

# Medaysis

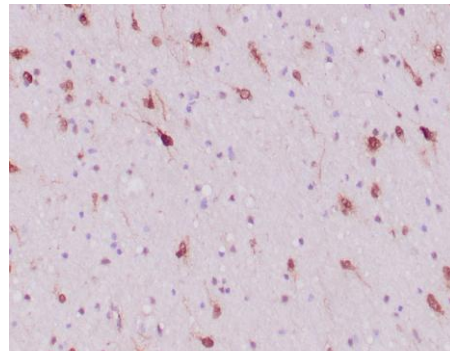
## IDH1-R132H [MD151R]

Gliomas comprise about 30% of all brain tumors and central nervous system tumors, and 80% of all malignant brain tumors. Mutations in isocitrate dehydrogenase 1 and 2 (IDH1 and IDH2) are found in 80% of low-grade gliomas (LGGs) (grade I and II) and in a subset of high-grade gliomas (HGGs) (grade III or IV). Grade III gliomas include anaplastic astrocytomas and anaplastic oligodendrogliomas. Grade IV gliomas are called glioblastomas. Hot spot mutations of IDH1 are early and frequent genetic alterations in secondary glioblastomas. Recent studies show that primary glioblastoma increases expression of wild-type IDH1 which confers therapeutic resistance. Studies show that IDH1 mutant and IDH1 wild-type gliomas have different metabolic properties, pointing that they may have distinctive vulnerabilities allowing for the possibility of personalized therapy.

About 95% of all IDH1 and IDH2 mutations are in IDH1, and among those over 90% are type R132H. All other mutations have far less frequency. Two main molecular subtypes of glioma, which harbor IDH1-R132H, express the following: (i) IDH1-R132H, 1p/19q codeletion; or (ii) IDH1-R132H, TP53 and ATRX inactivating mutations. Studies show that in addition to its roles in metabolism and epigenetics, mutant IDH1 also helps maintain genomic stability in tumors by enhancing the DNA damage response (DDR). IDH1-R132H gliomas with 1p/19q co-deletion or TP53 and ATRX loss may be related to better prognosis.

The National Comprehensive Cancer Network (NCCN) and the EURO-CNS research committee recommend for optimal testing of the IDH1 mutation status in glioma to first perform IHC testing with the IDH1-R132H antibody, followed by DNA-sequencing only when the results from IHC are negative.

Rabbit anti-IDH-R132H clone [MD151R] is highly specific and sensitive for the IDH1-R132H mutation. It does not bind to the wild-type IDH1. It aids the diagnosis of astrocytomas or oligodendrogliomas, as well as the detection of individual cancer cells in the tissue zone surrounding the tumor and in the infiltration zone of diffuse astrocytomas.



FFPE human glioblastoma

Cat.No.	Name	Size	Claim
RM0124	IDH1-R132H [MD151R]	1ml	RUO
RM0124-0.5	IDH1-R132H [MD151R]	0.5ml	RUO
RM0124RTU7	IDH1-R132H [MD151R]	7ml	RUO