

High Throughput Protein Synthesizer

Abnova presents a new generation, fully automated robotic desktop protein synthesizer, Protemist[®] DT II, for high throughput eukaryotic protein production. The system is developed and manufactured by CellFree Sciences Co., Ltd. It synthesizes the protein of interest using a special wheat germ lysate and a bi-layer reaction. Protemist[®] DT II can run two scales of translational reaction, 1.2 ml (24 well) or 6 ml (6 well). Batch affinity purification is available for affinity tagged fusion protein synthesized in 6-ml (6 well) reaction scale. This is an expert system in transcription, translation, and purification. The protocol and automation is designed for easy operation obviating the need for manual handling and production.

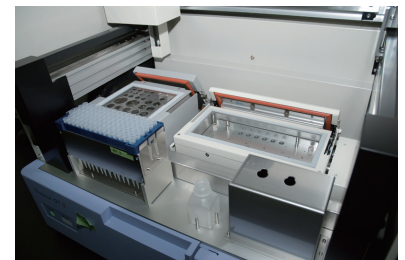
Features

- Wheat germ cell-free protein synthesis
- Start with expression vector and gene of interest
- Transcription, translation, and purification in less than 35 hours
- Batch affinity purification for 6-well format
- Approximately 0.5 mg/well (6-well format) or 0.1 mg/well (24-well format) of crude protein production
- Wide temperature control range for purification (4°C to 37°C)
- Control, record, and data retrieval by PC
- Disposable containers, tips, and tubes



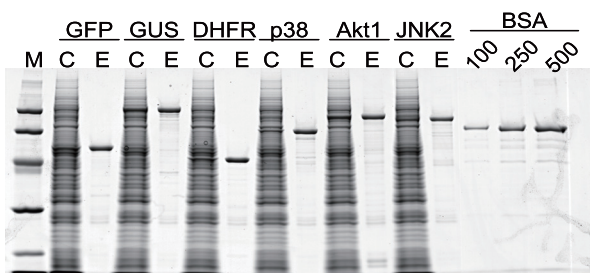
Programs for Protein Synthesis and Purification

- 1.2-ml translation scale
- 6-ml translation scale
- 6-ml scale translation of GST-tagged protein and purification
- 6-ml scale translation of His-tagged protein and purification



Demonstrations

- GST fusion protein expression and purification

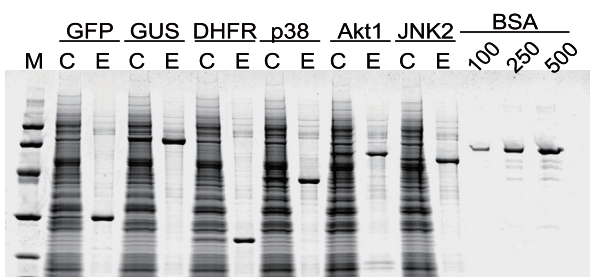


Translation (6-ml format) with WEPRO 1240G at 15°C for 20hrs, purification with glutathione-sepharose followed by elution with 1 ml reduction-type glutathione

M: Size marker
C: Crude sample (3µl)
E: Eluate (2µl)

	Yield/well after purification	
	Purity	Yield
GFP	87%	153 µg
GUS	82%	166 µg
DHFR	91%	172 µg
p38	84%	163 µg
Akt1	76%	152 µg
JNK2	81%	118 µg

- His fusion protein expression and purification



Translation (6-ml format) with WEPRO 1240H at 15°C for 20hrs, purification with Ni-sepharose followed by elution with 1 ml of 500mM imidazole

M: Size marker
C: Crude sample (3µl)
E: Eluate (2µl)

	Yield/well after purification	
	Purity	Yield
GFP	83%	224 µg
GUS	88%	286 µg
DHFR	81%	168 µg
p38	81%	236 µg
Akt1	60%	151 µg
JNK2	78%	191 µg