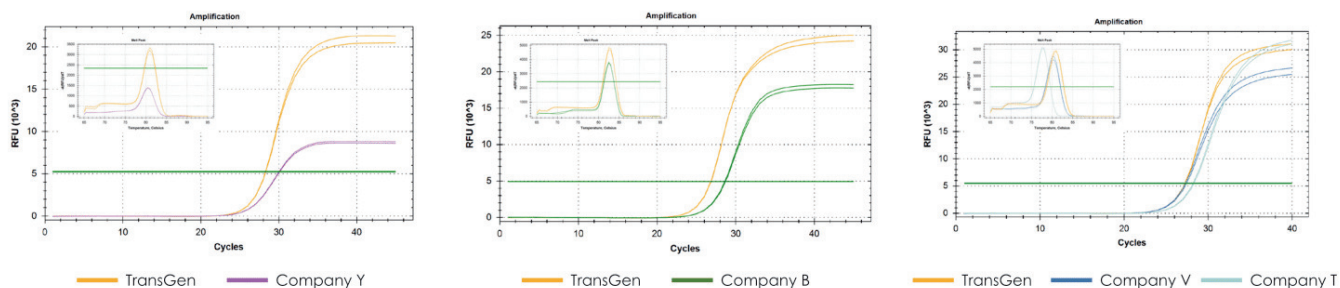
PerfectStart® Universal Green qPCR SuperMix (AQ631)

- 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

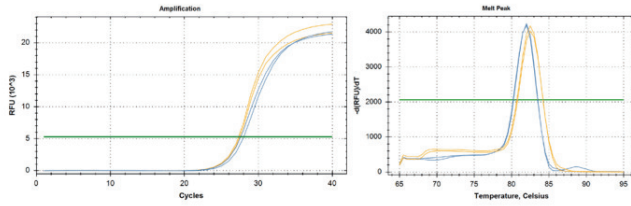
Excellent amplification curve



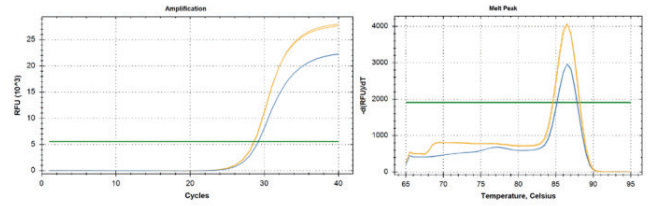
Gene amplification is performed using products from TransGen, Company Y, Company B, Company V, and Company T. The results showed that AQ631 exhibits strong fluorescence intensity (higher plateau phase value) and excellent amplification curve shape.

