Toutes les photos (1)

Documents

FDS

COO/COA

Plus de documents

RPOLT7-RO Roche

T7 RNA Polymerase

from *Escherichia coli* BL 21/pAR 1219

Synonyme(s):
polymerase

Numéro de classification (Commission des enzymes): 2.7.7.6 (BRENDA, IUBMB)

Référence	Conditionnement	Disponibilité		Prix	Quantité
10881767001	1000 UNITS	Only 2 left in stock (more on the way)	Détails...	155,00 €	− +
10881775001	5000 UNITS	Date d'expédition estimée le 03 octobre 2022	Détails...	538,00 €	− +

Demander une commande en gros

Ajouter au panier

PRODUITS RECOMMANDÉS

Roche

Roche

RPOLSP6-RO

SP6 RNA Polymerase

from *Escherichia coli* BL 21/pSR3

Consulter le prix et la disponibilité

10999644001

SP6/T7 Transcription Kit

sufficient for 2 x 20 assays (stadard transcription), kit of 1 (12 components), suitable for DNA sequencing, suitable...

Consulter le prix et la disponibilité

PROPRIÉTÉS

Niveau de qualité	100
Forme	solution
Conditionnement	pkg of 1,000 U (10881767001) pkg of 5,000 U (10881775001)
manufacturer/tradename	Roche
Expédié(e)(s) dans	dry ice
Temp. de stockage	−20°C

Catégories apparentées

Roche® Life Science Products

DESCRIPTION

Description générale

T7 RNA polymerase is commonly used to transcribe DNA which has been cloned into vectors which have two phage promoters in opposite orientation. RNA can be selectively synthesized from either strand of the insert DNA with different polymerases. Homogeneously labeled single-stranded RNA can be generated with this system. Transcripts can be non-radioactively labeled with biotin or DIG-11-UTP or radioactively labeled to high specific activity with [α-^{32}P] or [α-^{35}S]-labeled nucleotides.

Synthesis of hybridization probes: T7 RNA polymerase allows highly efficient production of homogeneously labeled RNA. This labeled RNA may be used as hybridization probes in Southern, northern, and dot blots, as well as in situ hybridizations.
Suitable labels: Transcripts can be nonradioactively labeled with biotin-16-UTP or DIG-11-UTP. They may also be radioactively labeled to high specific activity with [α-32P]- or [α-35S]-labeled nucleotides.

Spécificité

Promotor specifity
T7 RNA polymerase is extremely promoter-specific and only transcribes bacteriophage T7 DNA or DNA cloned downstream of a T7 promoter. Although the T7 and T3 promoter sequences differ only by 3 bp, T7 RNA polymerase only transcribes DNA cloned downstream of its promoter.
Heat inactivation: Stop the reaction by adding 2 µl 0.2 M EDTA (pH 8.0) and/or heat to 65 °C.

Application

- T7 RNA Polymerase can transcribe RNA from cloned DNA templates that are downstream from a T7 promoter. The synthesis can be performed with labeled NTPs to generate highly labeled RNA. Synthesized RNA can be used in many applications, including: RNA or DNA blotting techniques
- *In situ* hybridization

- RNase protection studies: Transcripts synthesized by the enzyme are used as precursor RNA for studies on RNA splicing and processing.
- Synthesis of capped RNA *in vitro* with addition of m7GpppG or m7GpppA in excess over GTP or ATP during the transcription reaction. The generated antisense RNA can be introduced into cells to suppress the expression of the corresponding genes.
- Microarray target synthesis

Conditionnement

1 kit containing 2 components

Définition de l'unité

One unit is the enzyme activity which incorporates 1 nmol CMP in acid-precipitable RNA products within 60 minutes at +37 °C.

Volume Activity: ≥20 U/µl

Notes préparatoires

Activator: The T7 RNA polymerases are strongly stimulated by BSA or spermidine.

Autres remarques

Test Buffer
40 mM Tris-HCl, pH 8.0 (+20°C), 6 mM MgCl2, 10 mM dithiothreitol, 2 mM spermidine, pH approximately 8.0 (+20°C).
Absence of Endonucleases
1. 1 µg lambda DNA is incubated with T7 RNA polymerase for 4 hours at +37°C in 25 µl test buffer. The number of enzyme units which show no degradation of lambda DNA is >100 U.
2. 1 µg Eco RI/Hind III fragments of lambda DNA is incubated with T7 RNA polymerase for 4 hours at +37°C in 25 µl test buffer. The number of enzyme units which show no alteration of the banding pattern is >100 U.
Absence of Nicking Activity
1 µg pBR322 DNA is incubated with T7 RNA polymerase for 4 hours at +37°C in 25 µl test buffer. The number of enzyme units

which show no relaxing of supercoiled structure is >100 U.

Absence of RNases

4 µg MS2 RNA are incubated with T7 RNA polymerase for 4 hours at +37°C in 50 µl test buffer. The number of enzyme units which show no degradation of MS2 RNA is >100 U.

Performance in Transcription Assay

T7 RNA polymerase is function tested in the SP6/T7 Transcription Kit (Cat. No. 10 999 644 001). The incorporation rate in the standard assay with 0.5 µg pSPT19 neo DNA linearized with Eco RI and 50 mCi [alpha-32P] CTP, [400 Ci/mmol (15 TBq/mmol)] gives >50% of the input radioactivity in 20 minutes.

For life science research only. Not for use in diagnostic procedures.

