

Anti-pan-IDH1 (wt & mutated) / DIA-W09

Rat monoclonal anti-pan-IDH1, Clone W09, to be used as a control for anti-IDH1 R132H

Product Information

Catalog No.:	DIA-W09 (100µg)	Reconstitution:	DIA-W09: Restore to 500µl with sterile distilled water by 10min. gentle shaking
Clone:	W09	Presentation:	in PBS with 2% BSA, 0.05% NaN ₃ , pH 7.4. Antibody purified from culture supernatant by protein G affinity chromatography
Concentration:	0.2 mg/ml	Applications:	Immunohistochemistry (standard formalin-fixed paraffin sections) Western blot
Isotype:	Rat IgG2a	Dilutions:	1:20 Immunohistochemistry (FFPE) 1:500 Western Blot (General recommendation, validation of antibody performance/protocol using proper controls is the responsibility of the end user.)
Specificity:	Human IDH1, wild type & point mutation		
Immunogen:	Peptide sequence 4-120 of human IDH1		
Physical State:	DIA-W09: Lyophilized powder		
Species			
Reactivity:	Human		
Antibody Control:	Antibody control for the IDH1 R132H mutation specific clone H09, (mouse anti-hu IDH1 R132H), cat.no.: DIA-H09		
Visualization:	Cytoplasmic		

Reactivity

Isocitrate dehydrogenase (IDH) is an important enzyme in the citric acid cycle and catalyzes the oxidative decarboxylation of isocitrate to alpha-ketoglutarate and CO₂ while converting NAD⁺ to NADH.

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. Mouse antibody clone H09 (product number #DIA-H09) reacts specifically with the isocitrate dehydrogenase 1 (IDH1) R132H point mutation in tissue sections from formalin-fixed brain tumor specimens. Therefore this antibody is highly useful for tumor classification.

Rat antibody clone W09 detects both wild type (wt) and point mutated IDH1 in glioblastoma (anti-pan-IDH1) and serves as control for the IDH1 point mutation specific mouse antibody clone H09. Moreover, Tan et al. (*Mol Cell Proteomics*, 2011) have identified IDH1 as a potential diagnostic and prognostic biomarker for Non-small-cell Lung Cancer (NSCLC). These findings suggest that anti-IDH1wt antibody could be used as a histochemical biomarker for prognosis prediction of NSCLC.

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 with 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 W09 antibody in lyophilised (absolutely dry) form is stable for many years. The antibody is stable for up to 1 year when stored as reconstituted liquid at 2-8°C.

