



pFB-CHlg-mG2ae1: Mouse IgG2a Mammalian Expression Vector with Reduced ADCC and CDC

SKU#: AFV-10

Product Overview

pFB-CHlg-mG2ae1 is a cloning vector that expresses the mouse IgG2a heavy chain constant region with **L235E / E318A / K320A / K322A** 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 mouse IgG2a expression with **L235E / E318A / K320A / K322A** mutation:

- Reduced binding to FcγRI and C1q
- Reduced ADCC and 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

- 5.0 µg of **pFB-CHlg-mG2ae1** 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-mk or pFB-CLlg-ml1 or pFB-CLlg-ml2 plasmid expressing the constant region of the mouse kappa or lambda light chain.

Steps for Fc engineered antibody generation

- Cloning your heavy chain variable region (VH) into **pFB-CHlg-mG2ae1** vector to make heavy chain expression plasmid;
- Cloning your light chain variable region (VL) into pFB-CLlg-mk or pFB-CLlg-ml1 or pFB-CLlg-ml2 vector to make light chain expression plasmid

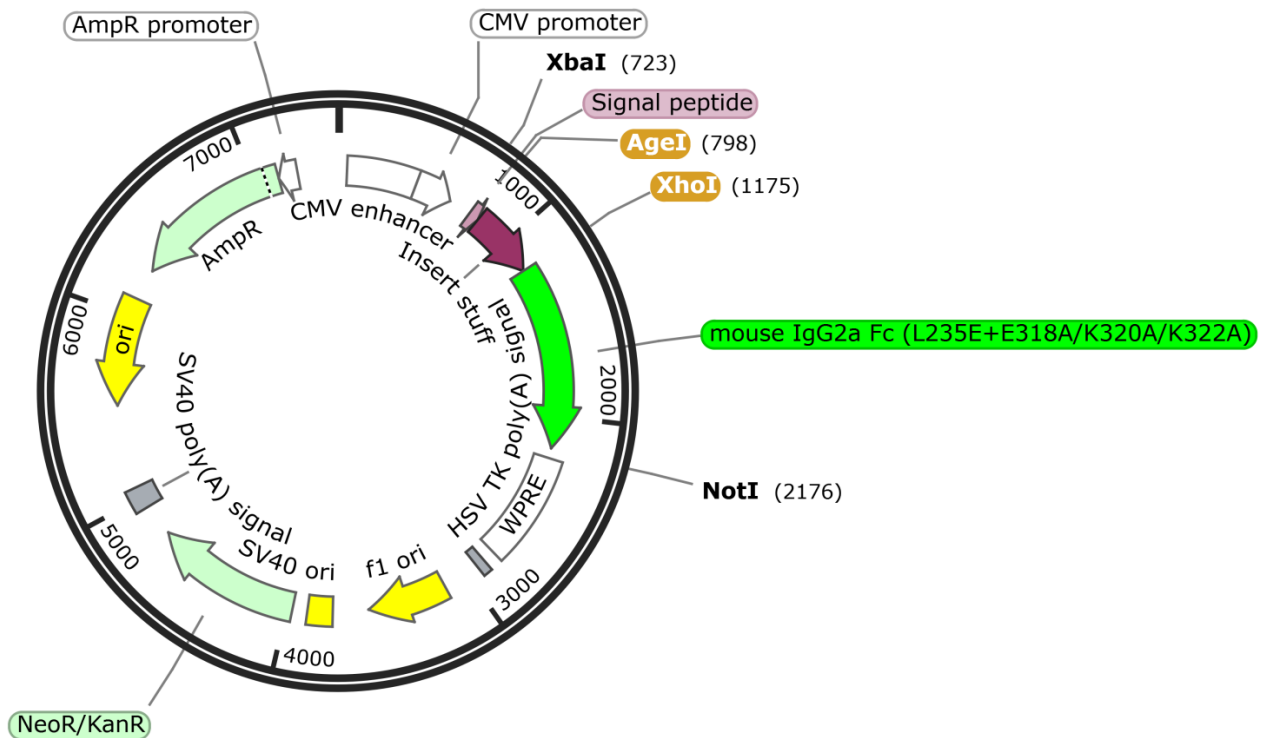


- Co-transfecting both heavy chain and light chain expression plasmids into your desired mammalian cell (such as CHO, HEK293) for Fc engineered antibody production.

References

1. Duncan et al., 1988. The binding site for C1q on IgG. Nature 332, 738–740.
2. Wines et al., 2000. The IgG Fc contains distinct Fc receptor (FcR) binding sites: the leukocyte receptors Fc gamma RI and Fc gamma RIIa bind to a region in the Fc distinct from that recognized by neonatal FcR and protein A. J Immunol 164, 5313–5318.

Vector map



AFV-10 mouse IgG2ae1 reduced ADCC and CDC 7453 bp