

Product Datasheet

Vazyme - HiScript IV 1st Strand cDNA Synthesis Kit (+gDNA wiper) (R412-02)

Catalog Number R412-02

Category Tools

Description HiScript IV 1st Strand cDNA Synthesis Kit (+gDNA wiper) is the fourth generation of the HiScript series for synthesizing first strand cDNA using Total RNA or Poly A + RNA as templates. Compared to previous versions, the HiScript IV 1st Strand cDNA Synthesis Kit (+gDNA wiper) further enhances reverse transcription efficiency, including stronger extension ability, faster reaction speed and higher tolerance to inhibitors, especially suitable for downstream qPCR quantification and long fragment cDNA amplification. This product premixes HiScript IV RTase, RNase inhibitor, dNTP Mix, etc., and only appropriate reverse transcription primers need to be added according to downstream experiments. The kit provides a genomic DNA elimination module, where the 5 × gDNA wiper Mix in the kit can quickly remove genomic DNA contamination under conditions of 42 °C for 2 min, ensuring reliable and authentic experimental data.

Usage Notes Restricted to UK and Ireland's customers ONLY

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Storage

Store at -30 ~ -15 °C and transport at ≤0°C. Performance Enhanced Extension Capability Using total RNA from 293T cells as a template, reverse transcription reactions were performed with Vazyme #R412, Vazyme #R312, and other commercially available reverse transcription products (Supplier A, B) under identical conditions. The resulting cDNA was then amplified using 2× Vazyme Lamp Master Mix (Dye Plus) (Vazyme #P312) to generate target fragments of varying lengths. As shown in the figure, all tested reverse transcriptases successfully synthesized 9.9 kb cDNA fragments. However, for 15 kb cDNA fragments, R412 demonstrated a higher cDNA yield compared to R312 and significantly outperformed the reverse transcription products from Supplier A and B. Higher Reverse Transcription Efficiency Using 100 ng of RNA from animal cells, animal tissues, and plant tissues as templates, reverse transcription reactions were performed with Vazyme #R412, Vazyme #R423, Vazyme #R312, and other commercially available reverse transcription reagents (Supplier A, B) following their respective protocols. The resulting cDNA was quantified for multiple genes using qPCR analysis. As shown in the figure, Vazyme #R412 and Vazyme #R423 consistently achieved lower Ct values across different test systems, outperforming Vazyme #R312 and the reverse transcription products from Supplier A and B. Faster Reaction Speed Using total RNA from 293T cells as a template, reverse transcription was performed with Vazyme #R412, Vazyme #R312, and other commercially available reverse transcription products (Supplier A, B) following their respective protocols at different reaction times (5 min, 10 min, 15 min, and 30 min). The resulting cDNA was then amplified using Vazyme #P312 to generate a 9.9 kb target fragment. As shown in the figure, most reverse transcriptases effectively amplified the 9.9 kb cDNA fragment within 30 minutes. However, at just 5 minutes of reaction time, R412 still demonstrated excellent reverse transcription efficiency, outperforming Vazyme #R312 and the reverse transcription products from Supplier A and B.

Background

Only available for the UK and Republic of Ireland

Note

For research use only

Expiration Date

12 months from date of receipt.

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