

MATERIAL SAFETY DATA SHEET

SECTION 1 – CHEMICAL PRODUCT(S) AND COMPANY IDENTIFICATION

Manufacturer Name: **Advanced BioMatrix, Inc.**
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San Diego, California 92150
 For Information Call: **800-883-8220**
 Date Prepared: **March 30, 2012**

| Common Name / Trade Name | Source | CAS Number |
|---------------------------|---------|-----------------|
| CDH18, Human, Recombinant | E. coli | [Not Available] |

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| Quick Identifier (In-plant Common Name) | CDH18 |
| Chemical Name | CDH18 |
| CAS Number | As Listed |

SECTION 2 – COMPOSITION AND INFORMATION ON INGREDIENTS

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| Ingredient Name(s) | Refer to <i>Section 1</i> |
| CAS Number(s) | Refer to <i>Section 1</i> |
| Principal Hazardous Component(s) | The product contains no substances which at their given concentration, are considered to be hazardous to health. However, the product is derived from human plasma and should be treated as potentially hazardous. |
| Product chemical and common name(s) | N/A |
| Biological Activity | Varies (%) |
| EC Numbers(s) | Refer to <i>Section 1</i> |
| Exposure Limit(s) | 1. None Established |

SECTION 3 – HAZARDS IDENTIFICATION

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| Threshold Limit Value | None known or reported. |
| Signs and Symptoms of Exposure | None known or reported |
| Medical Conditions Generally Aggravated by Exposure | None known or reported |
| Chemical Listed as Carcinogen or Potential Carcinogen | No |
| National Toxicology Program | No |
| I.A.R.C Monographs | No |
| OSHA Permissible Exposure Limit | None known |
| ACGIH Threshold Limit Value | No |
| Other Exposure Limit Use | No |

SECTION 4 – FIRST AID MEASURES

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| Emergency & First Aid Procedures | Remove or wash substance from exposure. Obtain Medical attention as needed. |
| Inhalation | Remove person from source then obtain necessary medical attention. |
| Eyes | Check for contact lenses and remove if present. Flush thoroughly with water while opening eyelids. If symptoms such as redness and irritation persist, obtain medical attention. |
| Skin | Remove contaminated clothing. Wash material from skin with soap and water and rinse thoroughly with clean water. Obtain medical attention as needed or if irritation develops. Clean contaminated clothing before reuse. |
| Ingestion | May be harmful if swallowed. Obtain Medical attention as needed. |

SECTION 5 – FIRE AND EXPLOSION HAZARDS

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| Special Fire Fighting Procedures | Fire fighter should wear full protective gear, including self-contained breathing apparatus. |
| Auto-Ignition Temperature | N/A |
| Flash Point | N/A |
| Flammable Limits in Air (% by Volume) | N/A |
| Extinguisher Media | Water spray, carbon dioxide, dry chemical foam. |
| Unusual Fire and Explosion Hazards | As with any organic material, this product may produce toxic carbon monoxide and dioxide fumes if heated to decomposition and airborne dust may present an explosion hazard. |
| Stability | Stable |

SECTION 6 – ACCIDENTAL RELEASE MEASURES

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| Precautions to be Taken in Handling and Storage | Wear appropriate protective clothing and gloves. |
| Other Precautions | None |
| Steps to be Taken in Case Material is Released or Spilled | Wear protective clothing and gloves. Vacuum or collect spill into appropriate waste container for disposal. Use normal clean-up procedures for liquid spillage and wash thoroughly with water. Wash contaminated clothing before reuse. |
| Waste Disposal Methods | Dispose of waste in accordance with all applicable Federal, State and local regulations. <i>Refer to Section 13.</i> |

SECTION 7 – HANDLING AND STORAGE

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| Storage | Refer to specific product label for storage conditions. |
| Handling | To ensure sterility of product, handle in an aseptic environment. |

SECTION 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

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| Respiratory Protection (Specify Type) | None required |
| Mechanical (General) | Vent fan |
| Ventilation | Advisable |
| Local Exhaust | As required |
| Special | None |
| Protective Gloves | Wear gloves to prevent skin contact |
| Eye Protection | Either safety glasses or goggles should be worn |
| Other Protective Clothing or Equipment | Sensitive individuals should wear dust masks/respirators, protective gloves, eye protection, lab coat, apron or other protective clothing to minimize contact. |

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

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| Appearance and Odor | Clear solution, no odor. |
| Solubility in Water | Soluble in water |
| Boiling Point | Decomposes |
| Specific Gravity (H₂O = 1) | Varies |
| Vapor Pressure (mmHg) | N/A |
| Percent Volatile by Volume | N/A |
| Vapor Density (Air = 1) | N/A |

SECTION 10 – STABILITY AND REACTIVITY

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|---|---------------------------|
| Evaporation Rate | N/A |
| Hazardous Decomposition Products | No information available. |
| Hazardous Polymerization | Will not occur. |
| Incompatibility (Materials to Avoid) | None known |

SECTION 11 – TOXICOLOGICAL INFORMATION

1. Refer to *Section 3* for health effects information.
2. The toxicological properties of this material have not been fully investigated.
3. Always follow Good Laboratory and Industrial Hygiene Practices and wear proper personal protective equipment when handling chemicals.
4. May cause irritation and/or allergic reaction.

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| Routes of Exposure | Ingestion, skin and eye contact. |
| LD50 | No oral LD50 is available |
| Carcinogenicity | Unknown |
| Mutagenic / Teratogenic Effects | Unknown |

SECTION 12 – ECOLOGICAL INFORMATION

No data available. No environmental hazard is known.

SECTION 13 – DISPOSAL CONSIDERATIONS

1. Dispose of waste in accordance with all applicable Federal, State and local regulations.
2. Chemical residues are generally classified as special waste and, as such, the transportation, storage, treatment and disposal of this waste material must be conducted in compliance with all applicable Federal, State and local regulations.
3. Rinse empty containers thoroughly before disposal and/or recycling.

SECTION 14 – TRANSPORT INFORMATION

Department of Transportation Requirements:

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| Proper Shipping Name | Not Regulated |
| Hazard Class | N/A |
| Packaging Group | N/A |
| Reportable Quantity | N/A |
| Labels Required | N/A |
| International Transportation Regulations | Not Regulated |
| UN/NA Code | N/A |

SECTION 15 – REGULATORY INFORMATION

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| US Federal Regulations | <ol style="list-style-type: none">1. Material(s) listed are exempt from the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory when supplied for research and development purposes or used under the Supervision of a technically qualified individual as defined by 40 CFR720.3.2. The health risks have not been fully determined. |
| State Regulations | Based upon available information, material(s) listed are not known to be regulated by any state or listed on any “Right To Know” Hazardous Substance List. |
| International Regulations | <ol style="list-style-type: none">1. EC: Harmful; R42/43, May cause sensitization by inhalation and skin contact.2. S36, Wear suitable protective clothing. |

SECTION 16 – OTHER USEFUL INFORMATION

Disclaimer

The information contained in this MSDS relates only to the material(s) designated and does not relate to uses(s) in combination with any other materials, process(es) and/or chemical reactions(s).

Advanced BioMatrix, Inc. provides this information in good faith, from sources believed to be accurate, however, assumes no liability for its accuracy or completeness.

We do not assume liability for damages resulting from the handling, use and/or disposal of these products, from their use in violation of patent or other rights or reliance upon this information.

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