

**LDB1 Antibody**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R Mk	Endogenous	49	Rabbit	#Q86U70	8861

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation

**Dilution**

1:1000  
1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

LDB1 Antibody recognizes endogenous levels of total LDB1 protein.

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human LDB1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

LIM-domain binding protein 1 (LDB1) is a nuclear adaptor protein and transcription co-factor that interacts with a multitude of LIM-domain containing transcription factors. Through such interactions, LDB1 facilitates promoter-enhancer bridging and is necessary for the activation and/or repression of genes in multiple cell lineages, including neuronal, cardiac, and hematopoietic cell lineages. Specifically, LDB1 associates with the T cell acute lymphocytic leukemia protein 1 (TAL1) and the nuclear adaptor LIM domain only 2 (LMO2) protein to regulate erythroid gene expression (1). LDB1 is crucial for hematopoietic development, and deletion of LDB1 results in embryonic lethality (2). LDB1 is also required for the maintenance of basal mammary epithelial stem cells and promotes breast tumorigenesis (3). In addition, LDB1 stabilizes LMO2 and is necessary to promote oncogenic properties of LMO2-driven leukemia (4). Structurally, LDB1 contains an amino-terminal homodimerization domain and a carboxy-terminal LIM interaction domain (LID). This protein has no known enzymatic or nucleic-acid binding functions (5).

**Background References**

1. Love, P.E. et al. (2014) *Trends Genet* 30, 1-9.
2. Mukhopadhyay, M. et al. (2003) *Development* 130, 495-505.
3. Salmans, M.L. et al. (2014) *PLoS Genet* 10, e1004520.
4. Layer, J.H. et al. (2016) *Mol Cell Biol* 36, 488-506.
5. Matthews, J.M. and Visvader, J.E. (2003) *EMBO Rep* 4, 1132-7.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **IP:** Immunoprecipitation

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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