



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 ^R) |
| 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

- 5.0 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

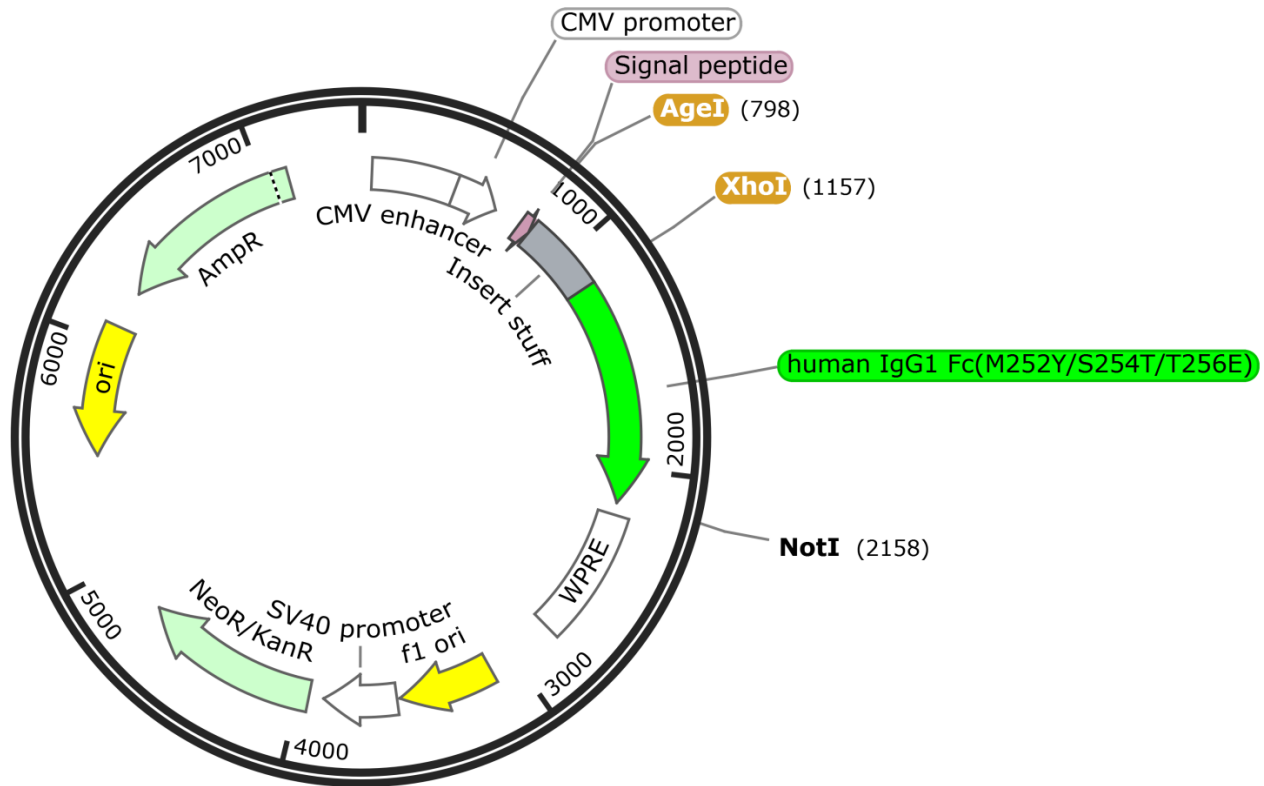
- Cloning your heavy chain variable region (VH) into **pFB-CHlg-hG1e6** vector to make heavy chain expression plasmid;
- Cloning your light chain variable region (VL) into pFB-CLlg-hk or pFB-CLlg-hl vector to make light chain expression plasmid
- Co-transfecting both heavy chain and light chain expression 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