

# myTXTL<sup>®</sup> Cell-Free Protein Expression Kits

## OVERVIEW

**myTXTL** is a fast and easy-to-use solution for *in vitro* protein expression. Gene transcription (TX) and translation (TL) is executed in a single reaction tube by a highly efficient cell-free system utilizing the endogenous TXTL machinery from *E. coli*. Meanwhile, compatibility with the well-established T7 expression system is maintained, providing you with maximum flexibility.

## FEATURES & BENEFITS

- Easy** – Simply mix template DNA and ready-to-use myTXTL Master Mix
- Simple** – Only standard laboratory equipment required
- Fast** – Save time by avoiding transformation, clone selection and cell lysis
- Flexible** – Use plasmid, linear DNA or RNA templates
- Versatile** – Compatible with T7 expression system
- High Yield** – Perform more analyses on a single TXTL reaction

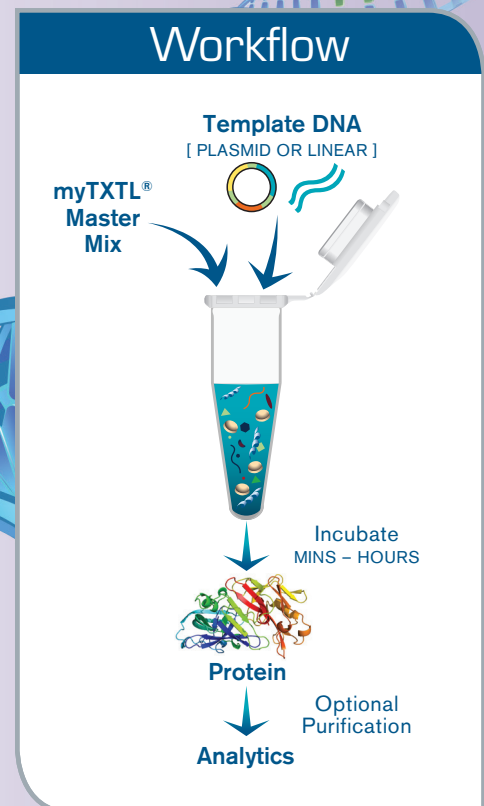
## APPLICATIONS

### Protein Expression

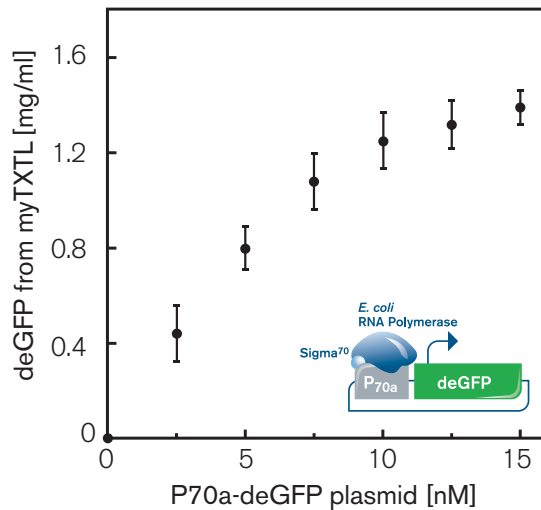
- High-Throughput Screening
- Difficult-to-Express Proteins
- *In vitro* Protein Evolution
- Protein Functionalization
- Molecular Interaction Analysis
- Membrane Proteins

### Synthetic Biology

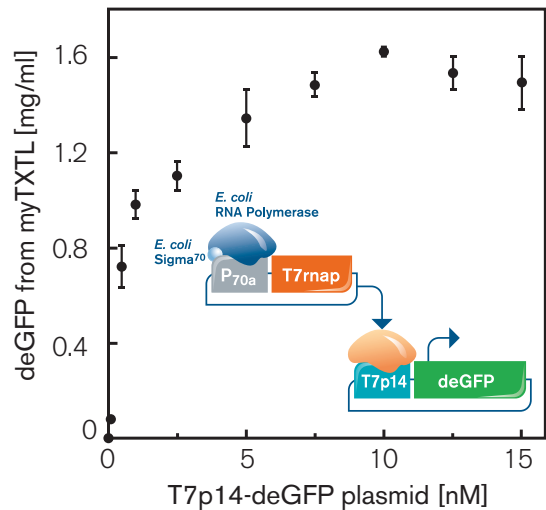
- Gene Circuits
- Rapid Prototyping
- Phage Production



## PERFORMANCE DATA



**Fig 1. Effect of plasmid concentration on protein yield.** The endogenous *E. coli* TXTL machinery (core RNA polymerase & sigma factor  $\sigma^{70}$ ) regulates gene expression on  $P_{70a}$ -vectors encoding a strong constitutive promoter.



**Fig 2. Example of a two-plasmid gene network.** Co-expression of T7 RNA polymerase facilitates T7- promoter controlled gene expression in myTXTL.

## ENHANCE PROTEIN PRODUCTION WITH LINEAR DNA

Boost protein yield from linear DNA templates by simply using the myTXTL Linear DNA Expression Kit. Conveniently screen large DNA libraries of synthesized gene fragments or PCR products in a high-throughput manner using automated liquid handling.

## COMPLETE T7 EXPRESSION SYSTEM

Easily express plasmids and gene fragments driven by a T7 promoter with the myTXTL T7 Expression kit. The system provides co-expression of T7 RNA polymerase for continuous transcription and translation of T7-driven constructs.

## myTXTL TOOLBOX 2.0 PLASMID COLLECTION

We offer over 100 plasmids with various promoters and open reading frames (ORFs) to investigate gene regulation and molecular turnover. ORFs include a wide selection of transcription factors, TXTL modulators, and fluorescent reporter proteins to build complex gene circuits. Contact us for a complete list of available plasmids.

## READY-TO-USE HIGH PURITY PLASMIDS

Select from a growing collection of ready-to-use, high purity (HP) plasmids for direct use with any of the myTXTL kits, thus eliminating the need for plasmid purification.

## PRODUCT TABLE

Cat. No.	Description	Reactions
505024	myTXTL T7 Expression Kit	24
505096	myTXTL T7 Expression Kit	96
507024	myTXTL Sigma 70 Master Mix Kit	24
507096	myTXTL Sigma 70 Master Mix Kit	96
508024	myTXTL Linear DNA Expression Kit	24
508096	myTXTL Linear DNA Expression Kit	96