

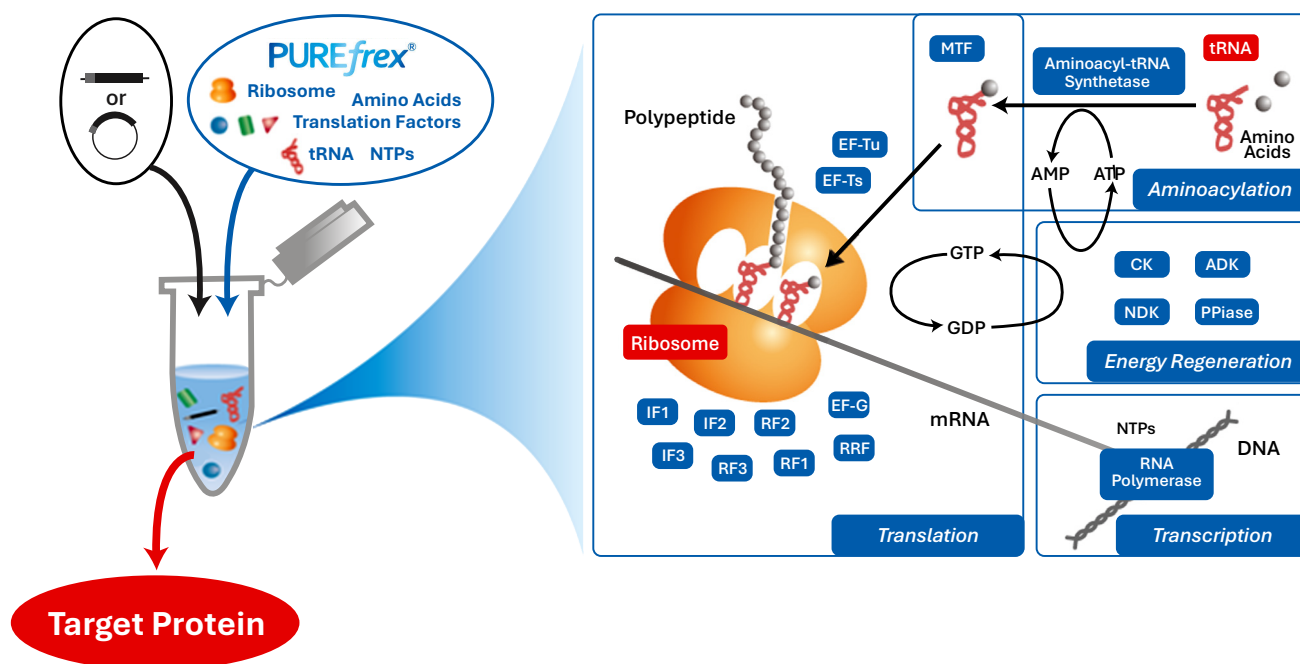
CELL-FREE PROTEIN EXPRESSION

Advanced Cell-Free Protein Synthesis System

PUREfrex® represents a breakthrough in cell-free protein synthesis technology, offering a precisely engineered *in vitro* coupled transcription/translation system. Unlike traditional S30 translation extracts, PUREfrex utilizes a completely reconstituted system derived from *E. coli* translation machinery. By adding DNA or mRNA that encodes the target protein to the reaction solution, proteins can be synthesized easily and quickly without using living cells.

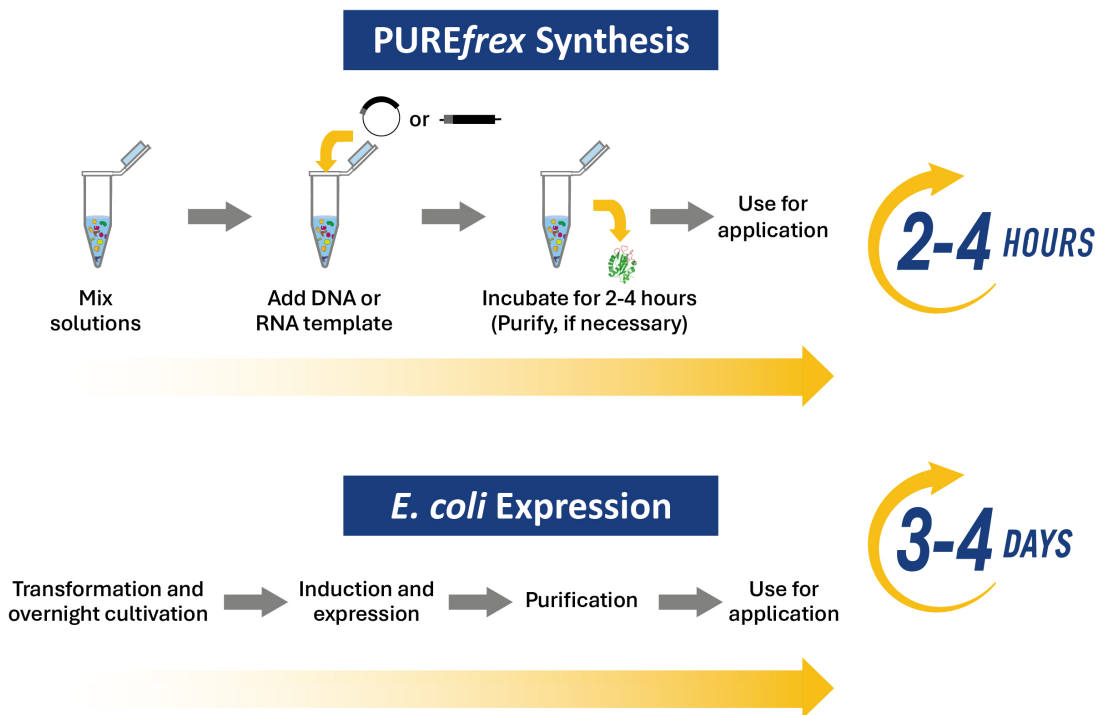
Advantages of the PUREfrex protein synthesis system:

