SAFETY DATA SHEET

1. Identification
Product identifier: BRIC Kit

Anti-BrdU mAb

Other means of identification
Product code: RN1007

Recommended use: Research use only.

Recommended restrictions: None known.

Manufacturer / Importer / Supplier / Distributor information
Manufacturer and Supplier (Asia): Medical & Biological Laboratories (MBL) Co., Ltd.
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 classified (HNOC): None.

3. Composition/Information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol (Glycerin)</td>
<td>56-81-5</td>
<td>50 - 60</td>
</tr>
</tbody>
</table>

Composition comments: All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First aid measures

Inhalation: Move to fresh air. Get medical attention if discomfort develops or persists.

Skin contact: 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/effects, acute and delayed: Irritation of eyes and mucous membranes. Mild skin irritation.

Indication of immediate medical attention and special treatment needed: Treat symptomatically.

General information: Get medical attention if any discomfort develops.

5. Fire fighting measures


Unsuitable extinguishing media: None known.

Specific hazards arising from the chemical: Fire or high temperatures create: Carbon oxides.

Special protective equipment and precautions for firefighters: Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.

Fire-fighting 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 public waters.

6. Accidental release measures

Personal precautions, protective equipment and 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 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, including any incompatibilities: Keep container tightly closed. Store away from incompatible materials.

8. Exposure controls/personal protection

Occupational exposure limits

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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol (CAS 56-81-5)</td>
<td>PEL</td>
<td>5 mg/m³</td>
<td>Respirable fraction.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 mg/m³</td>
<td>Total dust.</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerol (CAS 56-81-5)</td>
<td>TWA</td>
<td>10 mg/m³</td>
<td>Mist.</td>
</tr>
</tbody>
</table>

Biological limit values: No biological exposure limits noted for the ingredient(s).

Exposure guidelines: No exposure standards allocated.

Appropriate engineering controls: Provide adequate ventilation and minimize the risk of inhalation of vapors and mists.

Individual protection measures, such as personal protective equipment

Eye/face protection: Wear safety glasses.

Skin protection:
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.

General hygiene 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

- Physical state: Liquid.
- Form: Viscous liquid.
- Color: Colorless.
- Odor: Odorless.
- Odor threshold: Not available.
- pH: Neutral.
- Melting point/freezing point: Not available.
- Initial boiling point and boiling range: Not available.
- Flash point: Not available.
- Evaporation rate: Not available.
- Flammability (solid, gas): Not applicable.

Upper/lower flammability or explosive limits

- Flammability limit - lower (%): Not available.
- Flammability limit - upper (%): Not available.

Vapor pressure: Not available.

Vapor density: Not available.

Relative density: Not available.

Solubility(ies): Soluble in water.

Partition coefficient ($n$-octanol/water): Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. Stability and reactivity

Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability

Stable at normal conditions.

Possibility of hazardous reactions

Hazardous reactions do not occur.

Conditions to avoid

Strong heating. Contact with incompatible materials.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition products

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: May cause skin irritation. Causes skin irritation.
Eye contact: May cause eye irritation on direct contact. Causes eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics:

Information on toxicological effects:

Acute toxicity: Ingestion may cause irritation and malaise.
Skin corrosion/irritation: May cause skin irritation.
Serious eye damage/eye irritation: May cause eye irritation on direct contact.
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

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 n-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 products: Dispose of in accordance with local regulations.
Contaminated packaging: Dispose of in same manner as unused product.

14. Transport information

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

15. Regulatory information

US federal regulations: This product is hazardous according to OSHA 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories

SARA 302 Extremely hazardous substance
SARA 311/312 Hazardous chemical

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Safe Drinking Water Act (SDWA)
Drug Enforcement Administration (DEA), List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number
Drug Enforcement Administration (DEA), List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))
DEA Exempt Chemical Mixtures Code Number
Food and Drug Administration (FDA)

US state regulations

Massachusetts RTK - Substance List
New Jersey Worker and Community Right-to-Know Act
Pennsylvania RTK - Hazardous Substances
Rhode Island RTK
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>EC Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*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).

16. Other information

Issue date 01/30/2016
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.
SAFETY DATA SHEET

1. Identification

Product identifier: BRIC Kit

Other means of identification:
- Product code: RN1007
- Recommended use: Research use only.
- Recommended restrictions: None known.

Manufacturer / Importer / Supplier / Distributor information

Manufacturer and Supplier (Asia):
- Medical & Biological Laboratories (MBL) Co., Ltd.
  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: None.
- Disposal: None.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/Information on ingredients

Mixtures
The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

4. First-aid measures

Inhalation
Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

Skin contact
Remove contaminated clothing. Dry skin with paper towel or similar. Get medical attention if irritation develops or persists.

Eye contact
Rinse immediately with plenty of water, also under the eyelids. Get medical attention if irritation develops or persists.
Ingestion
No adverse effects due to ingestion are expected. Get medical attention if any discomfort occurs.

