BACKGROUND

The laminins are a family of glycoproteins that provide an integral part of the structural scaffolding of basement membranes in almost every animal tissue. Each laminin is a large (900 kDa) mosaic protein composed of heterotrimer assembled from A, B1, and B2 subunits, later renamed α, β, and γ chain subunits, secreted and incorporated into cell-associated extracellular matrices. Moreover, each subunit has various isoforms. Twelve different laminin heterotrimers have been identified so far in mammals.[1] The laminins can self-assemble, bind to other matrix macromolecules, and have unique and shared cell interactions mediated by integrins, dystroglycan, and other receptors.[2]

In mammals they play at least three essential roles.[3] First, they are major structural elements of basal laminae (BLs), forming one of two self-assembling networks (the other is composed of the collagens IV) to which other glycoproteins and proteoglycans of the BL attach. Second, they interact with cell surface components such as dystroglycan to attach cells to the extracellular matrix. Third, they are signaling molecules that interact with cellular receptors such as the integrins to convey morphogenetically important information to the cell's interior. For example, laminin promotes myogenesis in skeletal muscle, outgrowth of neurites from central and peripheral neurons, and mesenchymal to epithelial transitions in kidney. Through these interactions, laminins critically contribute to cell differentiation, cell shape and movement, maintenance of tissue phenotypes, and promotion of tissue survival. Recent advances in the characterization of genetic disruptions in humans, mice, nematodes and flies have revealed developmental roles for the different laminin subunits in diverse cell types, affecting differentiation from blastocyst formation to the post-natal period.

References:
1. Timpl, R. et al: J. Biol. Chem. 254:9933-7, 1979
2. Martin, G.R. & Timpl, R.: Ann. Rev. Cell Biol. 3:57-85, 1987
3. Mercurio, A.M.: Trends Cell Biol. 5:419-23, 1995

TECHNICAL INFORMATION

Source:
Laminin B1 Antibody is a mouse monoclonal antibody raised against recombinant human Laminin B1 fragments expressed in *E. coli*.

Specificity and Sensitivity:
This antibody detects endogenous Laminin B1 proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

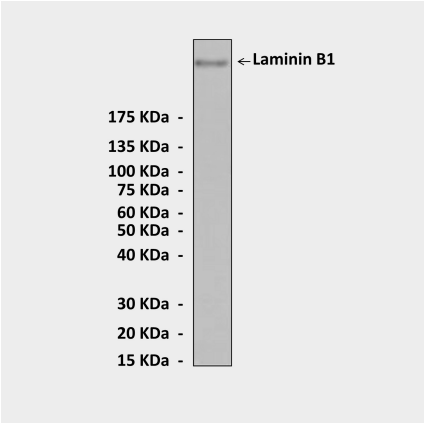
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

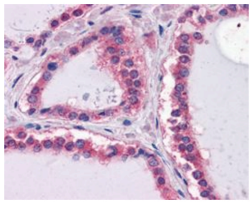
APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	1;50-200
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA





Top: Western Blot detection of Laminin B1 proteins in H1299 cell lysate using Laminin B1 antibody. **Bottom:** This antibody stains paraffin-embedded human thyroid cancer tissue in immunohistochemical analysis.