

Maximize RNA production with N1meΨ-RNA transcription for low immune response

INCOGNITO™ T7-FlashScribe™ N1meΨ-RNA Transcription Kit

Product Intro

The INCOGNITO™ T7-FlashScribe™ N1meΨ-RNA Transcription Kit is designed to maximize yields of N1-methyl-pseudouridine-containing RNA (N1meΨ-RNA) through *in vitro* transcription. A reaction produces up to 160 µg of N1meΨ-RNA from 1 µg of DNA template in just one hour. The reactions can be easily scaled up to produce milligram amounts of N1meΨ-RNA. N1meΨ-mRNAs induce lower innate immune responses in mammalian cells, making them beneficial for various applications.

Benefits

- **Maximum yield:** Yields up to 160 µg of N1meΨ-RNA from 1 µg of DNA template.
- **Shorter workflow:** Produce N1meΨ-RNA in just one hour.
- **Lower immunogenicity:** Synthesized transcripts include N1meΨTP for reduced immune response.
- **Scalable:** The standard reaction can be scaled up to produce milligram amounts of N1meΨ-RNA.

Product Description

The [INCOGNITO™ T7-FlashScribe™ N1meΨ-RNA Transcription Kit](#) is designed to maximize yields of N1-methyl-pseudouridine-containing RNA (N1meΨ-RNA) through *in vitro* transcription. A standard 60-minute, 20 µl reaction can yield up to 160 µg of N1meΨ-RNA from 1 µg of DNA template thanks to the high-performance T7-FlashScribe™ enzyme. The standard reaction can be scaled up to produce milligram amounts of RNA containing ATP, CTP, GTP, and N1-methyl-pseudouridine-5'-triphosphate (N1meΨTP). N1meΨ-mRNAs are translated into protein at higher levels and induce lower innate immune responses in mammalian cells compared to unmodified mRNAs. The INCOGNITO™ N1meΨ-RNA can be further processed into mRNA 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.

Product Performance

The INCOGNITO™ T7-FlashScribe™ N1meΨ-RNA Transcription Kit is functionally tested under standard reaction conditions using the T7 Control Template DNA. The kit must produce at least 120 µg of RNA from 1 µg of the T7 Control Template DNA in 60 minutes at 37°C.

The standard 20 µl, 60-minute reaction was optimized for transcription using 1 µg of linearized DNA template. However, incubation times can be adjusted if desired. Table 1 summarizes results with 1 µg of the control template DNA in a standard reaction with incubation times from 20-120 minutes. Results may vary depending on the template used.

Table 1. IVT RNA yields from INCOGNITO™ T7-FlashScribe™ N1meΨ-RNA Transcription Kit reactions incubated between 20-120 minutes. The standard protocol uses an incubation time of 60 minutes.

Incubation Time (minutes)	20	30	60	90	120
RNA yield (µg)	78-80	100-109	120-175	120-172	121-199

Ordering information

Catalog Number	Description
IFMY240625	INCOGNITO™ T7-FlashScribe™ N1meΨ-RNA Transcription Kit (25 reactions)

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