

C1110 / C1120 · 50 µL STANDARD REACTION · CURRENT COMMERCIAL

ZerothBIO Cell-Free Protein Synthesis Kit

Coupled *in vitro* transcription & translation — T7 expression system

Produce recombinant protein directly from template DNA in an optimized *E. coli*-based cell-free system, with target protein synthesis within 2–3 h under the standard incubation options.

- Two core reagents supplied — add template DNA and nuclease-free water, then incubate
- Compatible with circular plasmid DNA and linear PCR products
- T7 · Batch expression at a 50 µL standard reaction
- Two orderable pack sizes: 100 rxn and 200 rxn

ORDERABLE SKUS · LIST PRICE

100 rxn

Cat. No. C1110

₩500,000 · ₩100,000 / mL

200 rxn

Cat. No. C1120

₩800,000 · ₩80,000 / mL

50 µL standard reaction · T7 · Batch

For Research Use Only

01 Key Specifications at a Glance

REACTION	INCUBATION	TEMPLATE	TARGET SIZE
50 µL Standard reaction volume per rxn	2–3 h 30 °C / 3 h or 37 °C / 2 h	Plasmid / PCR Circular plasmid or linear DNA with T7 elements	≤150 kDa Yield 0.2–2.0 mg/mL, target-dependent*

* Protein yield is stated on a 50 µL reaction basis and is target-dependent. The range is not an expected value for every construct; determine expression empirically for each target.

02 Standard Workflow

01 Prepare DNA T7 promoter · RBS · T7 terminator	02 Mix on ice 25 µL + 15 µL + DNA/water (10 µL)	03 Incubate 30 °C / 3 h or 37 °C / 2 h	04 Analyze SDS-PAGE · Western blot · activity assay
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03 Kit Contents

COMPONENT	C1110 · 100 rxn	C1120 · 200 rxn
2x Master Mix	5 vials × 500 µL	5 vials × 1,000 µL
<i>E. coli</i> Extract	5 vials × 300 µL	5 vials × 600 µL
Reaction basis	50 µL × 100 rxn	50 µL × 200 rxn

Template DNA and nuclease-free water are user-supplied and are not kit components.

REQUIRED BUT NOT SUPPLIED

- Template DNA (plasmid or PCR product)
- Nuclease-free water
- Incubator, heating block or thermal cycler capable of 30 °C and 37 °C
- Ice or cooling block, microcentrifuge, calibrated pipettes, nuclease-free filter tips
- Reagents and equipment for SDS-PAGE, Western blot or activity assay

FOR RESEARCH USE ONLY · Not for use in diagnostic or therapeutic procedures.

TECHNICAL REFERENCE · 50 µL STANDARD REACTION

Controlled values for Cat. No. C1110 / C1120, re-expressed from the approved User Manual and Technical Data Sheet.

04 Product Specifications

SPECIFICATION	APPROVED VALUE
Reaction basis	50 µL / reaction
Expression system	T7 · Batch
Reaction condition	30 °C / 3 h or 37 °C / 2 h
Target protein size	≤150 kDa
Protein yield	0.2–2.0 mg/mL*
Template	Circular plasmid DNA or linear DNA (PCR product)
Purification	Not included

* 50 µL basis; target-dependent, not an expected value for every construct.

05 Reaction Composition

COMPONENT	NTC	50 µL RXN
2x Master Mix	25 µL	25 µL
<i>E. coli</i> Extract	15 µL	15 µL
Template DNA	—	x µL
Nuclease-free water	10 µL	(10 – x) µL
Total volume	50 µL	50 µL

Prepare on ice. Template DNA + nuclease-free water must equal 10 µL.
Template DNA: T7 promoter, RBS and T7 terminator required; recommended starting concentration approx. 5–8 µg/mL final in the reaction (0.25–0.4 µg per 50 µL reaction).

06 Storage, Handling & Analysis

STORAGE –70 °C to –20 °C Store all components in this range. Use by the EXP date on the product label.	FREEZE-THAW Avoid repeats Aliquot <i>E. coli</i> Extract upon receipt when practical; store aliquots at –70 °C.	THAW & MIX On ice Thaw immediately before use. Spin down, resuspend uniformly; do not generate bubbles in the extract.
LOADING 2 µL start For SDS-PAGE or Western blot, load 2 µL of reaction mixture as a starting point.	CONTROL Run an NTC <i>E. coli</i> Extract contains background proteins that may complicate band interpretation.	SAFETY Current MSDS Consult the current MSDS for 2x Master Mix and <i>E. coli</i> Extract before handling.

For bioactivity assays, determine target concentration with an analysis method appropriate for the target.

07 Ordering Information

CAT. NO.	DESCRIPTION	PACK SIZE	LIST PRICE	PER mL
C1110	ZerothBIO Cell-Free Protein Synthesis Kit 100 rxn	100 rxn · 50 µL	₩500,000	₩100,000 / mL
C1120	ZerothBIO Cell-Free Protein Synthesis Kit 200 rxn	200 rxn · 50 µL	₩800,000	₩80,000 / mL

List prices in Korean won (KRW). Per-mL price is calculated on total reaction volume (50 µL × rxn: 5 mL for C1110, 10 mL for C1120). Both SKUs are current commercial products. Contact ZerothBIO for quotations.

08 Support & Controlled References

TECHNICAL SUPPORT & ORDERS

Email zerothbio@gmail.com

Tel 070-8064-1061

Web www.zerothbio.com

CONTROLLED TECHNICAL BASIS

ZBIO-PRD-CFPS-MANUAL-001 · v1.1.2

ZBIO-PRD-CFPS-TDS-001 · v1.0

ZBIO-PRD-CFPS-MSDS-001 / 002 · v1.0

ZBIO-PRD-MASTER-001 · v1.4

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