



## pFB-CHlg-hG1e1: Human IgG1 Mammalian Expression Vector with increased ADCC

SKU#: AFV-01

### Product Overview

pFB-CHlg-hG1e1 is a cloning vector that expresses the human IgG1 heavy chain constant region with **S239D / I332E** 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 **S239D / I332E** mutations:

- Increased binding to FcγRIIIa
- Increased ADCC

### 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

- 5.0 µg of **pFB-CHlg-hG1e1** 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

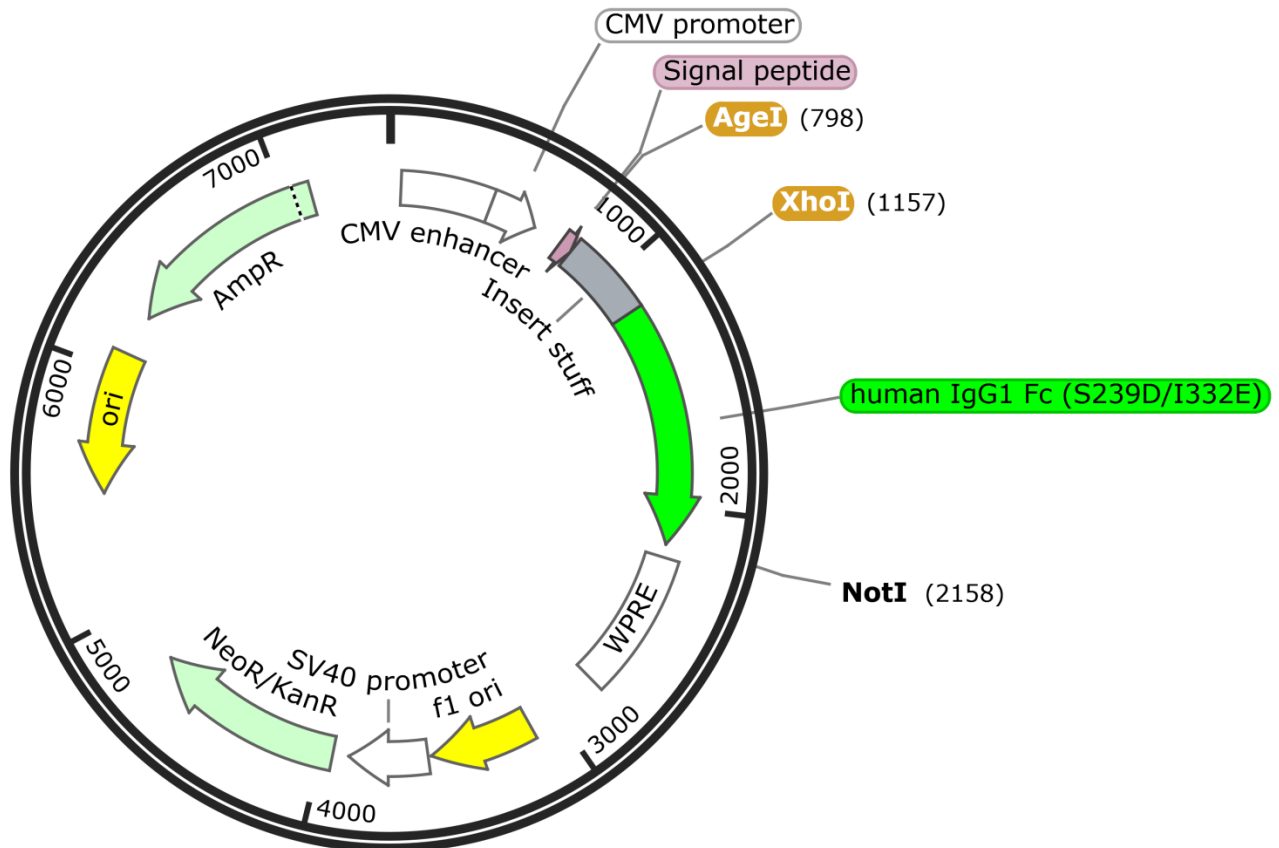
- Cloning your heavy chain variable region (VH) into **pFB-CHlg-hG1e1** vector to make heavy chain expression plasmid;
- Cloning your light chain variable region (VL) into pFB-CLlg-hk or pFB-CLlg-hl vector to make light chain expression plasmid
- Co-transfecting both heavy chain and light chain expression plasmids into your desired mammalian cell (such as CHO, HEK293) for Fc engineered antibody production.

### References



1. Lazar et al., 2006. Engineered antibody Fc variants with enhanced effector function. Proc. Natl. Acad. Sci. USA 103, 4005–4010.

## Vector map



## Fusion BioLabs human IgG1 Fc engineered vector

7435 bp