- Protein expression in hours instead of days
- Highly purified components eliminate contaminating nucleases & proteases
- DNA and RNA template integrity preserved
- Optimal protein functionality maintained
- Maximum yield of full-length target proteins
- Express proteins with any tag, including polyhistadine (HIS)
- PUREfrex components can be customized to meet the expression demands of your unique protein
- PUREfrex volumes are easily scalable for protein production from µL to L quantities



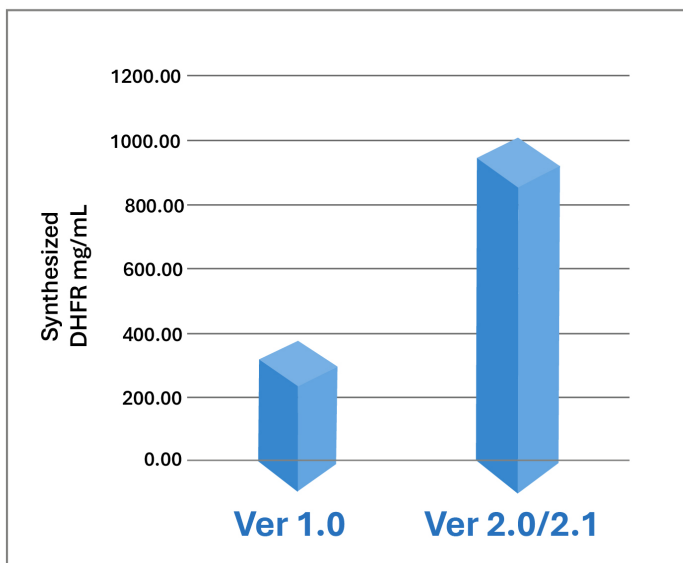
Express Your Proteins in Hours, Not Days

PUREfrex® cell-free technology enables rapid, scalable protein production. Highly compatible with machine learning workflows.

