

Reduce innate immunogenicity through scalable, high-yield Ψ -RNA production

INCOGNITO™ T7 Ψ -RNA Transcription Kit

Product Intro

The INCOGNITO™ T7 Ψ -RNA Transcription Kit is optimized for high-yield synthesis of pseudouridine-containing, *in vitro* transcribed RNA (Ψ -RNA). Reactions produce up to 100 μ g of Ψ -RNA from 1 μ g of DNA template in two hours and can be easily scaled up to produce milligram amounts of Ψ -RNA. Additionally, Ψ -mRNAs induce lower innate immune responses in mammalian cells, making them beneficial for various applications.

Benefits

- **High yield:** Produce up to 100 μ g of Ψ -RNA from 1 μ g of DNA template.
- **Lower immunogenicity:** Synthesized transcripts include Ψ TP for reduced immune response.
- **Scalable:** The standard reaction can be scaled up to produce milligram amounts of Ψ -RNA.

Product Description

The [INCOGNITO™ T7 \$\Psi\$ -RNA Transcription Kit](#) is optimized for high-yield synthesis of pseudouridine-containing RNA (Ψ -RNA) from an *in vitro* transcription (IVT) reaction. Although yield varies with the DNA template and other factors, a standard two-hour, 20 μ l reaction will yield up to 100 μ g of Ψ -RNA from 1 μ g of DNA template. These yields are made possible by the high-performance properties of the T7-Scribe™ enzyme. The standard reaction can be scaled up to produce milligram amounts of RNA containing the canonical nucleotides ATP, CTP, GTP and the modified nucleotide pseudouridine-5'-triphosphate (Ψ TP). INCOGNITO™ T7 IVT Ψ -RNA can be further processed into mRNA (5'-capped and 3'-poly[A] tailed) using [ScriptCap™ Cap 1 Capping System](#) (contains both [ScriptCap™ Capping Enzyme](#) and [2'-O-Methyltransferase](#)) and [A-Plus™ Poly\(A\) Polymerase Tailing Kit](#), available separately. Modified Ψ -mRNAs translate into higher protein levels and induce lower innate immune responses in mammalian cells expressing various RNA sensors compared to unmodified mRNAs.

Product Performance

The INCOGNITO™ T7 Ψ -RNA Transcription Kit is functionally tested under standard reaction conditions using the T7 Control Template DNA. The kit must produce at least 90 μ g of RNA from 1 μ g of the T7 Control Template DNA in two hours at 37°C.

The recommended reaction conditions should give excellent yields of RNA with most templates. However, the yield may be improved for some templates by extending the reaction time (e.g., to four hours), increasing the amount of template in the reaction, or increasing the reaction temperature from 37°C to 42°C.

Ordering information

Catalog Number	Description
C-ICTY110510	INCOGNITO™ T7 Ψ -RNA Transcription Kit (10 reactions)

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