

**HADHA Antibody (C-term) [Knockout Validated]
Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5706****Specification**

HADHA Antibody (C-term) [Knockout Validated] - Product Information

Application	WB, FC, IHC-P,E
Primary Accession	P40939
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Antigen Source	HUMAN

HADHA Antibody (C-term) [Knockout Validated] - Additional Information**Gene ID** 3030**Antigen Region**
737-763**Other Names**

Trifunctional enzyme subunit alpha, mitochondrial, 78 kDa gastrin-binding protein, TP-alpha, Long-chain enoyl-CoA hydratase, Long chain 3-hydroxyacyl-CoA dehydrogenase, HADHA, HADH

Dilution

WB~~1:500-1:2000

FC~~1:10~50

IHC-P~~1:10~50

Target/Specificity

This HADHA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 737-763 amino acids from the C-terminal region of human HADHA.

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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

HADHA Antibody (C-term) [Knockout Validated] is for research use only and not for use in diagnostic or therapeutic procedures.

HADHA Antibody (C-term) [Knockout Validated] - Protein Information

Name HADHA**Synonyms** HADH**Function**

Mitochondrial trifunctional enzyme catalyzes the last three of the four reactions of the mitochondrial beta-oxidation pathway (PubMed:[1550553](http://www.uniprot.org/citations/1550553), PubMed:[29915090](http://www.uniprot.org/citations/29915090), PubMed:[30850536](http://www.uniprot.org/citations/30850536), PubMed:[8135828](http://www.uniprot.org/citations/8135828), PubMed:[31604922](http://www.uniprot.org/citations/31604922)). The mitochondrial beta-oxidation pathway is the major energy-producing process in tissues and is performed through four consecutive reactions breaking down fatty acids into acetyl-CoA (PubMed:[29915090](http://www.uniprot.org/citations/29915090)). Among the enzymes involved in this pathway, the trifunctional enzyme exhibits specificity for long-chain fatty acids (PubMed:[30850536](http://www.uniprot.org/citations/30850536), PubMed:[31604922](http://www.uniprot.org/citations/31604922)). Mitochondrial trifunctional enzyme is a heterotetrameric complex composed of two proteins, the trifunctional enzyme subunit alpha/HADHA described here carries the 2,3-enoyl-CoA hydratase and the 3-hydroxyacyl-CoA dehydrogenase activities while the trifunctional enzyme subunit beta/HADHB bears the 3-ketoacyl-CoA thiolase activity (PubMed:[29915090](http://www.uniprot.org/citations/29915090), PubMed:[30850536](http://www.uniprot.org/citations/30850536), PubMed:[8135828](http://www.uniprot.org/citations/8135828)). Independently of subunit beta, HADHA also exhibits a cardiolipin acyltransferase activity that participates in cardiolipin remodeling; cardiolipin is a major mitochondrial membrane phospholipid (PubMed:[23152787](http://www.uniprot.org/citations/23152787), PubMed:[31604922](http://www.uniprot.org/citations/31604922)). HADHA may act downstream of Tafazzin/TAZ, that remodels monolysocardiolipin (MLCL) to a cardiolipin intermediate, and then HADHA may continue to remodel this species into mature tetralinoleoyl-cardiolipin (PubMed:[31604922](http://www.uniprot.org/citations/31604922)). Has also been proposed to act directly on MLCL; capable of acylating MLCL using different acyl-CoA substrates, with highest activity for oleoyl-CoA (PubMed:[23152787](http://www.uniprot.org/citations/23152787)).

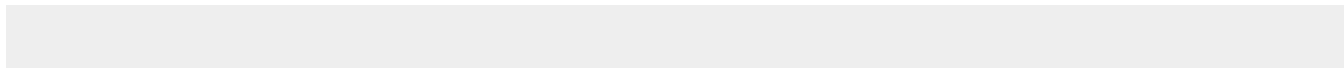
Cellular Location

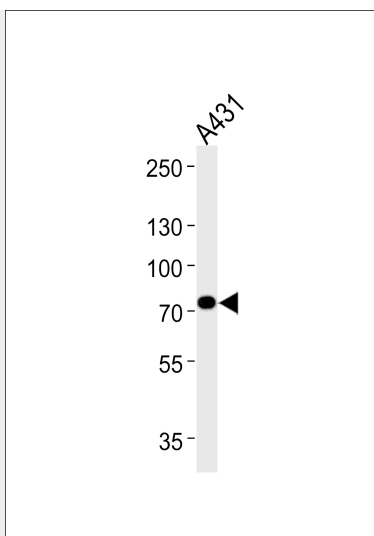
Mitochondrion. Mitochondrion inner membrane Note=Protein stability and association with mitochondrion inner membrane do not require HADHB.

