MUTEINS OF TEAR LIPOCALIN AND METHODS FOR OBTAINING THE SAME

Abstract

The present invention relates to a mutein of human tear lipocalin having detectable binding affinity to a given non-natural ligand of human tear lipocalin, wherein at least one of the cysteine residues at sequence positions 61 and 153 of the linear polypeptide sequence of the mature human tear lipocalin has been mutated to any other amino acid residue and wherein at least 12, 14, or 16 mutated amino acid residues are present at any of the sequence positions 26-34, 56-58, 80, 83, 104-106, and 108 of the linear polypeptide sequence of mature human tear lipocalin, wherein the non-natural ligand is VEGF or a fragment thereof. The invention also refers to a corresponding nucleic acid molecule encoding such a mutein and to a method for its generation. The invention further refers to a method for producing such a mutein. Finally, the invention is directed to a pharmaceutical composition comprising such a lipocalin mutein as well as to various uses of the mutein.

Fig. 27