10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

LDHD Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP5733a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q86WU2
Other Accession	NP_705690.2
Reactivity	Human
Predicted	Mouse, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB27170
Calculated MW	54871
Antigen Region	35-62

Additional Information

Gene ID	197257
Other Names	Probable D-lactate dehydrogenase, mitochondrial, DLD, Lactate dehydrogenase D, LDHD (HGNC:19708)
Target/Specificity	This LDHD antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 35-62 amino acids from the N-terminal region of human LDHD.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
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	LDHD Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LDHD (HGNC:19708)
Function	The mitochondrial D-lactate dehydrogenase is a stereoselective

dehydrogenase that targets a wide variety of D-2- hydroxyacids, particularly those with small to moderately sized hydrophobic groups attached to the C2 atom. It includes D-lactate which is generated in small amounts either endogenously through the methylglyoxal metabolism pathway or exogenously via intestinal bacterial activity and dietary intake. The dehydrogenase acts specifically on D-lactate, not on its stereoisomer L-lactate, and prevents the toxic accumulation of D-lactate in the organism (PubMed:30931947, PubMed:38373542). By converting branched-chain D-2-hydroxyacids into branched-chain ketoacids, it may indirectly regulate branched-chain amino acid metabolism (By similarity).

Cellular Location Mitochondrion {ECO:0000250|UniProtKB:Q7TNG8}.

Tissue Location Expressed moderately in heart and liver and at lower levels in skeletal muscle and kidney

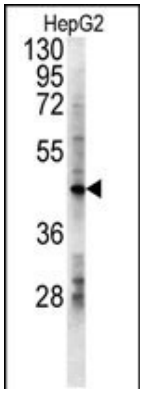
Background

LDHD belongs to the D-isomer specific 2-hydroxyacid dehydrogenase family. The similar protein in yeast has both D-lactate and D-glycerate dehydrogenase activities. Alternative splicing occurs at this locus and two transcript variants encoding distinct isoforms have been identified. [provided by RefSeq].

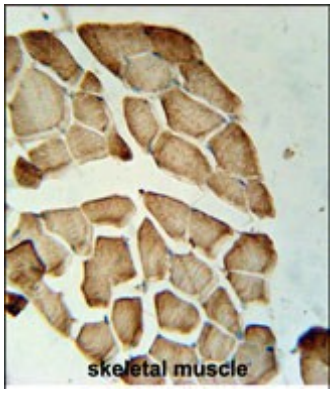
References

Dastani, Z., et al. Eur. J. Hum. Genet. (2009) In press :
Flick, M.J., et al. Biochem. Biophys. Res. Commun. 295(4):910-916(2002)

Images

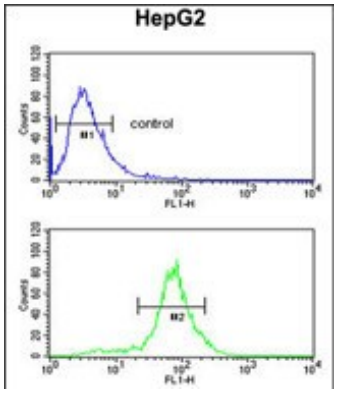


LDHD Antibody (N-term) (Cat. #AP5733a) western blot analysis in HepG2 cell line lysates (15ug/lane).This demonstrates the LDHD antibody detected the LDHD protein (arrow).



LDHD Antibody (N-term) (Cat. #AP5733a) immunohistochemistry analysis in formalin fixed and paraffin embedded human skeletal muscle followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the LDHD Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

LDHD Antibody (N-term) (Cat. #AP5733a) flow cytometric analysis of HepG2 cells (bottom histogram) compared to



a negative control cell (top histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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