HADHA Antibody (C-term) [Knockout Validated] - Protocols

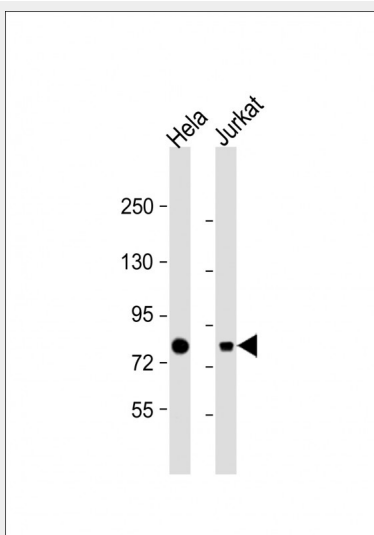
Provided below are standard protocols that you may find useful for product applications.

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

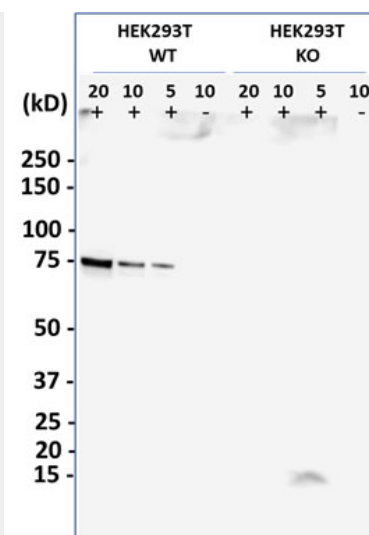
HADHA Antibody (C-term) [Knockout Validated] - Images



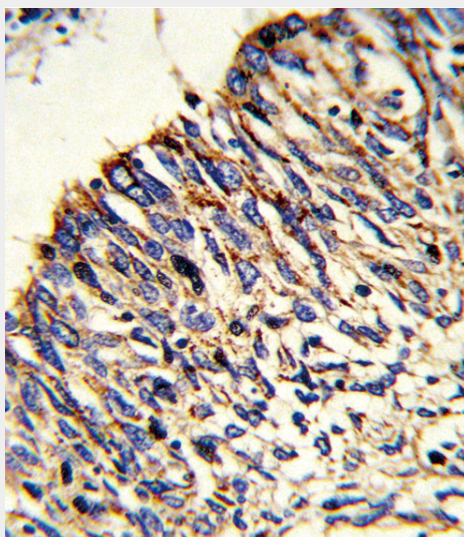
HADHA Antibody (C-term) (Cat.# AP6882b) western blot analysis in A431 cell line lysates (35ug/lane). This demonstrates the HADHA antibody detected the HADHA protein (arrow).



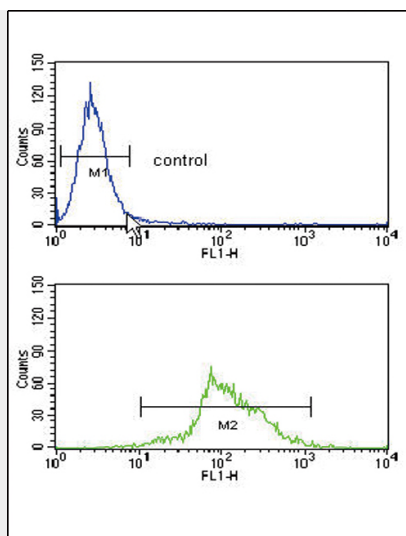
All lanes : Anti-HADHA Antibody (C-term) at 1:1000 dilution Lane 1: HeLa whole cell lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 83 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



A predominant 75 kDa band for the HEK293T wild type lysate was observed (3 ug/ml anti-HADHA) vs the predicted size of 83 kDa. The molecular weight discrepancy could be due to post-translationally modification of the target protein, a splice-variant form of the target protein, a partially degraded form of the target protein, or an unrelated protein which shares the antibody-reactive epitope. A less intense band at 65 kDa was also observed for the knock out lysate, suggesting incomplete knockout of the target gene.



Formalin-fixed and paraffin-embedded human lung carcinoma reacted with HADHA Antibody (C-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



HADHA Antibody (C-term) (Cat. #AP6882b) flow cytometry analysis of Ramos cells (bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

HADHA Antibody (C-term) [Knockout Validated] - Background

HADHA is the alpha subunit of the mitochondrial trifunctional protein, which catalyzes the last three steps of mitochondrial beta-oxidation of long chain fatty acids. The mitochondrial membrane-bound heterocomplex is composed of four alpha and four beta subunits, with the alpha subunit catalyzing the 3-hydroxyacyl-CoA dehydrogenase and enoyl-CoA hydratase activities.

HADHA Antibody (C-term) [Knockout Validated] - References

Sims, H.F., et.al., Proc. Natl. Acad. Sci. U.S.A. 92 (3), 841-845 (1995)