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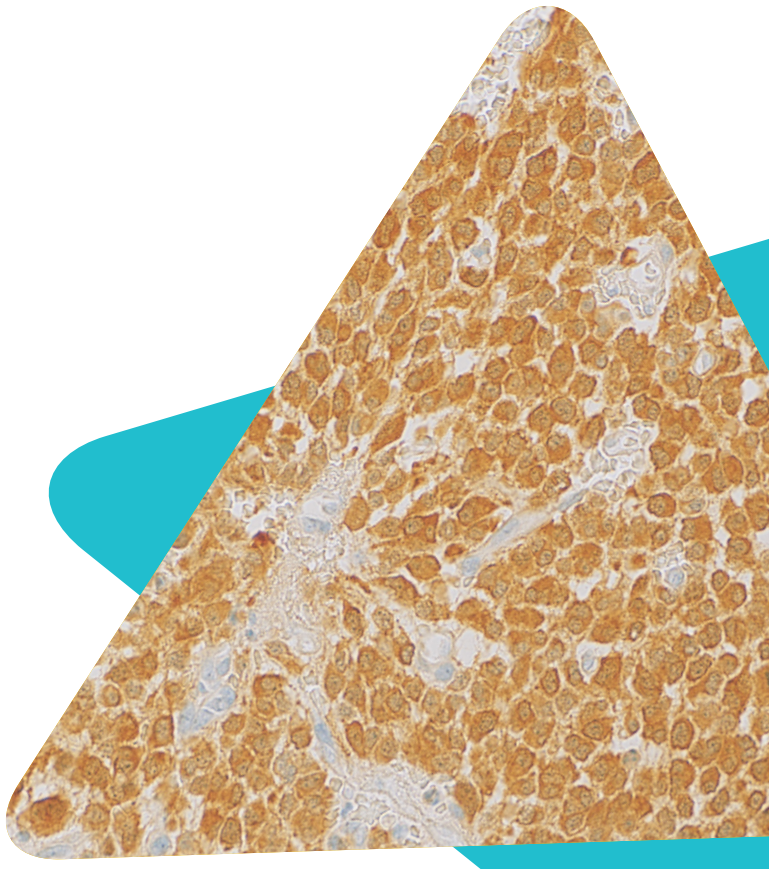
Cell Marque™ Tissue Diagnostics

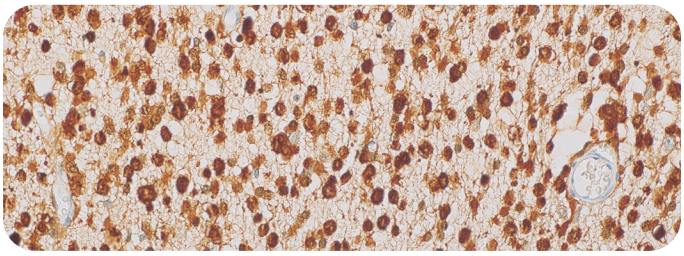
IDH1 R132H (MRQ-67)

Rabbit Monoclonal Antibody

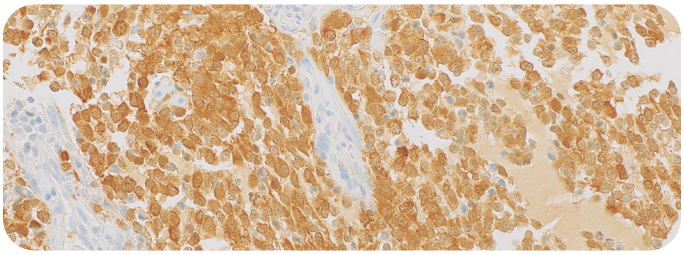
Isocitrate dehydrogenase 1 (IDH1) functions as an enzyme in the Krebs (citric acid) cycle and is biologically active in the cytoplasmic and peroxisomal compartments under normal conditions. The occurrence of heterozygous missense mutations at an arginine residue at codon 132 (R132) within the coding region for the substrate binding site of IDH1 has been described to promote oncogenesis in several malignancies.[1] Of the identified mutant variants, a histidine substitution (R132H) is one of the more frequently observed point mutations in certain tumor groups of gliomas.[2] Mutations involving IDH1 have been implicated as early events during gliomagenesis and IDH1 mutation status was incorporated into the 2016 WHO Classification of Tumors of the Central Nervous System as a new parameter for sub-classifying diffuse astrocytic and oligodendroglial tumors.[3,4] Immunohistochemical identification of IDH1 R132H immunoreactivity can be used as a tool in screening tumors that may be harboring this mutation, such as low grade diffuse and anaplastic astrocytomas, oligodendrogliomas, and secondary glioblastomas.



Astrocytoma



Oligodendroglioma



Glioblastoma

Ordering Information:

Description	Cat No.
0.1 mL concentrate	**456R-34**
0.5 mL concentrate	**456R-35**
1.0 mL concentrate	**456R-36**
1.0 mL predilute	**456R-37**
7.0 mL predilute	**456R-38**

Intended Use:

IDH1 R132H (MRQ-67) Rabbit Monoclonal Antibody is intended for laboratory use in the detection of the IDH1 R132H mutant protein in formalin-fixed, paraffin-embedded tissue stained in qualitative immunohistochemistry (IHC) testing. This product is not a stand-alone diagnostic, and cannot be used for diagnosis, treatment, prevention, or mitigation of disease.

Product Information:

Visualization: Cytoplasmic
Controls: Astrocytoma, Oligodendroglioma, Glioblastoma, Acute myeloid leukemia
Dilution Range: 1:25-1:100
Associated Specialty: Neuropathology

References:

1. Yang, H, et al. IDH1 and IDH2 mutations in tumorigenesis: mechanistic insights and clinical perspectives. Clin Cancer Res. 2012; 18:5562-5571.
2. Balss, J, et al. Analysis of the IDH1 codon 132 mutation in brain tumors. Acta Neuropathol. 2008; 116:597–602.
3. Watanabe, T, et al. IDH1 mutations are early events in the development of astrocytomas and oligodendrogliomas. Am. J. Pathol. 2009; 174:1149-1153.
4. Louis, D.N., et al. The 2016 World Health Organization Classification of Tumors of the Central Nervous System: A summary. Acta Neuropathol. 2016; 131:803-820.

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