

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Isocitrate Dehydrogenase 1/IDH1 in ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 843219
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Isocitrate Dehydrogenase 1/IDH1 Ser2-Leu414 Accession # O75874
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Knockout Validated	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Isocitrate Dehydrogenase 1 (IDH1) catalyzes the oxidative decarboxylation of isocitrate to α-ketoglutarate. There are two subclasses in the IDH family, one of them utilizing NADP⁺ as the electron acceptor and the other using NAD⁺ (1). The protein encoded by this gene is the NADP⁺-dependent isocitrate dehydrogenase found in the cytoplasm and peroxisomes. In peroxisomes, IDH1 generates the NADPH required for intraperoxisomal reduction reactions. Mutations of Arg132 of human IDH1 result in a reduced ability of the enzyme to convert isocitrate to α-ketoglutarate, but the enzyme acquires the ability to generate 2-hydroxyglutarate (2HG) from α-ketoglutarate (2). Elevated levels of the metabolite 2HG are associated with a high risk of malignant brain tumors. Arg132 mutations of IDH1 are common in high-grade gliomas, but not in other types of tumors (3).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.