"expression", refers to a gene or a gene product expression including the codified polypeptide.

DESCRIPTION OF THE DRAWINGS

FIG 1. Schematic representation of peptides conforming the primary sequence of recombinant PF3a.

FIG 2. Levels of serum IgE specific for PF~~14c~~3a determined by ELISA, in comparison to reactivity levels of natural extracts from B. tropicalis and D. pteronyssinus.

FIG 3. Schematic representation of peptides conforming the primary sequence of recombinant PF14c.

FIG 4. Levels of serum IgE specific for PF14c determined by ELISA in comparison to reactivity levels of natural extracts from B. tropicalis and D. pteronyssinus.

FIG 5. Purification profile for PF3a performed by gel electrophoresis on 15% polyacrylamide, stained with Comassie Blue. 1 is the molecular weight marker, 2 and 3 correspond to

CLAIMS

1. A nucleotide sequence artificially designed which codifies proteins representing different epitopes from several domestic mite allergens where said nucleotide sequence is selected from the group consisting of SEC ID N° 1 and SEQ ID N° 3.

2. An amino acid sequence characterized in that the said sequence is SEQ ID N° 2 or SEQ ID N1 4 and in that said amino acid sequence is codified by the nucleotide sequence SEQ ID N° 1 and SEQ ID N° 3 of Claim 1, respectively.

3. Design of a vector characterized by the insertion in sequence of vector pET45b+ of the nucleotide sequence selected from SEQ ID N° 1 and SEQ ID N° 3, such that an appropriate reading frame is preserved for expression of the recombinant protein with a histidine 6x tag, in the amino terminal region.

4. A vector characterized in that said vector contains a codifying sequence by means of a histidine 6x tag in the N-terminal region followed by a nucleotide sequence selected from the group consisting of sequences SQ ID N° 1 and SEQ ID N° 3 according to Claim 1.

5. The vector according to Claim 4, characterized in that said vector has 5852 base pairs including SEQ ID N° 1, which, when introduced in E. coli allows expression of recombinant protein of SEQ ID N° 2.

6. The vector according to Claim 4 characterized in that said vector has 5719 base pairs including SEQ ID N°~~2~~ 3, which, when introduced in E. coli allows expression of recombinant protein of SEQ ID N° 4.

7. A method to obtain a recombinant fusion protein of Claim 2 characterized in that said method comprises the following steps:

a. transformation of E. coli competent cells having the vector, by means of chemical treatment combined with thermal shock;

b. selection of transformed colonies by means of confirmation of the designed gene presence by PCR technique (polymerase chain reaction);

c. expression of recombinant protein by cell growth with antibiotic induced by IPTG (isopropyl-β-D-thiogalactoside);