

171 Treating or diagnosing IDH1 R132 mutant-positive cancers

- ✓ Peptide consisting of 10-20 amino acids identical to IDH1R132H
- ✓ Diagnosis of various types of cancer without the need for biopsy
- ✓ Usage as therapeutic vaccination

The Technology

- ✓ Peptide for detection of cancers accompanied by IDH1 R132H mutation 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
- ✓ The peptide can initiate an immune response against tumor cells accompanied by IDH1 R132H mutation *in vivo*.

Background

Mutations in the human isocitrate dehydrogenase type 1 (IDH1) gene affecting position 132 (R132H) were originally detected in glioma. These type of aggressive brain tumors are associated with poor prognosis. Thus an effective therapy and proper diagnostics are needed, to avoid the risk via burdensome and dangerous biopsy.

Advantages

The system can be used for diagnosis of IDH1 R132H mutation in tumour cells without the need for biopsy. In addition the peptide can be used for therapeutic vaccination and subsequent immune monitoring.

Commercial Opportunity

HDAC11#35/47 antibody is suitable for immunocytochemistry, chromatin IP and western blot. Whereas HDAC11#170/9 recognizes only native HDAC11 and is therefore especially suitable for immunocytochemistry and chromatin IP, see figures.

Reference

"HDAC11 is a novel drug target in carcinomas" published in Int J Cancer. 2012 Oct 1. doi: 10.1002/ijc.27876 by Deubzer HE, Schier MC, Oehme I, Lodrini M, Haendler B, Sommer A and Witt O.

Development Stage

Two different hybridoma cell lines (#35/47 and #170/9) expressing a monoclonal antibody against HDAC11 has been established.

Intellectual Property

The European patent application EP 12150298.3 filed 2012.

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