



## pFB-CHlg-hG1e6: Human IgG1 Mammalian Expression Vector with Increased half-life

SKU#: AFV-06

### Product Overview

pFB-CHlg-hG1e6 is a cloning vector that expresses the human IgG1 heavy chain constant region with M252Y / S254T / T256E mutations. It is a constitutive mammalian expression vector designed to deliver exceptionally high levels of antibody expression. This circular vector features an enhanced, full-length CMV promoter and other expression elements that typically enable higher expression levels. It can be used in suspension-adapted cells, such as Expi293F™ and ExpiCHO™, for transient protein expression. Additionally, it can serve as a Geneticin®-selectable expression plasmid for engineering stable cell lines. The vector carries an ampicillin resistance gene.

### Characteristics

Fc engineered human IgG1 expression with M252Y / S254T / T256E mutations:

- Increased binding to FcRn
- Increased half-life

### Specifications

Antibiotic Resistance	Ampicillin (Amp <sup>R</sup> )
Constitutive or Inducible System	Constitutive
Delivery Type	Transfection
Promoter	CMV
Product Type	Mammalian Expression Vector
Cloning Method	Restriction Enzyme (5'-AgeI; 3'-XhoI) or Homologous Assembly

### Contents & Storage

- 20 µg of pFB-CHlg-hG1e6 in Tris-EDTA buffer
- Store at -20°C. Vectors are guaranteed stable for 6 months when properly stored.

### Materials required for Fc engineered antibody generation

- pFB-CLlg-hk or pFB-CLlg-hl plasmid that expression the constant region of the human kappa or lambda light chain.

### Steps for Fc engineered antibody generation

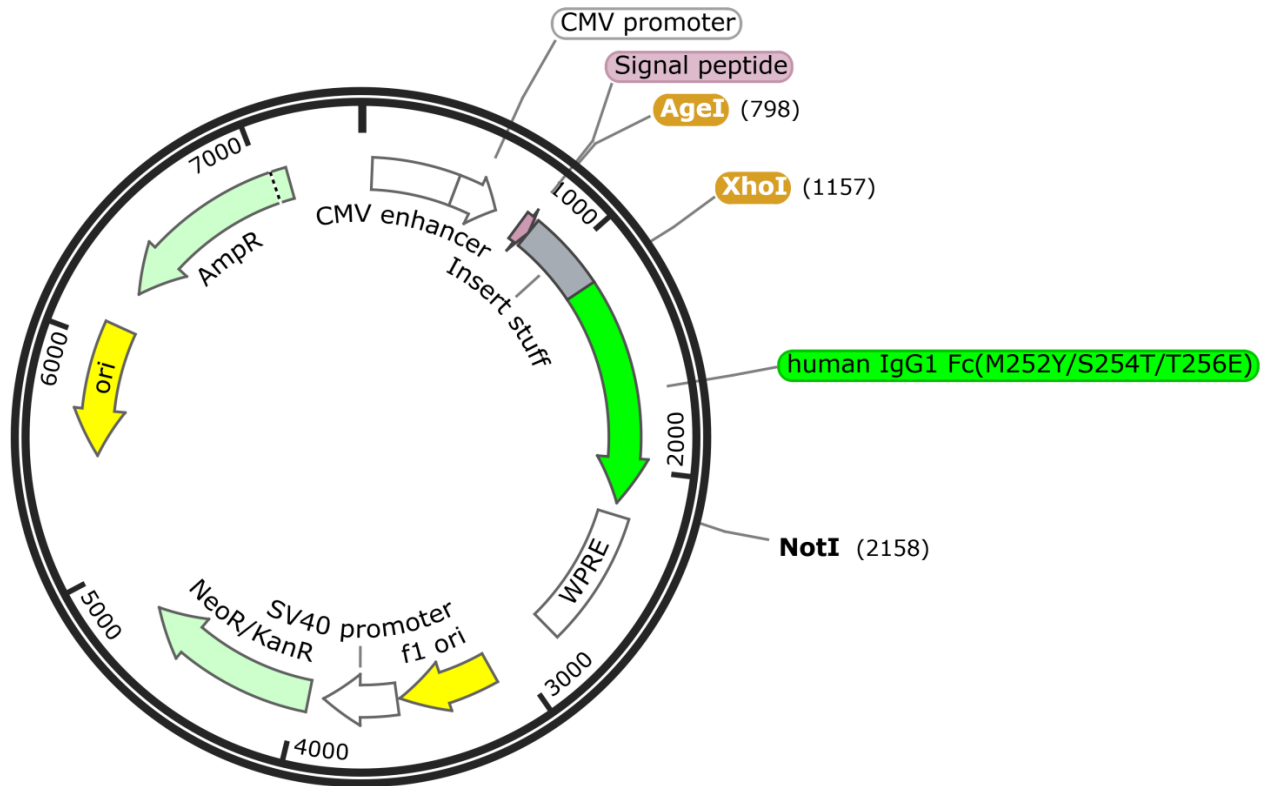
- Cloning your heavy chain variable region (VH) into pFB-CHlg-hG1e6 vector to make heavy chain expression plasmid;
- Cloning your light chain variable region (VL) into pFB-CLlg-hk or pFB-CLlg-hl vector to make light chain expression plasmid
- Co-transfecting both heavy chain and light chain expression plasmids into your desired mammalian cell (such as CHO, HEK293) for Fc engineered antibody production.



## References

1. Dall'Acqua et al., 2002. Increasing the affinity of a human IgG1 for the neonatal Fc receptor: Biological consequences. *J. Immunol.* 169: 5171-5180.
2. Dall'Acqua et al., 2006. Properties of human IgG1s engineered for enhanced binding to the neonatal Fc receptor (FcRn). *J Biol Chem.* 281(33):23514-23524.

## Vector map



## Fusion BioLabs human IgG1 Fc engineered vector

7435 bp