

Protein Synthesis Using Recombinant Elements

Cell-Free Protein Synthesis



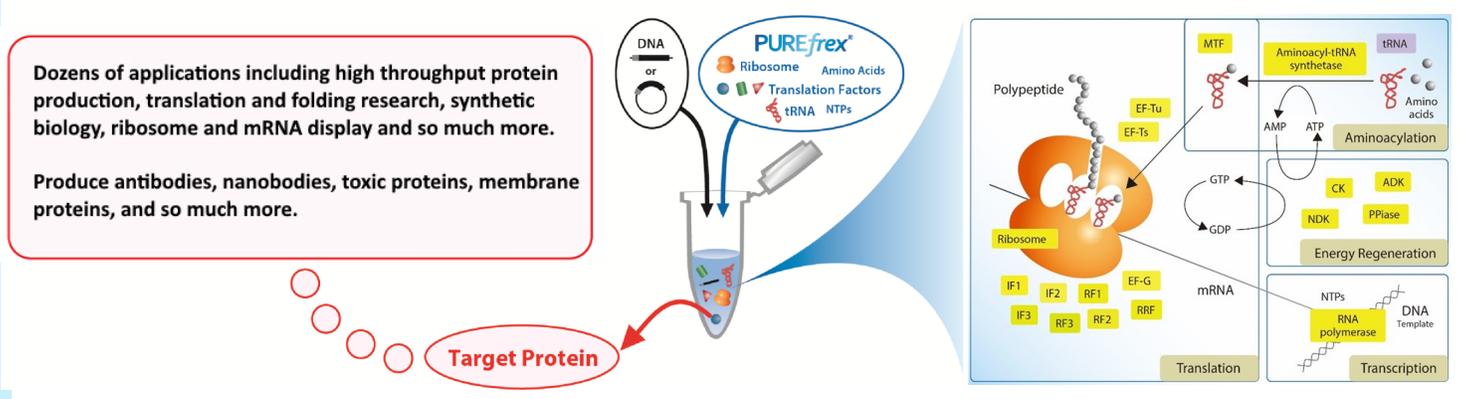
Advanced.
Pure. Flexible.

Kits and Custom. mls to liters.

PUREfrex® cell-free protein synthesis (CFPS) kits and reagents produced by Gene Frontier Corporation (Chiba, Japan) are state-of-the-art commercial adaptations of the PURE coupled transcription/translation CFPS technology developed by Professor Takuya Ueda at Tokyo University in 2001.

PUREfrex® kits comprise purified, un-tagged recombinant transcription and translation related protein factors, essential non-protein components, and highly purified E. Coli ribosomes.

From basic research to drug discovery to synthetic biology, nearly all wet labs working with proteins can benefit from experience with PUREfrex®. Keep some handy in your freezer. Cosmo Bio USA is Gene Frontier's partner for PUREfrex® distribution worldwide.



PUREfrex® Kits for Cell-Free Protein Synthesis



PUREfrex® 2.0
 Improved version of 1.0 featuring increased protein yields and reduced contaminants.

- Solution I - amino acids, NTPs, tRNAs, substrates
- Solution II - recombinant proteins
- Solution III - ultrapure ribosomes
- Other tube - DHFR DNA control template



PUREfrex® 2.1
 Select for proteins with disulfide bonds
 Experiment with reducing agents to determine optimal synthesis conditions for each protein..

- Solution I - amino acids, NTPs, tRNAs, substrates
- Solution II - recombinant proteins
- Solution III - ultrapure ribosomes
- Other tubes - Cysteine. Dithiothreitol. Reduced Glutathione. DHFR DNA control template.



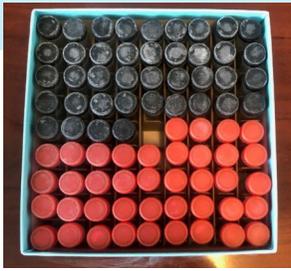
PUREfrex® 1.0
 Select when disclosure of detailed component composition is required.

- Solution I - amino acids, NTPs, tRNAs, substrates
- Solution II - recombinant proteins
- Solution III - ribosomes
- Other - DHFR DNA control template



COSMO BIO USA
 Great Reagents Drive Great Research

Learn more at the **PUREfrex® Dashboard**
www.cosmobiousa.com/pages/purefrex-protein-synthesis



Custom Kit!

drop-outs? drop-ins? mls? liters? custom formulations? scheduled deliveries? YES to all.

PUREfref[®] is intrinsically flexible. So is PUREfref. Contact us to arrange PUREfref[®] kits custom formulated to your needs and workflow.

PUREfref[®] Reaction Supplements

PUREfref[®] chaperone supplements to assist protein folding



PUREfref[®] GroE Mix

GroE Mix includes a ratio-optimized mix of highly purified GroEL and GroES proteins, and dilution buffer.



PUREfref[®] DnaK Mix

DnaK Mix includes a ratio-optimized mix of highly purified DnaK, DnaJ, and GrpE proteins, and dilution buffer.

PUREfref[®] enzyme supplements to promote disulfide bond formation



PUREfref[®] DsbC Set

DsbC Set - includes highly purified oxidized glutathione to enforce an oxidative environment required for S-S bond formation and DsbC (disulfide bond isomerase) to catalyze disulfide bridge exchange.



PUREfref[®] PDI Set

PDI Set includes oxidized glutathione (GSSG), and a ratio-optimized solution of PDI (protein disulfide isomerase) and human Ero1 α (to re-oxidize PDI).

PUREfref[®] translation factor supplement to prevent ribosome stalling through difficult sequences



PUREfref[®] EF-P

Translation factor EF-P (E. coli homolog of eukaryotic eIF5A) promotes peptide bond formation between the first methionine and the second amino acid, as well as elongation through three or more consecutive proline residues.

Product Name	Catalog Number	Size
PUREfref 1.0	GFK-PF001-0.25-EX	1 x 250 μ l *
	GFK-PF001-0.25-5-EX	5 x 250 μ l
	GFK-PF001-10-EX	5 x 2 ml
PUREfref 2.0	GFK-PF201-0.25-EX	1 x 250 μ l
	GFK-PF201-0.25-5-EX	5 x 250 μ l
	GFK-PF201-10-EX	5 x 2 ml
PUREfref 2.1	GFK-PF213-0.25-EX	1 x 250 μ l
	GFK-PF213-0.25-5-EX	5 x 250 μ l
	GFK-PF213-10-EX	5 x 2 ml

* reagents sufficient to prepare this volume of PUREfref reaction mix.



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Learn more at the PUREfref[®] Dashboard

www.cosmobiousa.com/pages/purefref-protein-synthesis