

OGDH Rabbit pAb

OGDH Rabbit pAb Catalog # AP56804

Product Information

Application IHC-P, IHC-F, IF

Primary Accession
Reactivity
Horse
Host
Clonality
Calculated MW
Physical State
Q02218
Horse
Rabbit
Polyclonal
115935
Liquid

Immunogen KLH conjugated synthetic peptide derived from human OGDH

Epitope Specificity 931-1023/1023

Isotype IgG

Purity affinity purified by Protein A

Buffer 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.

SUBCELLULAR LOCATION Mitochondrion matrix.

SIMILARITY Belongs to the alpha-ketoglutarate dehydrogenase family.

Important Note This product as supplied is intended for research use only, not for use in

human, therapeutic or diagnostic applications.

Background Descriptions This gene encodes one subunit of the 2-oxoglutarate dehydrogenase

complex. This complex catalyzes the overall conversion of 2-oxoglutarate (alpha-ketoglutarate) to succinyl-CoA and CO(2) during the Krebs cycle. The

protein is located in the mitochondrial matrix and uses thiamine pyrophosphate as a cofactor. A congenital deficiency in 2-oxoglutarate dehydrogenase activity is believed to lead to hypotonia, metabolic acidosis, and hyperlactatemia. Alternative splicing results in multiple transcript variants

encoding distinct isoforms.[provided by RefSeq, Sep 2009]

Additional Information

Gene ID 4967

Other Names 2-oxoglutarate dehydrogenase complex component E1, E1o, HsOGDH,

OGDC-E1, OGDH-E1, 1.2.4.2, 2-oxoglutarate dehydrogenase, mitochondrial, Alpha-ketoglutarate dehydrogenase, Alpha-KGDH-E1, Thiamine diphosphate (ThDP)-dependent 2-oxoglutarate dehydrogenase, OGDH (<u>HGNC:8124</u>)

Dilution IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500

Storage Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When

reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

Protein Information

Name

OGDH (HGNC:8124)

Function

2-oxoglutarate dehydrogenase (E1o) component of the 2- oxoglutarate dehydrogenase complex (OGDHC) (PubMed:24495017, PubMed:25210035, PubMed: <u>28435050</u>). Participates in the first step, rate limiting for the overall conversion of 2-oxoglutarate to succinyl-CoA and CO(2) catalyzed by the whole OGDHC (PubMed:24495017, PubMed:25210035, PubMed:28435050). Catalyzes the irreversible decarboxylation of 2-oxoglutarate (alpha-ketoglutarate) via the thiamine diphosphate (ThDP) cofactor and subsequent transfer of the decarboxylated acyl intermediate on an oxidized dihydrolipoyl group that is covalently amidated to the E2 enzyme (dihydrolipoyllysine-residue succinyltransferase or DLST) (PubMed:24495017, PubMed:25210035, PubMed:28435050, PubMed:35272141). Plays a key role in the Krebs (citric acid) cycle, which is a common pathway for oxidation of fuel molecules, including carbohydrates, fatty acids, and amino acids (PubMed: 25210035). Can catalyze the decarboxylation of 2-oxoadipate in vitro, but at a much lower rate than 2-oxoglutarate (PubMed: 28435050). Mainly active in the mitochondrion (PubMed: 29211711). A fraction of the 2-oxoglutarate dehydrogenase complex also localizes in the nucleus and is required for lysine succinylation of histones: associates with KAT2A on chromatin and provides succinyl-CoA to histone succinyltransferase KAT2A (PubMed: 29211711).

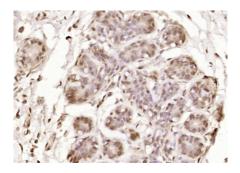
Cellular Location

Mitochondrion. Nucleus. Note=Mainly localizes in the mitochondrion. A small fraction localizes to the nucleus, where the 2- oxoglutarate dehydrogenase complex is required for histone succinylation.

Background

This gene encodes one subunit of the 2-oxoglutarate dehydrogenase complex. This complex catalyzes the overall conversion of 2-oxoglutarate (alpha-ketoglutarate) to succinyl-CoA and CO(2) during the Krebs cycle. The protein is located in the mitochondrial matrix and uses thiamine pyrophosphate as a cofactor. A congenital deficiency in 2-oxoglutarate dehydrogenase activity is believed to lead to hypotonia, metabolic acidosis, and hyperlactatemia. Alternative splicing results in multiple transcript variants encoding distinct isoforms.[provided by RefSeq, Sep 2009]

Images



Paraformaldehyde-fixed, paraffin embedded (human breast); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (OGDH) Polyclonal Antibody, Unconjugated (AP56804) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.