Compatible with multiple species

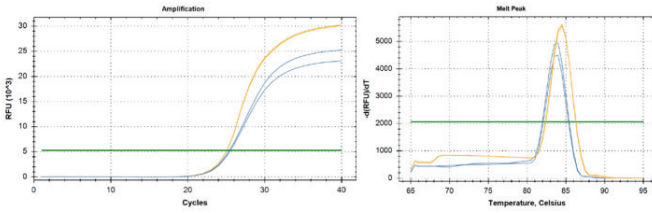
Tobacco



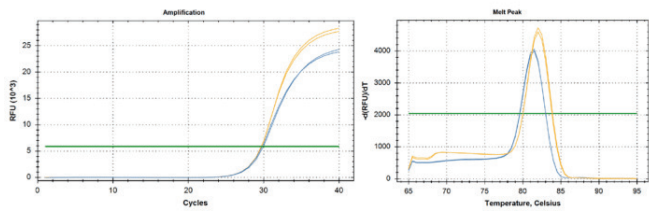
Wheat



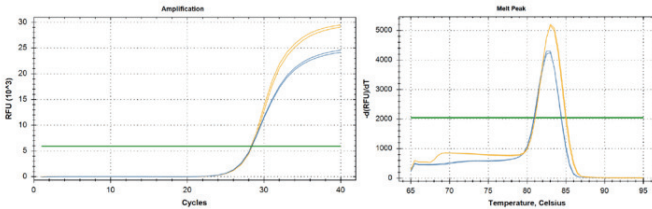
Arabidopsis



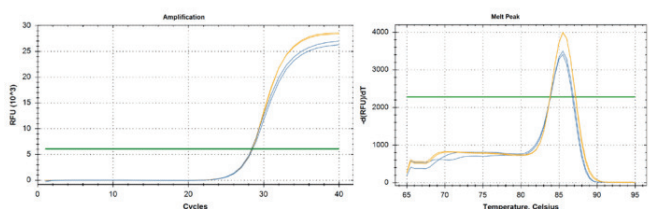
Rice



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	<i>EasyScript</i> [®] 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
	<i>TransScript</i> [®] 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
	<i>TransScript</i> [®] 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
	<i>TransScript</i> [®] Uni All-in-One First-Strand cDNA Synthesis SuperMix for qPCR (One-Step gDNA Removal)	AU341-02	100 rxns
<i>TransScript</i> [®] miRNA First-Strand cDNA Synthesis SuperMix	AT351-01	20 rxns×20 µl System	
	AT351-02	50 rxns×20 µl System	
PCR	<i>TransStart</i> [®] FastPfu DNA Polymerase	AP221-01	250 units
		AP221-02	500 units
		AP221-03	6×500 units
	<i>TransStart</i> [®] FastPfu DNA Polymerase (with 2.5 mM dNTPs)	AP221-11	250 units
		AP221-12	500 units
		AP221-13	6×500 units
	<i>TransStart</i> [®] FastPfu Fly DNA Polymerase	AP231-21	250 units
		AP231-22	500 units
		AP231-23	6×500 units
	2× <i>TransStart</i> [®] FastPfu PCR SuperMix (-dye)	AS221-01	1 ml
		AS221-02	5×1 ml
	2× <i>TransStart</i> [®] FastPfu PCR SuperMix (+dye)	AS221-11	1 ml
		AS221-12	5×1 ml
	2× <i>TransStart</i> [®] FastPfu Fly PCR SuperMix (-dye)	AS231-01	1 ml
		AS231-02	5×1 ml
	2× <i>TransStart</i> [®] FastPfu Fly PCR SuperMix (+dye)	AS231-11	1 ml
		AS231-12	5×1 ml
	<i>TransDirect</i> [®] Animal Tissue PCR Kit	AD201-01	100 rxns×20 µl System
		AD201-02	500 rxns×20 µl System
	<i>TransDirect</i> [®] Plant Tissue PCR Kit	AD301-01	100 rxns×20 µl System
AD301-02		500 rxns×20 µl System	
<i>TransDirect</i> [®] Blood PCR Kit	AD401-01	100 rxns×20 µl System	
	AD401-02	500 rxns×20 µl System	
<i>TransDirect</i> [®] Mouse Genotyping Kit	AD501-01	100 rxns×20 µl System	
	AD501-02	500 rxns×20 µl System	
qPCR	<i>PerfectStart</i> [®] Green qPCR SuperMix	AQ601-01	1 ml
		AQ601-02	5×1 ml
		AQ601-03	15×1 ml
		AQ601-04	25×1 ml
	<i>PerfectStart</i> [®] 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
	<i>PerfectStart</i> [®] Visual Green qPCR SuperMix	AQ621-01	1 ml
		AQ621-02	5×1 ml
		AQ621-03	15×1 ml
		AQ621-04	25×1 ml
	<i>PerfectStart</i> [®] 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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Cat#	Description	Cond.
NB-45-00042-100	Super NI-NTA Agarose Resin	100ml
NB-45-00042-25	Super NI-NTA Agarose Resin	25ml
NB-45-00058-4	Proteus 1 -step Batch Mini Spin Column Pack	40pc
NB-12-6001-3	NeoLine pipette 2-20 µl	1unit
NB-12-0023C	Mini Centrifuge N500C @10,000rpm (Including 6x1.5/2.0ml angle rotor)	1pcs
NB-03-0160	Proteinase K (Powder)	100mg
NB-60-0001	NeoPrep mini	50columns
NB-12-8001-19	Combs for NeoPRO4 mini (1.5mm, 15 wells)	5pieces
NB-12-8001-20	Spacer glasses flat for NeoPRO4 mini (0.75mm, 100*83mm)	5pieces
NB-12-8001-04	Short glasses flat for NeoPRO4 mini (1.0mm, 100*73mm)	10pieces

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