



CERTIFICATE OF MATERIAL ORIGIN

Date: 1/31/2020

Revision: 03

Product: Poly-D-Lysine, Solution, 0.1 mg/ml

Supplier	Advanced BioMatrix, Inc.
Supplier Catalog No.	5049
Supplier Location	California, USA
Name/Grade	Poly-D-Lysine, Solution, 0.1 mg/ml
Animal Origin (including human)	
-Animal Species	Not applicable - This product is manufactured solely from synthetic materials and do not contain any raw materials produced or substances derived from animal origin.
-Tissue Origin	Not applicable
-County of Origin	Not applicable
Non-animal Source of Origin	
-Country of Origin	United States
Animal Origin Material Adventitious	Not applicable
Agent Risk Reduction Steps	
Method of Manufacturing	Synthetic Processing
Briefly describe Method of Manufacturing	Poly-D-lysine is a positively charged amino acid polymer with approximately one HBr per lysine residue. The hydrobromide allows the poly-D-lysine to be in a crystalline form soluble in water. A small amount of product may be found in the beta structure because the HBr interferes with hydrogen bonding between amino and either the carboxyl groups or N or O containing moieties.

The above information has been completed by an authorized representative of management and is complete and correct to my knowledge.

President

January 31, 2020

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