

LAMC1 Antibody

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	220-250	Rabbit	#P11047	3915

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

LAMC1 antibody recognizes endogenous levels of total LAMC1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp1365 of human LAMC1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Laminins are a family of proteins important for maintaining cellular basement membrane (BM) structure and function (1). Laminins exist as heterotrimers of alpha (LAMA), beta (LAMB), and gamma (LAMC) chains. LAMC1 (laminin gamma-1) is a ubiquitously expressed gamma chain, and has three distinct functional domain structures. The N-terminal LN domain binds to specific alpha and beta chains to form a unique laminin heterotrimer. The LE domain mediates interactions with nidogens, while the C-terminal coil-coil fragment is necessary for agrin association. Collectively, these interactions are critical for stabilization and function of the BM (1). Genetic ablation of LAMC1 has demonstrated a critical role for this protein in embryo implantation, lung and kidney development, and neuronal Schwann cell myelination and regeneration, in addition to Trypanosome infection (2-5). Upregulation of LAMC1 has also been associated with tumor progression in multiple tumor types (6-9), possibly by creating a BM environment that is favorable for cancer cell metastasis and invasion.

Background References

1. Yurchenco, P.D. (2011) *Cold Spring Harb Perspect Biol* 3, a004911.
2. Ramathal, C. et al. (2011) *J Biol Chem* 286, 19860-71.
3. Willem, M. et al. (2002) *Development* 129, 2711-22.
4. Chen, Z.L. and Strickland, S. (2003) *J Cell Biol* 163, 889-99.
5. Nde, P.N. et al. (2012) *Front Immunol* 3, 337.
6. Liétard, J. et al. (1997) *Am J Pathol* 151, 1663-72.
7. Nishikawa, R. et al. (2014) *Int J Oncol* 45, 401-10.
8. Huang, S.X. et al. (2016) *Int J Oncol* 49, 217-24.
9. Kashima, H. et al. (2015) *Gynecol Oncol* 139, 338-44.

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

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