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(54) Title: FUSION PROTEINS, USES THEREOF AND PROCESSES FOR PRODUCING SAME

(57) Abstract: This invention provides fusion proteins comprising consecutive amino acids which beginning at the amino terminus of the protein correspond to consecutive amino acids present in (i) a cytomegalovirus human MHC-restricted peptide, (ii) a first peptide linker, (iii) a human β-2 microglobulin, (iv) a second peptide linker, (v) a HLA-A2 chain of a human MHC class I molecule, (vi) a third peptide linker, (vii) a variable region from a heavy chain of a scFv fragment of an antibody, and (viii) a variable region from a light chain of such scFv fragment, wherein the consecutive amino acids which correspond to (vii) and (viii) are bound together directly by a peptide bond or by consecutive amino acids which correspond to a fourth peptide linker, wherein the antibody from which the scFv fragment is derived specifically binds to mesothelin. This invention provides nucleic acid constructs encoding same, processes for producing same, compositions, and uses thereof.

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