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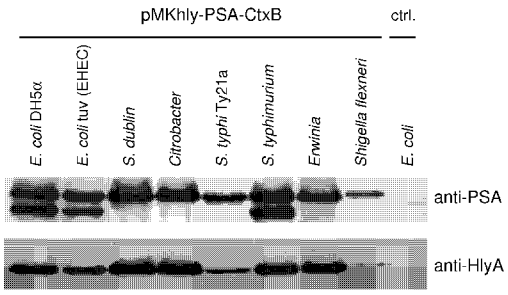
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(54) **Title:** MICROORGANISMS AS CARRIERS OF NUCLEOTIDE SEQUENCES CODING FOR ANTIGENS AND PROTEIN TOXINS, PROCESS OF MANUFACTURING AND USES THEREOF



(57) **Abstract:** The invention relates to a microorganism as a carrier of nucleotide sequences coding for antigens and protein toxins comprising the following components: (I) at least one nucleotide sequence coding for at least one complete or partial antigen of at least one wild-type or mutated protein; and (II) at least one nucleotide sequence coding for at least one protein toxin and/or at least one protein toxin subunit; and (III) a) at least one nucleotide sequence coding for at least one transport system which enables the expression of the expression products of component (I) and component (II) on the outer surface of the microorganism and/or enables the secretion of the expression products of component (I) and component (II); and/or coding for at least one signal sequence which enables the secretion of the expression products of component (I) and component (II); and/or (III) b) optionally, at least one nucleotide sequence coding for at least one protein for lysing the microorganism in the cytosol of mammalian cells and for intracellularly releasing plasmids or expression vectors, which are contained in the lysed microorganism; and (IV) at least one nucleotide sequence for at least one activation sequence for the expression of one or more of components (I) to (III), wherein said activation sequence can be activated in the microorganism and/or is tissue cell-specific, tumor cell-specific, macrophage-specific, dendrite-specific, lymphocyte-specific, function-specific or non-cell-specific"; wherein any of components (I) to (IV) can be present either once or several times and either identical or different. Also disclosed are a process of manufacturing thereof, corresponding plasmids or expression vectors and uses of the microorganism as a medicament.

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