



pFB-CHlg-hG1e4: Human IgG1 Mammalian Expression Vector with Reduced ADCC and CDC

SKU#: AFV-04

Product Overview

pFB-CHlg-hG1e4 is a cloning vector that expresses the human IgG1 heavy chain constant region with E233P/L234V/L235A/ΔG236 + A327G/A330S/P331S 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 E233P/L234V/L235A/ΔG236 + A327G/A330S/P331S mutations:

- No binding to FcγRIIb and FcγRIIIa
- Reduced ADCC & CDC

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

- 20 µg of pFB-CHlg-hG1e4 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

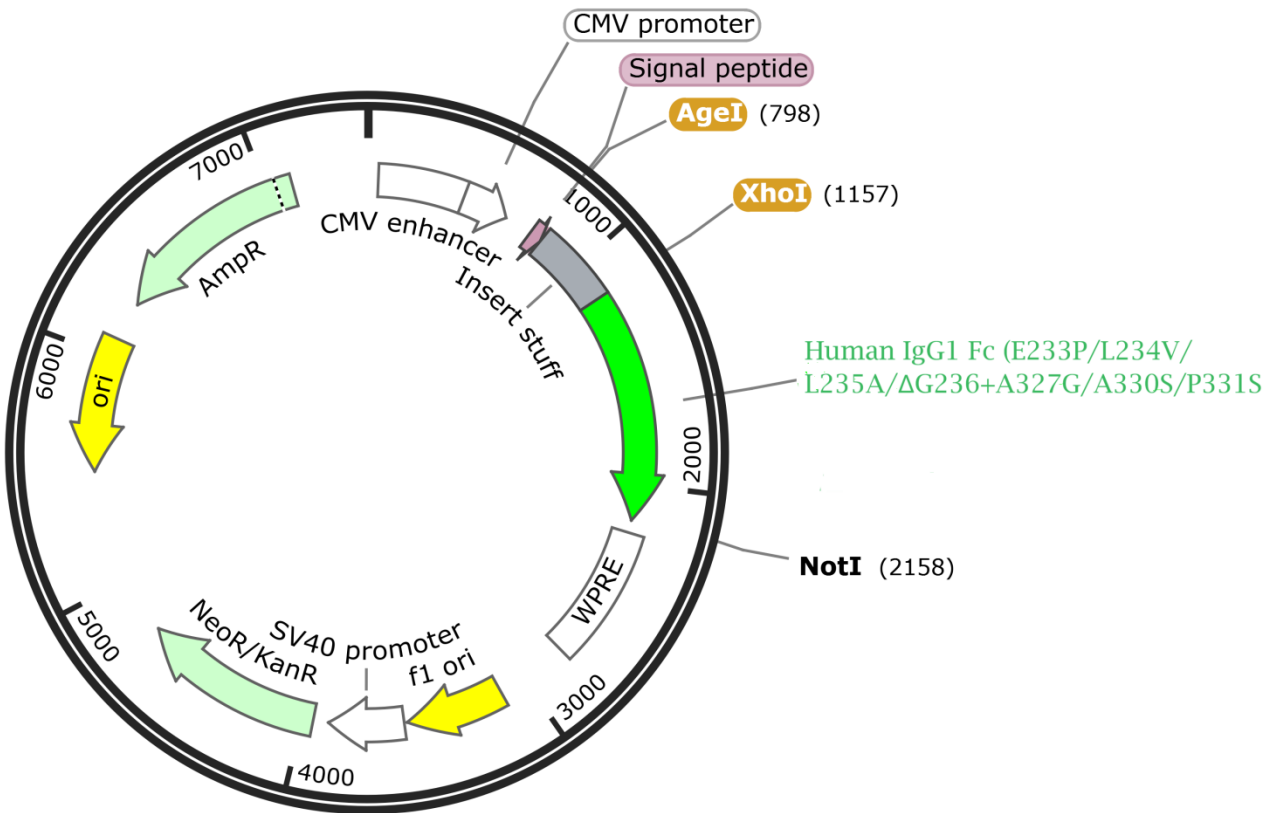
- Cloning your heavy chain variable region (VH) into pFB-CHlg-hG1e4 vector to make heavy chain expression plasmid;
- Cloning your light chain variable region (VL) into pFB-CLlg-hk or pFB-CLlg-hl vector to make light chain expression plasmid
- Co-transfecting both heavy chain and light chain expression plasmids into your desired mammalian cell (such as CHO, HEK293) for Fc engineered antibody production.



References

1. Moore GL et al., 2019. A robust heterodimeric Fc platform engineered for efficient development of bispecific antibodies of multiple formats. *Methods* 154: 38-50.

Vector map



Fusion BioLabs human IgG1 Fc engineered vector

7435 bp