Roche has 10x concentrated RNA Labeling Mixes that are specially designed for DIG- or biotin-labeling. These mixes work well with T7 RNA Polymerase.

Composants de kit seuls

Réf. du produit	Description
	T7 RNA Polymerase, in buffer, pH 7.9 ≥20 U/µl
	Transcription Buffer 10x concentrated

INFORMATIONS SUR LA SÉCURITÉ

Pictograms

Mention d'avertissement

Warning

Mentions de danger

H319

Conseils de prudence

GHS07

P264 - P280 - P305 + P351 + P338 - P337 + P313

Classification des risques
Eye Irrit. 2

Code de la classe de stockage
12 - Non Combustible Liquids

WGK
WGK 2

Flash Point(F)
does not flash

Point d'éclair C
does not flash

DOCUMENTATION

Certificat d'analyse

Saisir un numéro de lot pour rechercher un certificat d'analyse (COA).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COA)

Rechercher

Certificat d'origine

Saisir un numéro de lot pour rechercher un certificat d'origine (COO).

Numéro de lot

e.g. 023J5431

Comment saisir un numéro de lot (COO)

Rechercher

Plus De Documents

Enzyme Explorer

FDS

LES CLIENTS ONT ÉGALEMENT CONSULTÉ

Sigma-Aldrich

T2076

TargeTron™ Vector pAR1219

Expression Vector for Bacterial Gene Knockout

Consulter le prix et la disponibilité

Roche

DIGUTP-RO

Digoxigenin-11-UTP

Consulter le prix et la disponibilité

ARTICLES REVUS PAR DES PAIRS

High-throughput spatial mapping of single-cell RNA-seq data to tissue of origin.

Kaia Achim et al.

Nature biotechnology, 33(5), 503-509 (2015-04-14)

Understanding cell type identity in a multicellular organism requires the integration of gene expression profiles from individual cells with their spatial location in a particular tissue. Current technologies allow whole-transcriptome sequencing of spatially identified cells but lack the throughput needed

---

Programmable CRISPR interference for gene silencing using Cas13a in mosquitoes.

Aditi Kulkarni et al.
Journal of genomics, 8, 30-36 (2020-03-20)

In the CRISPR-Cas systems, Cas13a is an RNA-guided RNA nuclease specifically targeting single strand RNA. We developed a Cas13a mediated CRISPR interference tool to target mRNA for gene silencing in mosquitoes. A Cas13a expressing plasmid was delivered to mosquitoes by

---

MCPIP1 down-regulates IL-2 expression through an ARE-independent pathway.

Min Li et al.
PloS one, 7(11), e49841-e49841 (2012-11-28)

IL-2 plays a key role in the survival and proliferation of immune cells, especially T lymphocytes. Its expression is precisely regulated at transcriptional and posttranscriptional level. IL-2 is known to be regulated by RNA binding proteins, such as tristetraprolin (TTP)

Gap43 transcription modulation in the adult brain depends on sensory activity and synaptic cooperation.

Nicole Rosskothen-Kuhl et al.
PloS one, 9(3), e92624-e92624 (2014-03-22)

Brain development and learning is accompanied by morphological and molecular changes in neurons. The growth associated protein 43 (Gap43), indicator of neurite elongation and synapse formation, is highly expressed during early stages of development. Upon maturation of the brain, Gap43

Sfrp1 and Sfrp2 are not involved in Wnt/β-catenin signal silencing during lens induction but are required for maintenance of Wnt/β-catenin signaling in lens epithelial cells.

Yuki Sugiyama et al.
Developmental biology, 384(2), 181-193 (2013-10-22)

During eye lens development, regulation of Wnt/β-catenin signaling is critical for two major processes: initially it must be silent in the lens placode for lens development to proceed, but subsequently it is required for maintenance of the lens epithelium. It

---

Afficher tous les articles scientifiques apparentés

PROTOCOLES ET ARTICLES SCIENTIFIQUES

Articles

T7 RNA Polymerase - recombinant, expressed in E. coli

T7 RNA Polymerase is a DNA-dependant RNA Polymerase that exhibits a very high specificity for the T7 promoter sequence. The polymerase is useful for synthesizing large amounts of RNA suitable for in vitro translation and anti-sense RNA research.

mRNA Synthesis for the Development of Vaccines and Therapeutics

Understand how mRNA vaccines induce immunity. and read how synthetic mRNA is prepared for vaccine immunogens and other biopharmaceuticals. Find reagents for synthesis of mRNA.

PRODUITS CONSULTÉS RÉCEMMENT

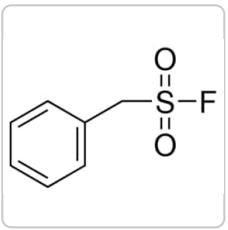
Roche

10875406001

***N*-Acetyl-β-D-Glucosaminidase (NAG)**

sufficient for ~50 tests

Consulter le prix et la disponibilité



Roche

PMSF-RO

PMSF

Phenylmethylsulfonyl fluoride

Consulter le prix et la disponibilité

SERVICE TECHNIQUE

Notre équipe de scientifiques dispose d'une expérience dans tous les secteurs de la recherche, notamment en sciences de la vie, science des matériaux, synthèse chimique, chromatographie, analyse et dans de nombreux autres domaines..

Contacter notre Service technique

Le contenu de cette page vous a-t-il été utile ?*

Que pouvons-nous faire pour améliorer cette page spécifique de notre site Internet ?

Envoyer