Improve Yield, Activity and Solubility by Enhancing the Folding of Recombinant Proteins

Protein misfolding often leads to low expression, proteolysis, cytotoxicity, insolubility, or poor immunogenicity or biological activity of your target protein. Get the same convenience and high protein expression level but better protein folding, enzymatic activity, antigenicity, immunoreactivity, and stability using the chaperone vectors.

### Chaperone vectors

Molecular chaperones are required at about a 1:1 ratio in order to assist nascent protein folding. Conventional vectors operate at a shortage of molecular chaperones, when target protein synthesis could be hundreds of times higher than the expression of the same protein in its native environment. Our ProFold™-chaperone vectors are optimized to facilitate target protein folding either in the endoplasmic reticulum (ER) or the cytoplasm. They are as efficient and as simple to use as their predecessors, but ProFold™ provides for high levels of expression of human molecular chaperones, which are comparable with the powerful synthesis of target proteins.

### For membrane and secreted glycoproteins

**ProFold™-ER1** Based on efficient BaculoGold-BacPAK6 vectors. Encodes human [Calreticulin](#)- major chaperone facilitating glycoprotein folding in the ER, and [PDI](#) which drives correct formation of disulfide bonds and also takes part in protein folding. PDI- also can minimize cytotoxic effects of some recombinant proteins.

**ProFold™-C1** Based on efficient BaculoGold-BacPAK6 vectors. Major human cytoplasmic molecular chaperones [Hsc70](#) and [Hsp40](#), which are natural protein folding partners, are encoded on this vector. The latter is partially farnesylated in higher eucaryotic cells ([Hsp40F](#)). Hsp40F is located at the cytosolic surface of the ER, were it could assist folding of endoplasmic domains of transmembrane proteins, such as ion channels.

### For cytoplasmic proteins

**ProFold™-ER1** Based on efficient BaculoGold-BacPAK6 vectors. Encodes human [Calreticulin](#)- major chaperone facilitating glycoprotein folding in the ER, and [PDI](#) which drives correct formation of disulfide bonds and also takes part in protein folding. PDI- also can minimize cytotoxic effects of some recombinant proteins.

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### Superactive Steroid Receptors

- In complex with Hsp90
- GST fusions for HTS assays
- Are available only from AB Vector
- Produced using patented chaperone technology
  - Androgen receptor
  - Glucocorticoid receptor
  - Estrogen receptors alpha and beta
  - Mineralocorticoid receptor*
  - Progesterone receptor

### Other Receptors In Complex With Hsp90

- Arylhydrocarbon receptor
- Pregnane X receptor
- Constitutive Androstane Receptor

*Active receptor is available only from AB vector

### Other Purified Nuclear Receptors

- Thyroid hormone receptor α
- Retinoic acid receptor α
- Retinoic acid receptor β
- Retinoic acid receptor γ
- Peroxisome proliferator-activated receptor α
- Peroxisome proliferator-activated receptor γ
- RAR-related orphan receptor α
- RAR-related orphan receptor γ
- Liver X receptor β
- Liver X receptor α
- Farnesoid X receptor
- Vitamin D receptor
- Retinoid X receptor α
- Retinoid X receptor β
- Retinoid X receptor γ
- Estrogen-related receptor α
- Estrogen-related receptor β
- Estrogen-related receptor γ

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**SDS-PAGE of purified GST tagged GR-LBD. Coomassie blue staining.**

1. Purified GR-LBD in complex with molecular chaperones (AB Vector)
2. Semi-purified GR-LBD (major competitor)
3. MW marker

**Glucocorticoid receptor (GR) activity**

[Schematic diagram of Glucocorticoid receptor (GR) activity with specific ligand binding activity](#)

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