\_



# SAFETY DATA SHEET

| 1. Identification             |  |  |
|-------------------------------|--|--|
| Product identifier            | Anti-Dab1 (Mouse) mAb                                |  |
| Other means of identification |  |  |
|                               |  |  |
| Product code                  | D355-3   |  |
| Recommended use               | Research use only.                                   |  |
| Recommended restrictions      | None known.  |  |
| Manufacturer / Importer / Sup | plier / Distributor information                      |  |
| Manufacturer and              | Medical & Biological Laboratories (MBL) Co., Ltd.    |  |
| Supplier (Asia)               | 4-5-3 Sakae, Naka-ku, Nagoya, Aichi 460-0008, Japan  |  |
| Telephone number              | +81-52-238-1901 (Monday to Friday, 9 AM to 5 PM JST) |  |
| Fax                           | +81-52-238-1440                                      |  |
| E-mail                        | sds-support@mbl.co.jp                                |  |
| URL                           | http://www.mbl.co.jp/e/index.html                    |  |
| Contact person                | SDS Support  |  |
| Supplier                      | MBL International Corporation                        |  |
|                               | 15A Constitution Way, Woburn, MA 01801, USA          |  |
| Telephone number              | +1-800-200-5459, option 3                            |  |
| Fax                           | +1-781-939-6963                                      |  |
| E-mail                        | tech@mblintl.com                                     |  |
| URL                           | http://www.mblintl.com/                              |  |
| Contact person                | Technical Service                                    |  |
| 2. Hazard(s) identification   |  |  |
|                               |  |  |

| Physical hazards        | Not classified.  |
|-------------------------|--|
| Health hazards          | Not classified.  |
| OSHA hazard(s)          | Not classified.  |
| Label elements          |  |
| Hazard symbol           | None.  |
| Signal word             | None.  |
| Hazard statement        | None.  |
| Precautionary statement |  |
| Prevention              | Observe good industrial hygiene practices.                                     |
| Response                | Wash thoroughly after handling.  |
| Storage                 | Store away from incompatible materials.  |
| Disposal                | Dispose of waste and residues in accordance with local authority requirements. |
| Hazard(s) not otherwise | None.  |
| classified (HNOC)       |  |
|                         |  |

### 3. Composition/Information on ingredients

| Mixtur | es                 |   |   |
|--------|--------------------|---|---|
| C      | hemical name       | CAS number                                | %   |
| G      | lycerol (Glycerin) | 56-81-5                                   | 50 - 60   |
| Compo  | osition comments   | All concentrations are in percent by weig | ht unless ingredient is a gas. Gas concentrations |

are in percent by volume.

### 4. First aid measures

Inhalation

Skin contact

Move to fresh air. Get medical attention if discomfort develops or persists. Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

| Eye contact  | Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops or persists. |
|--|---|
| Ingestion  | Drink plenty of water. Seek medical advice.   |
| Most important symptoms/<br>effects, acute and delayed                       | Irritation of eyes and mucous membranes. Mild skin irritation.  |
| Indication of immediate<br>medical attention and special<br>treatment needed | Treat symptomatically.  |
| General information  | Get medical attention if any discomfort develops.   |

### 5. Fire fighting measures

| Suitable extinguishing media<br>Unsuitable extinguishing<br>media | Water. Foam. Dry powder. Carbon dioxide (CO2).<br>None known.  |
|---|--|
| Specific hazards arising from the chemical                        | Fire or high temperatures create: Carbon oxides.   |
| Special protective equipment<br>and precautions for               | Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.                      |
| firefighters  |  |
| Fire-fighting<br>equipment/instructions                           | Move containers from fire area if you can do that without risk. Use water spray to cool unopened containers. Prevent entry to sewers and pubic waters. |

### 6. Accidental release measures

| Personal precautions,<br>protective equipment and<br>emergency procedures | Ensure adequate ventilation. Avoid inhalation of mist and contact with skin and eyes. For personal protection, see Section 8 of the SDS.   |
|---|--|
| Methods and materials for<br>containment and cleaning up                  | Dike far ahead of liquid spill for later disposal. Small Spills: Absorb spillage with suitable absorbent material. Clean contaminated surface thoroughly. After removal, flush contaminated area thoroughly with water. Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. |
| Environmental precautions   | Prevent further leakage or spillage if safe to do so.  |
| 7. Handling and storage   |  |
| Precautions for safe handling   | Provide adequate ventilation. Use work methods which minimize production of vapors and mists. Avoid inhalation of mist and contact with skin and eyes. Wash hands after handling. Observe good industrial hygiene practices.   |

