Vectors for Antibody Expression

Tech ID: 20472 / UC Case 2007-216-0

BACKGROUND

Recombinant antibodies have a wide variety of uses as research tools, therapeutics and diagnostics. Vectors utilized for the cloning and expression of antibody variable (V) regions make the expression of whole recombinant antibodies possible. In addition, expression of recombinant antibodies in a variety of cell types would provide greater utility to recombinant antibody technology.

INNOVATION

Researchers at UCLA have developed a large variety of vectors useful in the expression of recombinant antibodies. Different antibody variable regions can be easily introduced into these vectors for the expression of whole antibodies. Representative vectors are: Vectors pAG 4622 and pAH 4602 express V region antibodies associated with the human kappa and gamma 1 constant regions, respectively. Vectors 6307 pAH and 6525 pAN carry the genes for human IgG1 and human kappa, respectively. These vectors were designed for the ability to express chimeric antibodies in a variety of cell types by utilizing the cytomegalovirus promoter (CMV). Unlike cell type specific promoters such as immunoglobulin promoters that are active only in B cell types, CMV promoters are active in a variety of cell types. Importantly, they can be used in transient transfections of the human embryonic kidney derived cell line 293T to allow for rapid and robust expression of chimeric antibodies. Using the 6307 pAH and 6525 pAN vectors can results in substantial savings in time in screening recombinant antibodies.

APPLICATIONS

- Expression and screening of recombinant antibodies for use as therapeutics, diagnostics or as a research tool for antigen of choice.

RELATED MATERIALS

- Novel vectors for the expression of antibody molecules using variable regions generated by polymerase chain reaction. J Imm Meth 1992.
- The differential ability of human IgG1 and IgG4 to activate complement is determined by the COOH-terminal sequence of the CH2 domain. J Exp Med 1991.
- Structural features of human immunoglobulin G that determine isotype-specific differences in complement activation. J Exp Med 1993

ADDITIONAL TECHNOLOGIES BY THESE INVENTORS

- Vectors for the Recombinant Expression of Human Immunoglobulins
- Production of Secretory IgA with Increased Stability

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OTHER INFORMATION

KEYWORDS

materials electronics semconductor filter film

CATEGORIZED AS

- **Biotechnology**
  - Health
- **Medical**
  - Diagnostics
  - Research Tools
  - Therapeutics
- **Research Tools**
  - Expression System
  - Nucleic Acids/DNA/RNA
  - Protein Synthesis
  - Reagents
  - Vectors

RELATED CASES

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