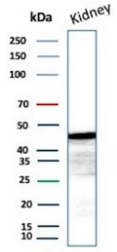
IDH1-R132G Antibody IDH1.R132G/13054R / Isocitrate Dehydrogenase R132G Mutant Antibody [clone IDH1.R132G/13054R] (V5737)

Catalog No.	Formulation	Size
V5737-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5737-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5737SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

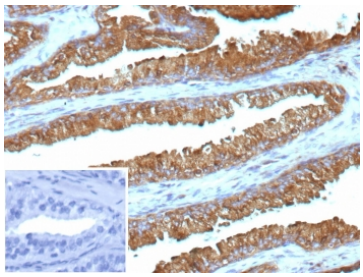
Recombinant RABBIT MONOCLONAL

Bulk quote request

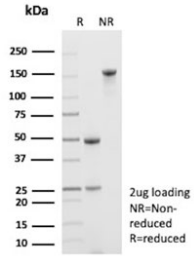
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	IDH1.R132G/13054R
Purity	Protein A affinity
UniProt	O75874
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western blot: 2-4ug/ml
Limitations	This IDH1-R132G Antibody IDH1.R132G/13054R is available for research use only.



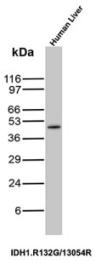
IDH1-R132G Antibody IDH1.R132G/13054R Detection in Human Kidney WB. Western blot analysis of human kidney tissue lysate using IDH1-R132G Antibody, clone IDH1.R132G/13054R. A prominent band is detected at approximately 45-47 kDa, consistent with the predicted molecular weight of IDH1. The discrete target band and limited additional background demonstrate clean detection by this Isocitrate Dehydrogenase R132G Mutant Antibody under the tested conditions.



IDH1-R132G Antibody IDH1.R132G/13054R Staining of Human Prostate Cancer IHC. Immunohistochemistry of FFPE human prostate cancer tissue using IDH1-R132G Antibody, clone IDH1.R132G/13054R. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min followed by cooling before staining. Brown immunoreactivity is visible within tumor cells. The inset shows the PBS secondary antibody negative control, supporting detection by this Isocitrate Dehydrogenase R132G Mutant Antibody under the tested conditions.



Purified IDH1-R132G Antibody IDH1.R132G/13054R SDS-PAGE. SDS-PAGE analysis of purified, BSA-free IDH1-R132G Antibody, clone IDH1.R132G/13054R, under reducing and non-reducing conditions. The intact antibody migrates predominantly near 150 kDa under non-reducing conditions, while reduction produces the expected antibody heavy- and light-chain bands near 50 kDa and 25 kDa, respectively. The observed banding pattern supports the integrity and purity of the recombinant monoclonal Isocitrate Dehydrogenase R132G Mutant Antibody preparation.



IDH1-R132G Antibody IDH1.R132G/13054R Detection in Human Liver WB. Western blot analysis of human liver tissue lysate using IDH1-R132G Antibody, clone IDH1.R132G/13054R. A discrete band is detected at approximately 45-47 kDa, consistent with the expected molecular weight of isocitrate dehydrogenase 1. The prominent target band and limited additional reactivity demonstrate clean detection by this Isocitrate Dehydrogenase R132G Mutant Antibody under the tested conditions.

Description

IDH1-R132G Antibody IDH1.R132G/13054R / Isocitrate Dehydrogenase R132G Mutant Antibody recognizes the R132G mutant form of isocitrate dehydrogenase 1 (IDH1), in which arginine at amino acid 132 is replaced by glycine. Wild-type IDH1 is an NADP-dependent metabolic enzyme that catalyzes conversion of isocitrate to alpha-ketoglutarate while generating NADPH. Alteration of the critical R132 residue changes the catalytic properties of IDH1 and produces a neomorphic enzymatic activity associated with cancer metabolism.

IDH1 R132G mutant protein converts alpha-ketoglutarate to D-2-hydroxyglutarate rather than performing the normal IDH1 reaction. Accumulation of this oncometabolite can inhibit alpha-ketoglutarate-dependent enzymes involved in processes including DNA and histone demethylation. These effects can alter cellular differentiation, gene regulation, and metabolic homeostasis, providing an important mechanistic connection between mutant IDH1 activity and tumor development.

Although R132H is the predominant IDH1 substitution in diffuse gliomas, additional mutations occur at the same catalytic residue, including R132G. Different R132 substitutions vary in frequency among tumor types, making mutation-specific reagents valuable for distinguishing individual mutant proteins. An Isocitrate Dehydrogenase R132G Mutant Antibody provides targeted detection of the R132G variant rather than serving as a general measure of total IDH1 expression.

Clone IDH1.R132G/13054R is a recombinant rabbit monoclonal antibody generated using recombinant human IDH1 protein containing the R132G mutation as the immunogen. NSJ Bioreagents offers this IDH1-R132G Antibody for researchers investigating mutant IDH1 expression, cancer-associated metabolic alterations, and R132G-mutated IDH1 biology. An IDH1-R132G Antibody provides a clone-defined reagent for studying this specific cancer-associated form of isocitrate dehydrogenase 1.

For research targeting the more common R132H IDH1 mutation, see our IDH1 R132H Antibody IDH1/6806R / IDH1 R132H Mutation Antibody page.

Application Notes

Optimal dilution of the IDH1-R132G Antibody IDH1.R132G/13054R / Isocitrate Dehydrogenase R132G Mutant Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein from human IDH1 protein with the R132G mutation was used as the immunogen for the IDH1-R132G Antibody IDH1.R132G/13054R.

Storage

Aliquot the IDH1-R132G antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

IDH1-R132G antibody, IDH1 R132G antibody, Isocitrate dehydrogenase R132G mutant antibody, Isocitrate dehydrogenase 1 R132G antibody, IDH1 R132G mutant antibody

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