

# FAHD1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP55069

## Product Information

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<b>Application</b>	WB, IHC-P, IHC-F, IF, ICC, E
<b>Primary Accession</b>	<a href="#">Q6P587</a>
<b>Reactivity</b>	Rat, Pig, Dog, Bovine
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	24542
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human FAHD1
<b>Epitope Specificity</b>	101-200/224
<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. Cytoplasm, cytosol.
<b>SIMILARITY</b>	Belongs to the FAH family.
<b>SUBUNIT</b>	Homodimer.
<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>	FAHD1 is a 224 amino acid protein belonging to the FAH family. Present as a homodimer, FAHD1 is thought to have hydrolase activity and uses magnesium and calcium as cofactors. The gene that encodes FAHD1 maps to human chromosome 16, which encodes over 900 genes in approximately 90 million base pairs, making up nearly 3% of human cellular DNA. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, though through the CREBBP gene which encodes a critical CREB binding protein. Signs of Rubinstein-Taybi include mental retardation and predisposition to tumor growth and white blood cell neoplasias. Crohn's disease is a gastrointestinal inflammatory condition associated with chromosome 16 through the NOD2 gene. An association with systemic lupus erythematosus and a number of other autoimmune disorders with the pericentromeric region of chromosome 16 has led to the identification of SLC5A11 as a potential autoimmune modifier.

## Additional Information

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<b>Gene ID</b>	81889
<b>Other Names</b>	Acylpyruvase FAHD1, mitochondrial, 3.7.1.5, Fumarylacetoacetate hydrolase domain-containing protein 1, FAH domain-containing protein 1, Oxaloacetate decarboxylase, OAA decarboxylase, 4.1.1.112, YisK-like protein, FAHD1, C16orf36, YISKL

<b>Target/Specificity</b>	Ubiquitous (at protein level).
<b>Dilution</b>	WB=1:500-2000,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% Glycerol
<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>	FAHD1 {ECO:0000303 PubMed:21878618, ECO:0000312 HGNC:HGNC:14169}
<b>Function</b>	Tautomerase that converts enol-oxaloacetate, a strong inhibitor of succinate dehydrogenase, to the physiological keto form of oxaloacetate (PubMed: <a href="#">38287013</a> ). It is thereby required to maximize aerobic respiration efficiency by preventing succinate dehydrogenase inhibition (PubMed: <a href="#">38287013</a> ). Also acts as a weak oxaloacetate decarboxylase (ODx), catalyzing the decarboxylation of oxaloacetate (OAA) to pyruvate and CO(2), and as such is likely a regulatory enzyme in the TCA cycle (PubMed: <a href="#">25575590</a> , PubMed: <a href="#">30348641</a> ). Also displays acylpyruvase activity, being able to hydrolyze acetylpyruvate and fumarylpyruvate in vitro (PubMed: <a href="#">21878618</a> , PubMed: <a href="#">30348641</a> ). Exhibits only a weak hydrolase activity on methylacetylpyruvate and acetylacetone, and no activity toward acetoacetyl-CoA (PubMed: <a href="#">21878618</a> ).
<b>Cellular Location</b>	Mitochondrion. Cytoplasm, cytosol
<b>Tissue Location</b>	Ubiquitous (at protein level).

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