



# CERTIFICATE OF MATERIAL ORIGIN

Date: 10/27/2017

Revision: 02

**Product:** E-Cadherin (CD324), Human, Solution

|   |  |
|---|--|
| <b>Supplier</b>   | Advanced BioMatrix, Inc.   |
| <b>Supplier Catalog No.</b>   | 5085   |
| <b>Supplier Location</b>  | California, USA  |
| <b>Name/Grade</b>   | E-Cadherin (CD324), Human, Solution  |
| <b>Animal Origin (including human)</b>                                |  |
| -Animal Species   | Not applicable   |
| -Tissue Origin  | Not applicable   |
| -County of Origin   | Not applicable   |
| <b>Non-animal Source of Origin</b>                                    |  |
| -Country of Origin  | United States  |
| <b>Animal Origin Material Adventitious Agent Risk Reduction Steps</b> | Not applicable   |
| <b>Method of Manufacturing</b>  | Recombinant and protein expression   |
| <b>Briefly describe Method of Manufacturing</b>                       | Recombinant human E-Cadherin gene (155-710 aa Fragment) was constructed with codon optimization and expressed in non-fusion protein form in E. coli as inclusion bodies. The final product was refolded using a unique "temperature shift inclusion body refolding" technology and chromatographically purified. |

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

**President**

**October 27, 2017**

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