#### Conditions for safe storage, Keep container tightly closed. Store away from incompatible materials.

including any incompatibilities

### 8. Exposure controls/personal protection

### **Occupational exposure limits**

| US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) |
|---|
|---|

| Components             | Туре | Value    | Form                 |
|------------------------|------|----------|----------------------|
| Glycerol (CAS 56-81-5) | PEL  | 5 mg/m3  | Respirable fraction. |
|                        |      | 15 mg/m3 | Total dust.          |

| Components             | Туре | Value    | Form  |
|------------------------|------|----------|-------|
| Glycerol (CAS 56-81-5) | TWA  | 10 mg/m3 | Mist. |

**Biological limit values** No biological exposure limits noted for the ingredient(s). **Exposure guidelines** No exposure standards allocated. Appropriate engineering

Provide adequate ventilation and minimize the risk of inhalation of vapors and mists.

controls

#### Individual protection measures, such as personal protective equipment

Eye/face protection Skin protection

Wear safety glasses.

| Hand protection                   | Wear protective gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.  |
|-----------------------------------|---|
| Other                             | Wear appropriate clothing to prevent repeated or prolonged skin contact. Wear protective gloves. Nitrile gloves are recommended, but be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier. |
| Respiratory protection            | In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment with combination filter (gas filter/dust filter). Seek advice from local supervisor.  |
| Thermal hazards                   | Wear appropriate thermal protective clothing, when necessary.   |
| General hygiene<br>considerations | Handle in accordance with good industrial hygiene and safety practice. Wash hands after handling. Routinely wash work clothing and protective equipment to remove contaminants.   |

# 9. Physical and chemical properties

| Appearance<br>Physical state<br>Form<br>Color<br>Odor<br>Odor threshold<br>pH<br>Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water) |                  |
|---|------------------|
| Form<br>Color<br>Odor<br>Odor threshold<br>pH<br>Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)                                 |                  |
| Color<br>Odor<br>Odor threshold<br>pH<br>Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   | Liquid.          |
| Odor<br>Odor threshold<br>pH<br>Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Viscous liquid.  |
| Odor threshold<br>pH<br>Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Colorless.       |
| pH<br>Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Odorless.        |
| Melting point/freezing point<br>Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Not available.   |
| Initial boiling point and<br>boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Neutral.         |
| boiling range<br>Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   | Not available.   |
| Flash point<br>Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Not available.   |
| Evaporation rate<br>Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   |                  |
| Flammability (solid, gas)<br>Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   | Not available.   |
| Upper/lower flammability or e<br>Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Not available.   |
| Flammability limit<br>- lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   | Not applicable.  |
| - lower (%)<br>Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   | xplosive limits  |
| Flammability limit<br>- upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Not available.   |
| - upper (%)<br>Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  |                  |
| Vapor pressure<br>Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   | Not available.   |
| Vapor density<br>Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)   |                  |
| Relative density<br>Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Not available.   |
| Solubility(ies)<br>Partition coefficient<br>( <i>n</i> -octanol/water)  | Not available.   |
| Partition coefficient ( <i>n</i> -octanol/water)  | Not available.   |
| ( <i>n</i> -octanol/water)  | Soluble in water |
|   | Not available.   |
|   |                  |
| Auto-ignition temperature   | Not available.   |
| Decomposition temperature   | Not available.   |
| Viscosity   | Not available.   |

# 10. Stability and reactivity

| Reactivity<br>Chemical stability   | The product is non-reactive under normal conditions of use, storage and transport.<br>Stable at normal conditions. |
|--|--|
| Possibility of hazardous reactions   | Hazardous reactions do not occur.  |
| Conditions to avoid<br>Incompatible materials<br>Hazardous decomposition<br>products | Strong heating. Contact with incompatible materials.<br>Strong oxidizing agents.<br>None known.                    |

## 11. Toxicological information

### Information on likely routes of exposure

| Ingestion  | Ingestion may cause irritation and malaise.  |
|------------|--|
| Inhalation | Under normal conditions of intended use, this material is not expected to be an inhalation |
|            | hazard.  |

| Skin contact<br>Eye contact<br>Symptoms related to the<br>physical, chemical and | May cause skin irritation. Causes skin irritation.<br>May cause eye irritation on direct contact. Causes eye irritation.<br>Irritation of eyes and mucous membranes. Mild skin irritation. |
|--|--|
| toxicological characteristics  |  |
| Information on toxicological e   |  |
| Acute toxicity   | Ingestion may cause irritation and malaise.  |
| Skin corrosion/irritation  | May cause skin irritation.   |
| Serious eye damage/eye   | May cause eye irritation on direct contact.  |
| irritation   |  |
| Respiratory sensitization  | Not classified.  |
| Skin sensitization   | Not a skin sensitizer.   |
| Germ cell mutagenicity   | Not classified.  |
| Carcinogenicity  | IARC not listed.   |
| Reproductive toxicity  | Not classified.  |
| Specific target organ toxicity - single exposure                                 | Knowledge about health hazard is incomplete.   |
| Specific target organ toxicity - repeated exposure                               | Knowledge about health hazard is incomplete.   |
| Aspiration hazard  | Not classified.  |

