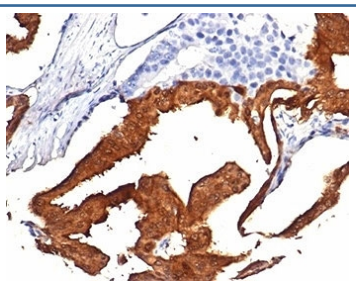
Isocitrate Dehydrogenase R132H Mutant Antibody IDH1/7277R / IDH1 R132H Protein Antibody [clone IDH1/7277R] (V4026)

Catalog No.	Formulation	Size
V4026-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4026-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4026SAF-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	IDH1/7277R
Purity	Protein A/G affinity
UniProt	O75874
Localization	Cytoplasm, nucleus
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Isocitrate Dehydrogenase R132H Mutant Antibody IDH1/7277R is available for research use only.



Isocitrate Dehydrogenase R132H Mutant Antibody IDH1/7277R Staining of Human Prostate Carcinoma IHC. Immunohistochemistry of FFPE human prostate carcinoma tissue using Isocitrate Dehydrogenase R132H Mutant Antibody, clone IDH1/7277R. 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. Strong brown immunoreactivity is visible in tumor cells, demonstrating detection of IDH1 R132H Protein in the tested prostate carcinoma specimen.

Description

Isocitrate Dehydrogenase R132H Mutant Antibody IDH1/7277R / IDH1 R132H Protein Antibody recognizes the R132H mutant form of isocitrate dehydrogenase 1 (IDH1), in which arginine at amino acid 132 is replaced by histidine. Wild-type IDH1 is an NADP-dependent metabolic enzyme that catalyzes the oxidative decarboxylation of isocitrate to alpha-ketoglutarate while generating NADPH. Substitution at the R132 catalytic residue changes the enzymatic properties of IDH1 and produces a neomorphic activity associated with tumor biology.

IDH1 R132H Protein converts alpha-ketoglutarate to D-2-hydroxyglutarate, resulting in accumulation of this cancer-associated oncometabolite. D-2-hydroxyglutarate can interfere with alpha-ketoglutarate-dependent enzymes involved in processes including DNA and histone demethylation. The resulting metabolic and epigenetic alterations can disrupt normal cellular differentiation and contribute to the biological effects associated with mutant IDH1.

The R132H substitution represents the predominant IDH1 mutation found in diffuse gliomas and is an important molecular feature in brain tumor research and classification. IDH1 mutations are also investigated in other malignancies, although the relative frequency of R132H and other substitutions varies according to tumor type. Mutation-specific antibodies provide a means of investigating the R132H mutant protein independently of wild-type IDH1 and other IDH1 sequence variants.

Clone IDH1/7277R is a recombinant rabbit monoclonal antibody generated against the mutant IDH1 R132H protein. NSJ Bioreagents offers this Isocitrate Dehydrogenase R132H Mutant Antibody for researchers investigating mutant IDH1 expression, cancer-associated metabolic alterations, and the biology of IDH1-mutated tumors. An Isocitrate Dehydrogenase R132H Mutant Antibody provides a clone-defined reagent for studying the cancer-associated IDH1 R132H Protein.

For an alternative recombinant monoclonal clone recognizing the IDH1 R132H mutation, see our IDH1 R132H Antibody IDH1/6806R / IDH1 R132H Mutation Antibody page.

Application Notes

Optimal dilution of the Isocitrate Dehydrogenase R132H Mutant Antibody IDH1/7277R / IDH1 R132H Protein Antibody should be determined by the researcher.

Immunogen

A recombinant protein fragment specific the the IDH R132H Mutant was used as the immunogen for the Isocitrate Dehydrogenase R132H Mutant Antibody IDH1/7277R.

Storage

Aliquot the Isocitrate Dehydrogenase R132H Mutant antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

IDH1 R132H antibody, IDH1 R132H protein antibody, IDH1 R132H mutant antibody, Isocitrate dehydrogenase R132H antibody, Isocitrate dehydrogenase 1 R132H antibody

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