PEPTIDE VACCINE FOR TREATMENT OF IDH1 R132H MUTANT-POSITIVE CANCERS

Ref-Nr: TA-P-987

HINTERGRUND

Mutations in the human isocitrate dehydrogenase type 1 (IDH1) gene affecting position 132 (R132H) were originally detected in glioma. Since these types of brain tumors, accompanied by IDH1 R132H mutation, are usually aggressive and associated with a poor prognosis, effective therapies and proper diagnostic tools are urgently needed in clinical practice. State of the art diagnosis of IDH1 R132H mutation in cancer requires tissue samples, which are obtainable only via cumbersome and potentially dangerous biopsy.

Diagnostic method, readouts: a) antibody binding to peptide; b) T-cell stimulation by peptide. Clinical Phase I Trial IDH1 Peptide Vaccine in IDH1R132Hmutated Grade III-IV Gliomas (NOA-16) ongoing as NCT02454634 (see at: clinicaltrials.gov/ct2/show/NCT02454634).

LÖSUNG

The peptide referring to the present invention can be used in several ways for detection of cancers accompanied by IDH1 R132H mutation simply by using blood samples.

- Binding of the peptide to antibodies against IDH1 R132H present in blood serum of cancer patients
- Stimulation of T-cells obtained from patients suffering from tumors accompanied by IDH1 R132H mutation

In addition the peptide can initiate an immune response against tumor cells accompanied by IDH1 R132H mutation in vivo.

ANWENDUNGSBEREICHE

Diagnosis of IDH1 R132H mutation in tumor cells without the need for biopsy. In addition the peptide can be used for therapeutic vaccination and subsequent immune monitoring.
PUBLIKATIONEN & VERWEISE

1. “A vaccine targeting mutant IDH1 induces antitumour immunity.”