| 12. Ecological information                                | on   |  |
|---|--|--|
| Ecotoxicity   | The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills have a harmful or damaging effect on the environment. |  |
| Persistence and degradability                             | The product is biodegradable.  |  |
| Bioaccumulative potential                                 | The product is not bioaccumulating.  |  |
| Partition coefficient <i>n</i> -octanol / water (log Kow) |  |  |
|   | Glycerol (CAS 56-81-5) -1.76   |  |
| Mobility in soil  | Expected to be highly mobile in soil.  |  |
| Mobility in general                                       | The product is water soluble and may spread in water systems.  |  |
| Other adverse effects                                     | No data available.   |  |

### 13. Disposal considerations

| Disposal instructions        | Dispose of in accordance with all applicable regulations. Do not discharge into drains, water courses or onto the ground. |
|------------------------------|---|
| Local disposal regulations   | Dispose of in accordance with local regulations.  |
| Hazardous waste code         | Not regulated.  |
| Waste from residues / unused | Dispose of in accordance with local regulations.  |
| products                     |   |
| Contaminated packaging       | Dispose of in same manner as unused product.  |

### 14. Transport information

| DOT                         | Not regulated as a dangerous good. |
|-----------------------------|------------------------------------|
| ΙΑΤΑ                        | Not regulated as a dangerous good. |
| IMDG                        | Not regulated as a dangerous good. |
| Transport in bulk according | Not applicable.                    |
| to Annex II of MARPOL 73/78 |                                    |
| and the IBC Code            |                                    |

# 15. Regulatory information

US federal regulations This product is hazardous according to OSHA 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

| TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)  | Not regulated. |
|--|----------------|
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | Not regulated. |
| CERCLA Hazardous Substance List (40 CFR 302.4)                 | Not listed.    |
|  |                |

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Yes

Yes

| Hazard categories                                 |  | Immediate Hazard - Yes<br>Delayed Hazard - No |
|---|--|---|
|   |  | Fire Hazard - No                              |
|   |  | Pressure Hazard - No                          |
|   |  | Reactivity Hazard - No                        |
| SARA 302 Extremely haz                            | zardous substance  | No  |
| SARA 311/312 Hazardou                             | s chemical   | Yes   |
| Other federal regulations                         |  |   |
| Clean Air Act (CAA) Sect                          | tion 112 Hazardous Air Pollutants (HAPs) List  | Not regulated.                                |
| Clean Air Act (CAA) Sect                          | tion 112(r) Accidental Release Prevention (40 CFR 68.130)  | Not regulated.                                |
| Safe Drinking Water Act                           | (SDWA)   | Not regulated.                                |
| -   | nistration (DEA). List 2, Essential Chemicals (21 CFR<br>)(2) and Chemical Code Number                   | Not listed.                                   |
|   | nistration (DEA). List 1 & 2 Exempt Chemical Mixtures (21  | Not regulated.                                |
| DEA Exempt Chemical M                             | lixtures Code Number   | Not regulated.                                |
| Food and Drug Administ                            |  | Not regulated.                                |
| US state regulations                              | This product does not contain a chemical known to the State of birth defects or other reproductive harm. | California to cause cancer,                   |
| Massachusetts RTK - Substance List                |  | Glycerol (CAS 56-81-5)                        |
| New Jersey Worker and Community Right-to-Know Act |  | Not regulated.                                |
| Pennsylvania RTK - Hazardous Substances           |  | Glycerol (CAS 56-81-5)                        |
| Rhode Island RTK                                  |  | Glycerol (CAS 56-81-5)                        |
| California Proposition 65                         | 5 - Carcinogens & Reproductive Toxicity (CRT)  | Not listed.                                   |
| International Inventories                         |  |   |
| Country(s) or region                              | Inventory name   | On inventory (yes/no)*                        |
| Australia   | Australian Inventory of Chemical Substances (AICS)   | Yes   |
| Canada  | Domestic Substances List (DSL)   | Yes   |
| Canada  | Non-Domestic Substances List (NDSL)  | No  |
| China   | Inventory of Existing Chemical Substances in China (IECSC)   | Yes   |
| Europa  | EC Inventory   | Yes   |
| Europe  | •  |   |
| Japan   | Inventory of Existing and New Chemical Substances (ENCS)   | Yes   |
| -   | •  | Yes   |

United States & Puerto Rico

Philippines

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Toxic Substances Control Act (TSCA) Inventory

Philippine Inventory of Chemicals and Chemical Substances (PICCS)

### 16. Other information

| Issue date          | 08/06/2015  |
|---------------------|---|
| Revision date       | 09/30/2016  |
| Version             | 10  |
| Further information | Not available.  |
| References          | IUCLID  |
| Disclaimer          | This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. |