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(54) Title: SEMA5B PEPTIDES AND VACCINES CONTAINING THE SAME

(57) Abstract: Peptide vaccines against cancer are described herein. In particular, isolated epitope peptides derived from the SEMA5B gene that elicit CTLs and thus are suitable for use in the context of cancer immunotherapy are provided. The inventive peptides encompass both SEMA5B-derived peptides and modified versions thereof, in which one, two, or several amino acids are substituted, deleted, inserted or added, provided such modified versions retain the requisite CTL inducibility of the original sequences. Further provided are polynucleotides encoding such peptides as well as pharmaceutical compositions that include any such peptides or polynucleotides as active agents. Antigen-presenting cells and isolated CTLs that target such peptides, as well as methods for inducing the antigen-presenting cell, or CTL are also provided. Furthermore, the present invention provides methods for the treatment and/or prophylaxis (i.e., prevention) of cancers (tumors) such as esophageal cancer, NSCLC, RCC and SCLC, and/or the prevention of a metastatic or postoperative recurrence thereof, as well as methods for inducing CTLs, methods for inducing anti-tumor immunity, using the peptides derived from SEMA5B, polynucleotides encoding the peptides, or antigen-presenting cells presenting the peptides, or the pharmaceutical compositions of the present invention.