

Product Datasheet

Laminin Biologically Active Protein NBP1-78301

Unit Size: 1 mg

Store at -80C. Avoid freeze-thaw cycles.

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NBP1-78301**Laminin Biologically Active Protein**

Product Information	
Unit Size	1 mg
Concentration	1.0 mg/ml
Storage	Store at -80C. Avoid freeze-thaw cycles.
Preservative	No Preservative
Purity	Protein A or G purified
Buffer	Sterile liquid solution in phosphate buffered saline, pH 7.2 containing 0.1 mM EDTA. Found negative for bacteria, fungi, and mycoplasma

Product Description	
Description	A biologically active protein corresponding to LAMA1.
Gene ID	284217
Gene Symbol	LAMA1
Species	Mouse
Reactivity Notes	Human reactivity reported in scientific literature (PMID: 26801212)
Notes	Preparation: Laminin-1 was purified from mouse EHS sarcoma by combining methods of Paulsson (Eur J Biochem, 166: 11-19, 1987) and Engvall (Arch Biochem Biophys, 222: 649-656, 1983). The goal was to obtain a laminin preparation with high specific activity (for cell attachment and neuritic growth) and minimal growth factor contamination. All laminin fractions were selected based on immunoreactivity (ELISA) and bioassays for neurite-promoting and neurotrophic activities. Briefly, mouse tumor tissue was homogenized in the presence of a protease inhibitor cocktail (without metal chelators). The insoluble fraction was collected. Laminin-nidogen complex was then extracted by 10 mM EDTA chelation. The EDTA extract was fractionated by CL6B gel filtration. The highly enriched laminin fraction was further purified by heparin-affinity. The high specific activity laminin prep was concentrated and further purified by 100 kD ultrafiltration and flushing in the presence of EDTA. The prep was sterilized by the addition of 0.55% chloroform and then dialyzed exhaustively with PBS containing 0.1 EDTA using aseptic conditions. The resulting laminin-1 preparation is >95% pure showing the characteristic 200 and 400 kD bands by reducing SDS-PAGE. The major contaminant is the laminin-binding protein, nidogen. The preparation has high specific activity for promoting neurite growth in vitro (e.g., half-maximal=50 ng/ml and maximal=200 ng/ml for chick E8 dorsal root ganglionic neurons). Maximal cell attachment of Schwann cells occurs at less than or equal to 2 ug/ml. Applied to a tissue culture substratum the laminin preparation shows negligible neuron survival promoting activity.

Product Application Details	
Applications	Functional, Immunocytochemistry/ Immunofluorescence, Tissue Culture Substratum
Recommended Dilutions	Immunocytochemistry/ Immunofluorescence, Functional, Tissue Culture Substratum
Application Notes	Laminin promotes and may be required for cell adhesion, growth and motility of numerous cell types, especially embryonic and neural cells. For cell adhesion apply to tissue culture surfaces at 2-10 ug/ml. For neuritic growth apply to tissue culture surfaces (best when pretreated with polylysine or polyornithine) at 200-1000 ng/ml. Thaw product slowly at 2 to 8 degrees C. Do not refreeze. Once thawed, retain sterility and may be stored at 2 to 8 degrees C for up to 3 months.



Publications

Errico A, Stocco A, Riccardi V et al. Neurofibromin Deficiency and Extracellular Matrix Cooperate to Increase Transforming Potential through FAK-Dependent Signaling Cancers 2021-05-12 [PMID: 34066061]

Segerer FJ, Rottgermann PJ, Schuster S et al. Versatile method to generate multiple types of micropatterns. Biointerphases. 2016-03-22 [PMID: 26801212] (Human)

Muir D, Neubauer D, Lim IT, Yachnis AT, Wallace MR. Tumorigenic properties of neurofibromin-deficient neurofibroma Schwann cells. Am J Pathol 158:501-513. 2001-01-01 [PMID: 11159187] (ICC/IF, Mouse, Human)

Zuo J, Ferguson TA, Hernandez YJ, Stetler-Stevenson WG, Muir D. Neuronal matrix metalloproteinase-2 degrades and inactivates a neurite-inhibiting chondroitin sulfate proteoglycan. J Neurosci 18:5203-5211. 1998-01-01 [PMID: 9651203] (ICC/IF, Human)





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