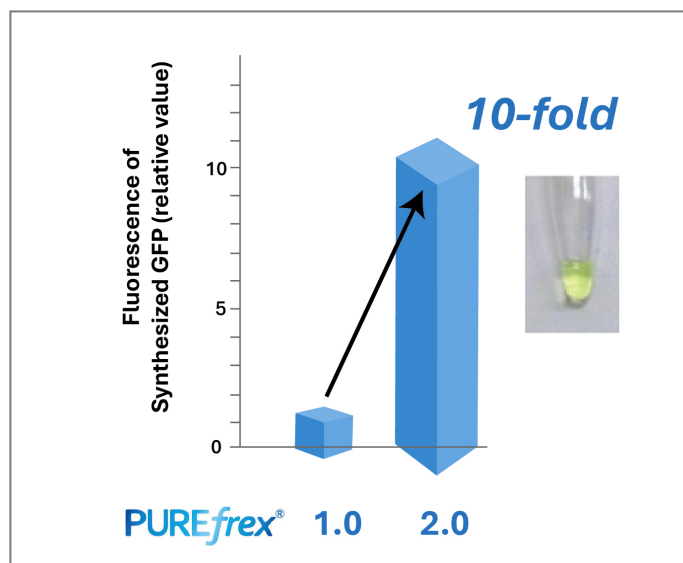


Maximize Yields While Maintaining Protein Functionality

Maximum Expression of Proteins



No Loss of Protein Functionality



PUREfrex® Kits for Cell-free Protein Synthesis

PRODUCT	DESCRIPTION	CATALOG NUMBER	SIZES
PUREfrex 2.0	Improved version of PUREfrex 1.0 with increased protein yields and reduced contaminants.	GFK-PF201-0.1-EX GFK-PF201-0.25-EX GFK-PF201-2ML-EX GFK-PF201-10ML-EX GFK-PF201-50ML-EX	100 uL 250 uL 2 mL 5 x 2 mL 25 x 2 mL
PUREfrex 2.1	Ideal for expressing proteins with disulfide bonds and control of redox environment.	GFK-PF213-0.25-EX GFK-PF213-2ML-EX GFK-PF213-10ML-EX GFK-PF213-50ML-EX	250 uL 2 mL 5 x 2 mL 25 x 2 mL
PUREfrex 1.0	Use when detailed component composition is required.	GFK-PF001-0.25-EX GFK-PF001-2ML-EX GFK-PF001-10ML-EX GFK-PF001-50ML-EX	250 uL 2 mL 5 x 2 mL 25 x 2 mL

PUREfrex® Reaction Supplements

Do you have a challenging protein to express? There is a variety of supplements available to optimize expression of your protein with the PUREfrex system.



PRODUCT	DESCRIPTION	CATALOG NUMBER	SIZES
Chaperone supplements to assist proper protein folding and solubility			
GroE Mix	An optimized ratio of highly purified E. coli derived GroEL (Hsp60) and GroES	GFK-PF004-0.5-EX GFK-PF004-10ML-EX GFK-PF004-50ML-EX	500 uL 5 x 2 mL 25 x 2 mL
DnaK Mix	An optimized ratio of highly purified E. coli derived DnaK, DnaJ and GrpE	GFK-PF003-0.5-EX GFK-PF003-10ML-EX GFK-PF003-50ML-EX	500 uL 5 x 2 mL 25 x 2 mL
Enzyme supplements to promote disulfide bond synthesis for functional proteins			
DsbC Set	Contains E. coli disulfide bond isomerase (DsbC) and GSSG (oxidized glutathione) to create an oxidizing environment	GFK-PF005-0.5-EX GFK-PF005-10ML-EX GFK-PF005-50ML-EX	500 uL 5 x 2 mL 25 x 2 mL
PDI Set	Contains oxidized glutathione (GSSG), human PDI (protein disulfide isomerase) and human Ero1α (ER oxidoreductin-1 to reoxidize PDI)	GFK-PF006-0.5-EX GFK-PF006-10ML-EX GFK-PF006-50ML-EX	500 uL 5 x 2 mL 25 x 2 mL
Transcription factor supplement to prevent ribosome stalling through difficult sequences			
EF-P	Contains recombinant Elongation Factor P (EF-P) (modified at LYS34) and dilution buffer.	GFK-PFS052-0.5-EX GFK-PFS052-10ML-EX GFK-PFS052-50ML-EX	500 uL 5 x 2 mL 25 x 2 mL

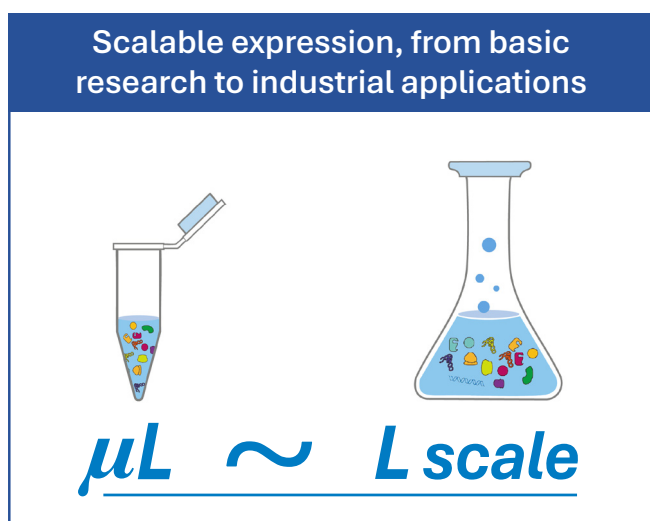
PUREfrex® Custom Kit Development

For researchers with specialized protein expression needs, we offer the development of custom PUREfrex kits that are uniquely adapted to your project goals.

Advantages of Custom PUREfrex:

- Optimization of kit components for difficult-to-express proteins
- Addition of non-standard amino acids
- Bulk sizing for large-scale reaction formats

Custom PUREfrex kit development includes consultation with technical experts to define your expression requirements, custom formulation of reaction components, and testing under controlled conditions to ensure you can produce high-yield, high-purity functional proteins. With rapid turnaround and flexible delivery formats, PUREfrex custom kits support your unique protein synthesis needs.



Let us help you unlock the full potential of cell-free expression with a PUREfrex solution built specifically for your research.

Learn more and request your custom PUREfrex configuration online.



PUREfrex® Distributed Worldwide by:



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