

**OGDH Polyclonal Antibody**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP56804**

**Specification**

**OGDH Polyclonal Antibody - Product Information**

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	<a href="#">Q02218</a>
Reactivity	Pig, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	111 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human OGDH
Epitope Specificity	931-1023/1023
Isotype	IgG
<b>Purity</b>	
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]

**OGDH Polyclonal Antibody - Additional Information**

**Gene ID** 4967

**Other Names**

2-oxoglutarate dehydrogenase, mitochondrial, 1.2.4.2, 2-oxoglutarate dehydrogenase complex component E1, OGDC-E1, Alpha-ketoglutarate dehydrogenase, OGDH ([HGNC:8124](http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=8124))

**Dilution**

IHC-P~~N/A  
IHC-F~~N/A

=["dilution\\_IF">IF~1:50~200</span><br \><span class = "dilution\\_ICC">ICC~N/A</span><br \><span class = "dilution\\_E">E~N/A</span>](#)

**Format**

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

**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.

**OGDH Polyclonal Antibody - Protein Information**

**Name** OGDH ([HGNC:8124](#))

**Function**

2-oxoglutarate dehydrogenase (E1o) component of the 2- oxoglutarate dehydrogenase complex (OGDHC) (PubMed:[24495017](http://www.uniprot.org/citations/24495017)</a>, PubMed:[25210035](http://www.uniprot.org/citations/25210035)</a>, PubMed:[28435050](http://www.uniprot.org/citations/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:[24495017](http://www.uniprot.org/citations/24495017)</a>, PubMed:[25210035](http://www.uniprot.org/citations/25210035)</a>, PubMed:[28435050](http://www.uniprot.org/citations/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:[24495017](http://www.uniprot.org/citations/24495017)</a>, PubMed:[25210035](http://www.uniprot.org/citations/25210035)</a>, PubMed:[28435050](http://www.uniprot.org/citations/28435050)</a>, PubMed:[35272141](http://www.uniprot.org/citations/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:[25210035](http://www.uniprot.org/citations/25210035)</a>). Can catalyze the decarboxylation of 2-oxoadipate in vitro, but at a much lower rate than 2-oxoglutarate (PubMed:[28435050](http://www.uniprot.org/citations/28435050)</a>). Mainly active in the mitochondrion (PubMed:[29211711](http://www.uniprot.org/citations/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:[29211711](http://www.uniprot.org/citations/29211711)</a>).

**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.

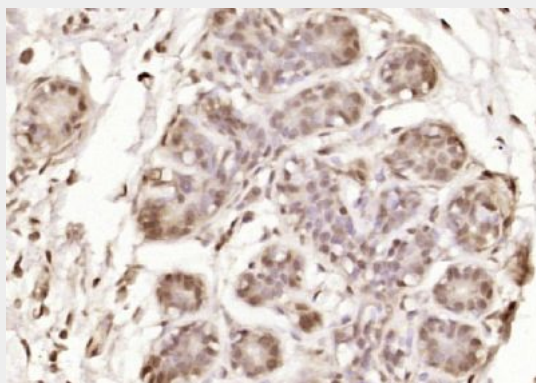
**OGDH Polyclonal Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)

- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **OGDH Polyclonal Antibody - 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 (bs-17710R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.