Most important symptoms/effects, acute and delayed
Dry skin.

Indication of immediate medical attention and special treatment needed
Treat symptomatically.

General information
Get medical attention if any discomfort develops.

5. Fire-fighting measures

Suitable extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

UNSUITABLE extinguishing media
None known.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing should be worn when fighting chemical fires. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire-fighting equipment/instructions
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
The product is non-combustible.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid prolonged and repeated contact. Wear suitable protective clothing. For personal protection, see Section 8 of the SDS.

Methods and materials for containment and cleaning up
Absorb spillage with non-combustible, absorbent material. After removal, flush contaminated area thoroughly with water. For waste disposal, see Section 13 of the SDS.

Environmental precautions
Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling
Avoid prolonged and repeated contact. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Keep container closed.

8. Exposure controls/personal protection

Occupational exposure limits
No exposure limits noted for ingredient(s).

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Provide adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/face protection
If risk of splashing, wear safety goggles or face shield.

Skin protection

Hand protection
Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.

Other
Wear protective gloves. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection
No protection is ordinarily required under normal conditions of use.

General hygiene considerations
Wear appropriate thermal protective clothing, when necessary.

General information
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

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

10. Stability and reactivity

Reactivity: The product is stable and non reactive under normal conditions of use, storage and Chemical stability: Stable at normal conditions.
Possibility of hazardous reactions: None known.
Conditions to avoid: None known.
Incompatible materials: None known.
Hazardous decomposition products: No hazard in normal industrial use.

11. Toxicological information

Information on likely routes of exposure

Ingestion: Large quantities: May cause discomfort if swallowed.
Inhalation: Under normal conditions of intended use, this material is not expected to be an inhalation hazard.
Skin contact: Prolonged contact may cause dryness of the skin.
Eye contact: Direct contact with eyes may cause temporary irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Dry skin.

Information on toxicological effects

Acute toxicity: Large quantities: May cause discomfort if swallowed.
Skin corrosion/irritation: Prolonged contact may cause dryness of the skin.
Serious eye damage/eye irritation: Direct contact with eyes may cause temporary irritation.
Respiratory sensitization: No data available.
Skin sensitization: Not a skin sensitizer.
Germ cell mutagenicity: No data available.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Specific target organ toxicity
- single exposure
  No data available.
Specific target organ toxicity
- repeated exposure
  No data available.
Aspiration hazard
  No data available.

12. Ecological information

Ecotoxicity
  The product components are 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
  No data available.
Bioaccumulative potential
  No data available.
Mobility in soil
  No data available.
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
  products
  Dispose of in accordance with local regulations.
Contaminated packaging
  Dispose of in same manner as unused product.

14. Transport information

DOT
  Not regulated as dangerous goods.
IATA
  Not regulated as dangerous goods.
IMDG
  Not regulated as dangerous goods.
Transport in bulk according
to Annex II of MARPOL 73/78
  and the IBC Code
  Not applicable.

15. Regulatory information

US federal regulations
  This product is not hazardous according to OSHA 29CFR 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 listed.
  CERCLA Hazardous Substance List (40 CFR 302.4)
    Not listed.
  Superfund Amendments and Reauthorization Act of 1986 (SARA)
    Hazard categories
    Immediate Hazard - No
    Delayed Hazard - No
    Fire Hazard - No
    Pressure Hazard - No
    Reactivity Hazard - No
    SARA 302 Extremely hazardous substance
      No
    SARA 311/312 Hazardous chemical
      No
    SARA 313 (TRI reporting)
      Not regulated.
  Other federal regulations
    Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
      Not regulated.
    Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
      Not regulated.
    Safe Drinking Water Act (SDWA)
      Not regulated.
    Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR
      1310.02(b) and 1310.04(f)(2) and Chemical Code Number
      Not listed.
    Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21
      CFR 1310.12(c))
      Not regulated.
DEA Exempt Chemical Mixtures Code Number
Food and Drug Administration (FDA)

US state regulations
Australia
Canada
Canada
China
Europe
Japan
Korea
New Zealand
Philippines
United States & Puerto Rico

Massachusetts RTK - Substance List
New Jersey Worker and Community Right-to-Know Act
Pennsylvania RTK - Hazardous Substances
Rhode Island RTK
California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT)

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

Inventory of Existing Chemical Substances in China (IECSC)
EC Inventory
Inventory of Existing and New Chemical Substances (ENCS)
Existing Chemicals List (ECL)
New Zealand Inventory
Philippine Inventory of Chemicals and Chemical Substances (PICCS)
Toxic Substances Control Act (TSCA) Inventory

Not regulated.
Not regulated.
Not regulated.
Not regulated.
Not regulated.
Not regulated.
Not listed.

On inventory (yes/no)*
Yes
Yes
No
Yes
Yes
Yes
Yes
Yes

* 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).

16. Other information

Issue date
Revision date
Version
Further information
Disclaimer

01/30/2016
09/30/2016
10
Not available.

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.