Safety Notes

The material contains 0.05% sodium azide as 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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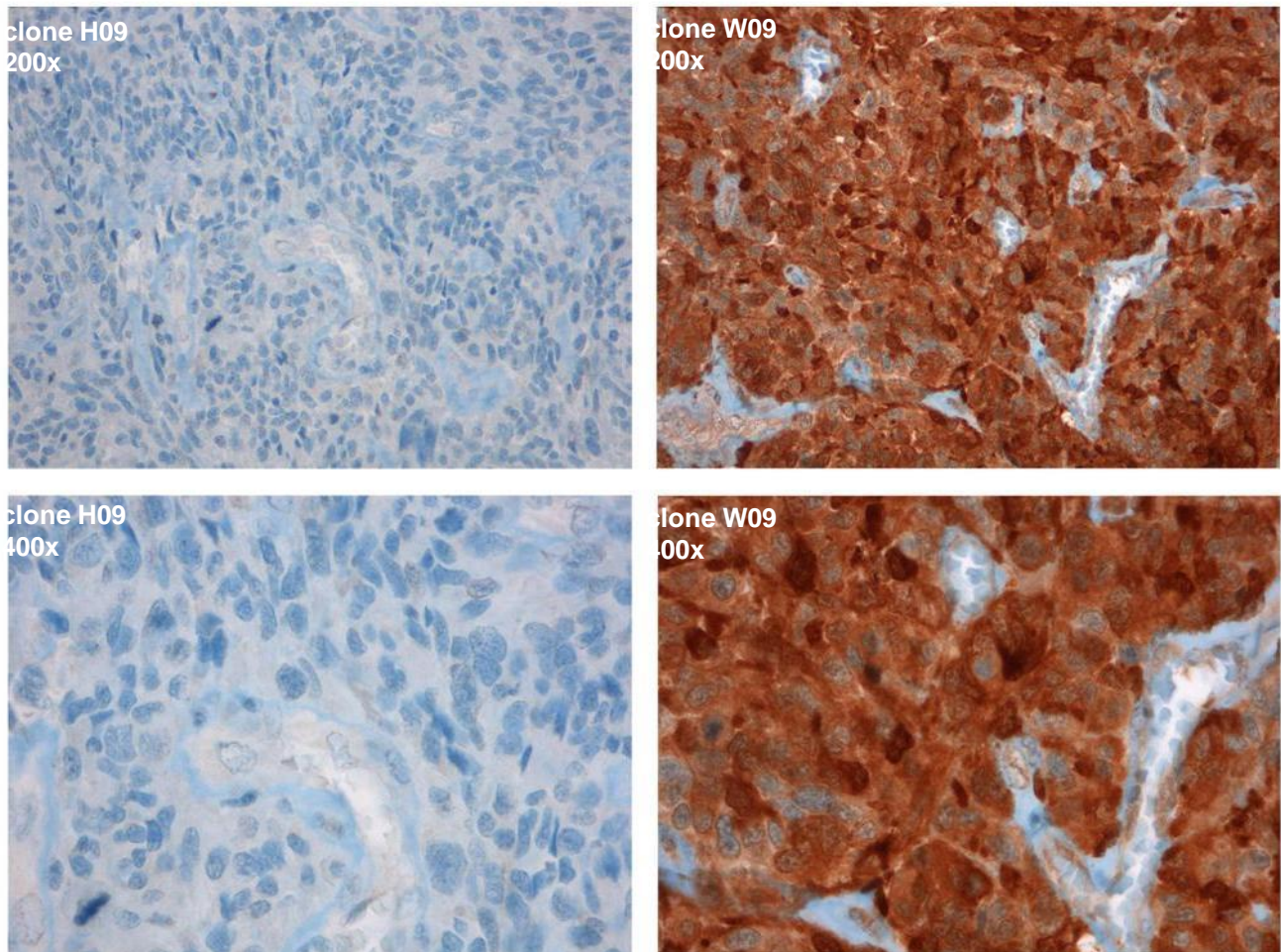


Figures

Immunohistochemistry of human IDH1 R132H and human IDH1 wild-type in formalin-fixed paraffin-embedded glioblastoma.

(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)

No reaction of IDH1 R132H mutation specific antibody clone H09 with glioblastoma (left) but strong reaction of anti-pan-IDH1 specific antibody clone W09 with the same glioblastoma (right). Magnification: 200x(top) and 400x(bottom)



References for clone W09

1. Capper D, Weissert S, Balss J, Habel A, Meyer J, Jäger D, Ackermann U, Tessmer C, Korshunov A, Zentgraf H, Hartmann C, von Deimling A. Characterization of R132H mutation-specific IDH1 antibody binding in brain tumors. *Brain Pathol.* 20(1): 245-254, 2010

Related references

1. Tan F, Jiang Y, Sun N, Chen Z, Lv Y, Shao K, Li N, Qiu B, Gao Y, Li B, Tan X, Zhou F, Wang Z, Ding D, Wang J, Sun J, Hang J, Feng X, Shi S, He F, He J.. Identification of IDH1 as a Potential Diagnostic and Prognostic Biomarker for Non-small-cell Lung Cancer by Proteomic Analysis. *Mol Cell Proteomics* 2011 Nov 7. (Epub ahead of print)

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