

# OGDH Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP56804

## Product Information

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<b>Application</b>	IHC-P, IHC-F, IF, ICC, E
<b>Primary Accession</b>	<a href="#">Q02218</a>
<b>Reactivity</b>	Pig, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	115935
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human OGDH
<b>Epitope Specificity</b>	931-1023/1023
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	Mitochondrion matrix.
<b>SIMILARITY</b>	Belongs to the alpha-ketoglutarate dehydrogenase family.
<b>Important Note</b>	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
<b>Background Descriptions</b>	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 <sub>2</sub> 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

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<b>Gene ID</b>	4967
<b>Other Names</b>	2-oxoglutarate dehydrogenase, mitochondrial, 1.2.4.2, 2-oxoglutarate dehydrogenase complex component E1, OGDC-E1, Alpha-ketoglutarate dehydrogenase, OGDH ( <a href="#">HGNC:8124</a> )
<b>Dilution</b>	IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,ELISA=1:5000-10000
<b>Format</b>	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
<b>Storage</b>	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.

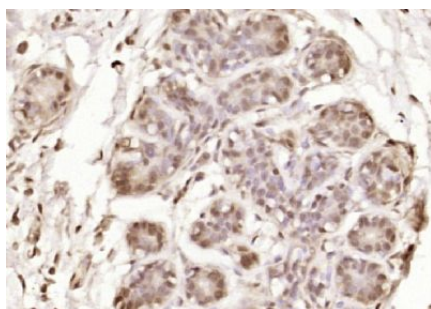
## Protein Information

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<b>Name</b>	OGDH ( <a href="#">HGNC:8124</a> )
<b>Function</b>	<p>2-oxoglutarate dehydrogenase (E1<math>\alpha</math>) component of the 2- oxoglutarate dehydrogenase complex (OGDHC) (PubMed:<a href="#">24495017</a>, PubMed:<a href="#">25210035</a>, PubMed:<a href="#">28435050</a>). 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:<a href="#">24495017</a>, PubMed:<a href="#">25210035</a>, PubMed:<a href="#">28435050</a>). 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:<a href="#">24495017</a>, PubMed:<a href="#">25210035</a>, PubMed:<a href="#">28435050</a>, PubMed:<a href="#">35272141</a>). 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:<a href="#">25210035</a>). Can catalyze the decarboxylation of 2-oxoadipate in vitro, but at a much lower rate than 2-oxoglutarate (PubMed:<a href="#">28435050</a>). Mainly active in the mitochondrion (PubMed:<a href="#">29211711</a>). 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:<a href="#">29211711</a>).</p>
<b>Cellular Location</b>	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.

## Images

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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'.