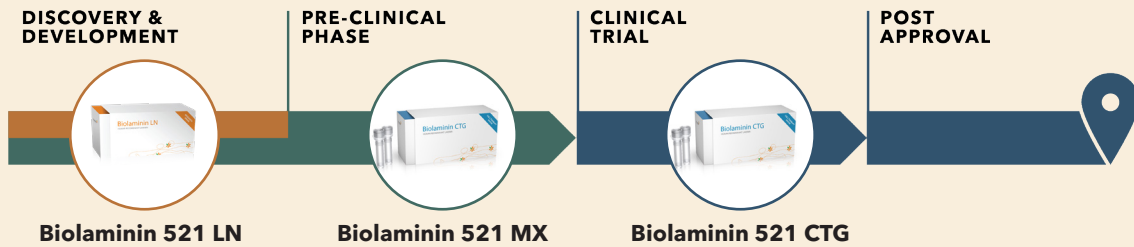


# Biolaminin 521 Cell Culture Substrates

Support scientists—from discovery all the way to clinic

The Biolaminin® 521 products are the only full-length, human, recombinant laminin 521 substrates on the market. Biolaminin 521 CTG is the world's first cell therapy grade laminin product and can support scientists throughout their cell therapy development process. As a complement to the CTG product, Biolaminin 521 MX has been developed, facilitating a seamless transition from discovery into clinical settings.



Scientists who are at an early research stage will enjoy a seamless journey from basic research to post-approval therapy and production – starting with Biolaminin 521 MX (MX521), upgrading to Biolaminin 521 CTG (CTG521) for the clinical development phases.

	<b>Biolaminin 521 LN</b>	<b>Biolaminin 521 MX</b>	<b>Biolaminin 521 CTG</b>
<b>Product name</b>	Biolaminin 521 LN	Biolaminin 521 MX	Biolaminin 521 CTG
<b>Product code</b>	LN521	MX521	CT521
<b>Product claims</b>	Research grade	Research grade	Cell therapy grade
<b>Declaration</b>	For research use only	For research use only	For research use or non-commercial manufacturing of cell, gene, or tissue-based products
<b>Product specifications</b>	Human recombinant laminin 521. A trimeric protein of total 774 kDa (400 kDa, 196 kDa, 178 kDa, respectively)	Human recombinant laminin 521. A trimeric protein of total 774 kDa (400 kDa, 196 kDa, 178 kDa, respectively)	Human recombinant laminin 521. A trimeric protein of total 774 kDa (400 kDa, 196 kDa, 178 kDa, respectively)
<b>Manufacturing</b>	Human, adherent cell line	Human, suspension cell line	Human, suspension cell line
<b>Animal origin-free<sup>1</sup></b>	Primary level*	Secondary level	Secondary level
<b>Quality control</b>	<ul style="list-style-type: none"> <li>• Appearance (clear colorless solution)</li> <li>• Concentration 0.10 mg/mL</li> <li>• Authenticity</li> <li>• Protein purity</li> <li>• Mycoplasma (PCR)</li> <li>• Endotoxin &lt;50 EU/mL (EndoLISA)</li> <li>• Potency</li> </ul>	<ul style="list-style-type: none"> <li>• Appearance (clear colorless solution)</li> <li>• Concentration 0.10 mg/mL</li> <li>• Authenticity</li> <li>• Protein purity</li> <li>• Mycoplasma (PCR)</li> <li>• Endotoxin &lt;10 EU/mL (EndoLISA)</li> <li>• Potency</li> </ul>	<ul style="list-style-type: none"> <li>• Appearance (clear colorless solution)</li> <li>• Concentration 0.10 mg/mL</li> <li>• Authenticity</li> <li>• Protein purity</li> <li>• Mycoplasma (qPCR)<sup>‡</sup></li> <li>• Endotoxin &lt;10 I.U./mL (LAL Kinetic)<sup>‡</sup></li> <li>• Potency</li> <li>• Retroviral RT activity (Q-PERT)<sup>‡</sup></li> <li>• Virus testing<sup>‡</sup></li> </ul>
<b>Documentation</b>	CoA & Animal Origin Free statement (AOF)	CoA & Animal Origin Free statement (AOF)	CoA & AOF statement
<b>Formulation</b>	PBS buffered saline, 10% glycerol, 0.02% NaN <sub>3</sub> , pH 7.2	20mM HEPES, 0.25M NaCl, 10% glycerol, pH 7.5	20mM HEPES, 0.25M NaCl, 10% glycerol, pH 7.5
<b>Storage &amp; shipping</b>	Shipped on dry ice. Store at -20o C to -80o C	Shipped on dry ice. Store at -20° C to -80° C	Shipped on dry ice. Store at -20° C to -80° C

<sup>1</sup> ISCT guidance document "ISCT Animal-Free Origin Survey Results-Summary".

\* FBS used in early seeding phase. Due to the dilution effect in the production process, the theoretical proportion of serum left in the final product is <0.2 PPM (parts/million). This value is calculated under the assumption that no serum is lost during the purification process, hence the actual concentration is likely to be considerably lower.

<sup>‡</sup> According to European and US Pharmacopoeia standards.