

Anti-Human IDH1 R132H Astrocytoma and Oligodendroglioma Tumor Cell Marker Mouse Monoclonal Antibody

Product Information

Catalog-No.:	DIA H09 (100µg) DIA H09 M (20µg sample)	Species Reactivity Human	
Concentration:	0,2mg/ml	Applications	Dilution
Clone:	H09	Immunohistochemistry (Standard formalin-fixed paraffin)	1:20
Isotype:	Mouse IgG2a	Western Blot	1:500
Immunogen:	Synthetic peptide, amino acid sequence CKPIIIGHHAYGD	Others not tested	
Physical State:	Lyophilized powder	Control antibody	DIA W09 rat anti-hu IDH1wt monoclonal antibody
Reconstitution:	After opening, restore to 500µl (sample 100µl) with sterile distilled water by gentle shaking for 10 minutes		
Presentation:	in PBS with 2% BSA, 0,05% NaN ₃ , pH 7,4. Antibody purified from culture supernatant by GAM (goat anti-mouse) chromatography		

The indicated dilutions are general recommendations. As protocols may vary, optimal working dilutions should be determined by the end user.

Reactivity

Antibody clone H09 reacts specifically with the isocitrate dehydrogenase 1 (IDH1) R132H point mutation in tissue sections from formalin-fixed brain tumor specimens. Heterozygous point mutations of IDH1 codon 132 are frequent in World Health Organization (WHO) grade II and III gliomas. IDH1 R132H mutations occur in approximately 70% of astrocytomas and oligodendroglial tumors.

The high frequency and distribution of the IDH1 R132H mutation among specific brain tumor entities allow the highly sensitive and specific discrimination of various tumors by immunohistochemistry, such as anaplastic astrocytoma from primary glioblastoma or diffuse astrocytoma WHO grade II from pilocytic astrocytoma or ependymoma. Noteworthy is the discrimination of the infiltrating edge of tumors with IDH1 mutation from reactive gliosis.

This antibody is highly useful for tumor classification and in detecting single infiltrating tumor cells.

Instructions for Use

Immunohistochemical staining of standard formalin-fixed paraffin sections

Deparaffinize and rehydrate according to standard procedures. Heat induced epitope retrieval (HIER) is required.

For immunohistochemical detection different techniques can be used: Indirect immunoenzyme labeling with a secondary antibody conjugate, biotin/(strept)avidin-based detection, soluble enzyme immune complex or polymer-based detection. To detect antibody, follow the instructions provided by the particular visualization system. The antibody is suited for immunohistochemical staining using automated platforms.

Use the antibody at 1:20 dilution for 30min at RT.

Storage and Stability

The antibody is stable for 1 year when stored as reconstituted liquid at 2-8°C.

Notes on Safety

The material contains 0,05% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material. Avoid skin and eye contact, inhalation, and ingestion.

For research use only. Not for diagnostic or therapeutic use.

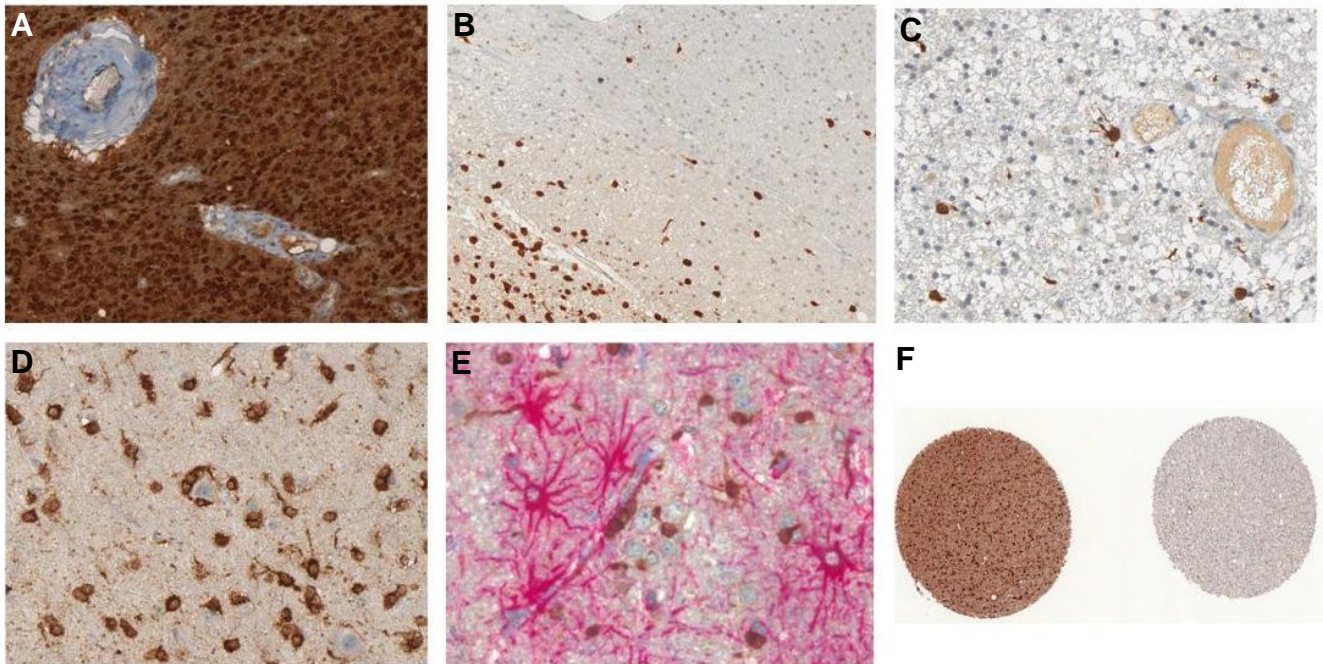
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Immunohistochemistry of human IDH1 R132H in formalin-fixed paraffin-embedded brain tissue sections

(pictures courtesy of Prof. Dr. med. Andreas von Deimling, Department of Neuropathology, University Heidelberg / Clinical Cooperation Unit Neuropathology, German Cancer Research Center (DKFZ), Heidelberg, Germany)



- (A)
Strong reaction of IDH1 mutation specific antibody clone H09 in tumor center of anaplastic oligoastrocytoma.
- (B)
Infiltration zone of anaplastic astrocytoma with specific labelling of infiltrating glioma cells by antibody clone H09.
- (C)
Identification of single tumor cells in white matter distant from tumor center with IDH1 mutation specific antibody clone H09.
- (D)
Cortex infiltrated by oligodendrogloma with specific labelling of tumor cells by antibody clone H09.
- (E)
Double staining of GFAP (glial fibrillary acidic protein, red) and clone H09 (brown) of oligodendrogloma infiltration zone demonstrating specific labelling of tumor cells but not of GFAP positive reactive astrocytes.
- (F)
Strong reaction of IDH1 mutation specific antibody clone H09 with IDH1 R132H mutated diffuse astrocytoma (left) but not with wild type tumor (right).

References for clone H09

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