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IsocitRe dehydrogenase (IDH3) Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP1927A

Product Information

Application	WB, E
Primary Accession	P50213
Other Accession	Q99NA5, Q9D6R2, Q28480, P41563
Reactivity	Human
Predicted	Bovine, Monkey, Mouse, Rat, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	39592
Antigen Region	317-346

Additional Information

Gene ID	3419
Other Names	Isocitrate dehydrogenase [NAD] subunit alpha, mitochondrial, Isocitric dehydrogenase subunit alpha, NAD(+)-specific ICDH subunit alpha, IDH3A
Target/Specificity	This Isocitrate dehydrogenase (IDH3) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 317-346 amino acids from the C-terminal region of human Isocitrate dehydrogenase (IDH3).
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	IsocitRe dehydrogenase (IDH3) Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	IDH3A (HGNC:5384)
Function	Catalytic subunit of the enzyme which catalyzes the decarboxylation of isocitrate (ICT) into alpha-ketoglutarate. The heterodimer composed of the alpha (IDH3A) and beta (IDH3B) subunits and the heterodimer composed of

the alpha (IDH3A) and gamma (IDH3G) subunits, have considerable basal activity but the full activity of the heterotetramer (containing two subunits of IDH3A, one of IDH3B and one of IDH3G) requires the assembly and cooperative function of both heterodimers.

Cellular Location Mitochondrion.

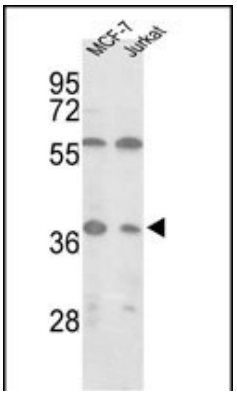
Background

Isocitrate dehydrogenases catalyze the oxidative decarboxylation of isocitrate to 2-oxoglutarate. These enzymes belong to two distinct subclasses, one of which utilizes NAD(+) as the electron acceptor and the other NADP(+). Five isocitrate dehydrogenases have been reported: three NAD(+)-dependent isocitrate dehydrogenases, which localize to the mitochondrial matrix, and two NADP(+)-dependent isocitrate dehydrogenases, one of which is mitochondrial and the other predominantly cytosolic. NAD(+)-dependent isocitrate dehydrogenases catalyze the allosterically regulated rate-limiting step of the tricarboxylic acid cycle. Each isozyme is a heterotetramer that is composed of two alpha subunits, one beta subunit, and one gamma subunit. The protein described here is the alpha subunit of one isozyme of NAD(+)-dependent isocitrate dehydrogenase.

References

Soundar, S., et al., J. Biol. Chem. 278(52):52146-52153 (2003).
Weiss, C., et al., Biochemistry 39(7):1807-1816 (2000).
Kim, Y.O., et al., J. Biol. Chem. 274(52):36866-36875 (1999).
Huh, T.L., et al., Genomics 32(2):295-296 (1996).
Kim, Y.O., et al., Biochem. J. 308 (PT 1), 63-68 (1995) (): ().

Images



Western blot analysis of Isocitrate dehydrogenase (Cat. #AP1927a) in MCF-7, Jurkat cell line lysates (35ug/lane). Isocitrate dehydrogenase (arrow) was detected using the purified Pab.

Citations

- Novel mitochondrial substrates of omi indicate a new regulatory role in neurodegenerative disorders.

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