Datasheet for ABIN3197487

anti-Isocitrate Dehydrogenase antibody

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Overview

Quantity:	50 µg
Target:	Isocitrate Dehydrogenase (IDH)
Reactivity:	Zea mays, Tomato, Pisum sativum, Potato, Arabidopsis thaliana
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Isocitrate Dehydrogenase antibody is un-conjugated
Application:	Western Blotting (WB)

Product Details

Immunogen:	KLH-conjugated peptide 1 and peptide 2 conserved in all higher plants mitochondrial, NAD dependent isocitrate dehydrogenase subunits including Arabidopsis thaliana IDH-I Q8LFC0, At4g35260 and IDH-II P93032, At4g17130
Cross-Reactivity (Details):	No cross-reactivity with: Chlamydomonas reinhardtii
Predicted Reactivity:	dicots including Brassica napus, Vitis vinifera, monocots including Oryza sativa, Zea mays
Characteristics:	Expected / apparent Molecular Weight of the Antigene: 39 / 45 kDa (Arabidopsis thaliana)
Purification:	serum

Target Details

Target:	Isocitrate Dehydrogenase (IDH)
Abstract:	IDH Products

Target Details

Background:	AGI Code: At4g35260 Plant NADH dependent isocitrate dehydrogenase enzyme is located in mitochondrial matrix. This enzyme is classified as an oxidoreductase and its function is to catalyze a reaction in the citric acid cycle, specifically the sequential dehydrogenation and decarboxylation of isocitrate to form a-ketoglutarate. It removes hydrogens from its substrate, isocitrate. In addition to this process, it functions as a decarboxylase, removing a CO2 from the six-carbon substrate to form a five-carbon product mentioned above as a-ketoglutarate. There are two forms of this enzyme NADP+ and NAD+ dependent.
Molecular Weight:	expected: 39 kDa, apparent: 45 kDa (Arabidopsis thaliana)
UniProt:	P93032

Application Details

Application Notes:	Recommended Dilution 1 : 5 000 with standard ECL (WB). Additional Information: Peptide used to elicit this antibody is not conserved in NADPH dependentanzymes, partially conserved across eukaryotic Idh subunits. Some conservationacross bacterial which contain the NAD-dependent form of Idh (as opposed to theNADP-dependent form).
Comment:	cellular [compartment marker] of mitochondrial matrix
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	PBS pH 7.4
Handling Advice:	Please, remember to spin tubes briefly prior to opening them to avoid any losses that might occur from lyophilized material adhering to the cap or sides of the tubes. Once reconstituted make aliquots to avoid repreated freeze-thaw cycles.
Storage:	-20 °C

Publications

Product cited in:	Rurek, Woyda-Ploszczyca, Jarmuszkiewicz et al.: "Biogenesis of mitochondria in cauliflower (Brassica oleracea var. botrytis) curds subjected to temperature stress and recovery involves regulation of the complexome, respiratory chain activity, ..." in: **Biochimica et biophysica acta**, Vol. 1847, Issue 4-5, pp. 399-417, (2015) (PubMed).

Publications

Lee, Lee, Yoo, Duncan, Oh, Lee, Lee, Whelan, Hwang: "Mitochondrial targeting of the Arabidopsis F1-ATPase γ-subunit via multiple compensatory and synergistic presequence motifs." in: **The Plant cell**, Vol. 24, Issue 12, pp. 5037-57, (2013) (PubMed).

Szal, Jastrz?bska, Kulka, Lea: "Influence of mitochondrial genome rearrangement on cucumber leaf carbon and nitrogen metabolism." in: **Planta**, Vol. 232, Issue 6, pp. 1371-82, (2010) (PubMed).

Images

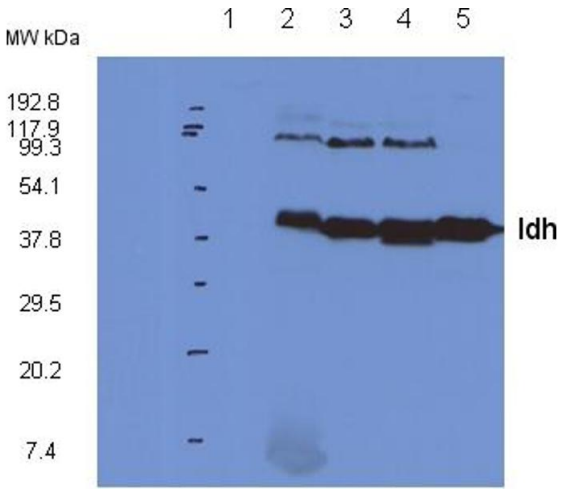

Image 1. Figure description: 1: Total extract A. thaliana (20 g protein) 2: Fraction enriched with mitochondria A. thaliana 3: Pure mitochondria A. thaliana 4: Pure mitochondria P. satisum 5: Pure mitochondria S. tuberosum Description of experimental conditions: After SDS-PAGE gel electrophoresis samples have been transferred to nitrocellulose membrane. Blocking has been done in 5% milk powder in TBS followed by incubation with primary antibodies for 1 hour and 30 minutes in RT After incubation with secondary antibodies reaction has been developed using ECL reagent (GE Healthcare) * Band detected at ca. 90 kDa is suspected to be a dimmer of Idh, since this band is depleted upon peptide competition experiment.