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(54) Title: MEANS AND METHODS FOR TREATING OR DIAGNOSING IDH1 R132H MUTANT-POSITIVE CANCERS

(57) Abstract: The present invention concerns the field of tumor therapeutics and diagnostics. Specifically, it relates to a peptide comprising at least 8 amino acids in length which are present as contiguous amino acid sequence in the human Isocitratdehydrogenase Type 1 (IDH1), wherein said peptide has at least one amino acid exchange from R to H at a position corresponding to position 132, for use in preventing and/or treating cancer. Further contemplated is a medicament comprising the said peptide. Furthermore, the invention relates to a method for diagnosing cancer characterized by having a mutation in the genome of at least some cancer cells which results in the expression of a mutant IDH1 having the R132H mutation comprising the steps of contacting a blood sample of a subject suspected to suffer from such a cancer with a peptide comprising at least 10 amino acids in length which are present as contiguous amino acid sequence in the IDH1,wherein said peptide has at least one amino acid exchange from R to H at a position corresponding to position 132 for a time and under conditions which allow for specific binding of a component of the immune system to the peptide, and determining whether, or not, binding of the said component of the immune system to the peptide occurred, wherein the cancer is diagnosed if the occurrence of binding has been determined. Provided by the invention is also a kit and a device for carrying out said method.