Safety Data Sheet

Cat. # 786-844

BCA Solution (BCA Reagent A)

Size: 250ml
SECTION 1: Identification

1.1. Identification
- Product form: Mixture
- Product name: BCA Solution (BCA Reagent A)
- Product code: 030B

1.2. Recommended use and restrictions on use
No additional information available

1.3. Supplier
Geno Technology, Inc./ G-Biosciences
9800 Page Avenue
Saint Louis, 63132-1429 - United States
T 800-628-7730 - F 314-991-1504
technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number
Emergency number: Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements
GHS-US labeling
No labeling applicable

2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt</td>
<td>(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt / 4,4'-dicarboxy-2,2'-biquinoline, disodium salt / bichinonic acid, disodium salt / disodium bichinoninate / disodium-2,2-bichinoninate</td>
<td>(CAS-No.) 979-88-4</td>
<td>0.5 - 2</td>
<td>Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>
### BCA Solution (BCA Reagent A)

#### Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Name</th>
<th>Common Name (Synonyms)</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
</table>
| sodium hydroxide          | anhydrous caustic soda / B751 / caustic alkali / caustic flake / caustic flakes / caustic soda / caustic soda, bead / caustic soda, dry / caustic soda, flake / caustic soda, granular / caustic soda, lye / caustic soda, solid / caustic white / caustic, flaked / hydrate of soda / hydrate of sodium / hydrate of soda / LEWIS red devil lye / lye (=sodium hydroxide) / soda lye / soda, caustic / soda, hydrate / sodium hydrate / sodium hydrate lye / sodium hydroxide / sodium hydroxide (NaOH)) / sodium hydroxide, bead / sodium hydroxide, dry / sodium hydroxide, flake / sodium hydroxide, granular / sodium hydroxide, pellets / sodium hydroxide, solid / white caustic | (CAS-No.) 1310-73-2 | 0.05 - 0.5 | Met. Corr. 1, H290  
Skin Corr. 1A, H314  
Aquatic Acute 3, H402 |

Full text of hazard classes and H-statements: see section 16

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

- **First-aid measures after inhalation**: Remove person to fresh air and keep comfortable for breathing.
- **First-aid measures after skin contact**: Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water.
- **First-aid measures after eye contact**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- **First-aid measures after ingestion**: Call a poison center/doctor/physician if you feel unwell.

#### 4.2. Most important symptoms and effects (acute and delayed)

- **Symptoms/effects after skin contact**: Irritation.
- **Symptoms/effects after eye contact**: Eye irritation.

#### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media


#### 5.2. Specific hazards arising from the chemical

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

#### 5.3. Special protective equipment and precautions for fire-fighters

**Protection during firefighting**: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

**6.1.1. For non-emergency personnel**

**Emergency procedures**: Ventilate spillage area. Avoid contact with skin and eyes.

**6.1.2. For emergency responders**

**Protective equipment**: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

**6.3. Methods and material for containment and cleaning up**

**Methods for cleaning up**: Take up liquid spill into absorbent material.

**Other information**: Dispose of materials or solid residues at an authorized site.
BCA Solution (BCA Reagent A)
Safety Data Sheet

6.4. Reference to other sections
For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin and eyes.

Hygiene measures: Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Substance</th>
<th>ACGIH Ceiling (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium carbonate (497-19-8)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sodium hydroxide (1310-73-2)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves

Eye protection:
Safety glasses

Skin and body protection:
Wear suitable protective clothing

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
RELATIVE DENSITY: No data available
SOLUBILITY: No data available
LOG POW: No data available
AUTO-IGNITION TEMPERATURE: No data available
DECOMPOSITION TEMPERATURE: No data available
VISCOITY, KINEMATIC: No data available
VISCOITY, DYNAMIC: No data available
EXPLOSION LIMITS: No data available
EXPLOSIVE PROPERTIES: No data available
OXIDIZING PROPERTIES: No data available

9.2. OTHER INFORMATION
No additional information available

SECTION 10: STABILITY AND REACTIVITY

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

10.2. CHEMICAL STABILITY
Stable under normal conditions.

10.3. POSSIBILITY OF HAZARDOUS REACTIONS
No dangerous reactions known under normal conditions of use.

10.4. CONDITIONS TO AVOID
None under recommended storage and handling conditions (see section 7).

10.5. INCOMPATIBLE MATERIALS
No additional information available

10.6. HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous decomposition products.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS
Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

SODIUM CARBONATE (497-19-8)

LD50 oral rat 2800 mg/kg (Rat, Male/female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit > 2000 mg/kg (16 CFR 1500.40, 24 h, Rabbit, Experimental value, Dermal)
LC50 inhalation rat (mg/l) 2.3 mg/l (2 h, Rat, Male, Experimental value, Inhalation (aerosol))

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : Not classified
Specific target organ toxicity – repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.
SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

<table>
<thead>
<tr>
<th>Substance</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium carbonate (497-19-8)</td>
<td>LC50 fish 1</td>
<td>300 mg/l (Other, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value)</td>
</tr>
<tr>
<td></td>
<td>EC50 Daphnia 1</td>
<td>200 - 227 mg/l (Other, 48 h, Ceriodaphnia sp., Semi-static system, Fresh water, Experimental value)</td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>LC50 fish 1</td>
<td>45.4 mg/l (Other, 96 h, Salmo gairdneri, Static system, Fresh water, Experimental value, Solution &gt;=50%)</td>
</tr>
<tr>
<td></td>
<td>EC50 Daphnia 1</td>
<td>40.4 mg/l (Other, 48 h, Ceriodaphnia sp., Experimental value, Nominal concentration)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Endpoint</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium carbonate (497-19-8)</td>
<td>Biodegradability</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td></td>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td></td>
<td>ThOD</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>Biodegradability</td>
<td>Not applicable.</td>
</tr>
<tr>
<td></td>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td></td>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td></td>
<td>ThOD</td>
<td>Not applicable (inorganic)</td>
</tr>
<tr>
<td>(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)</td>
<td>Biodegradability in water</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium carbonate (497-19-8)</td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>Not bioaccumulative.</td>
</tr>
<tr>
<td>(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)</td>
<td>No bioaccumulation data available.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

<table>
<thead>
<tr>
<th>Substance</th>
<th>Ecology - soil</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium carbonate (497-19-8)</td>
<td>Low potential for adsorption in soil.</td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td>No (test)data on mobility of the substance available.</td>
</tr>
</tbody>
</table>

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

## SECTION 14: Transport information

**Department of Transportation (DOT)**
In accordance with DOT

Other information : No supplementary information available.

**Transportation of Dangerous Goods**

**Transport by sea**
Not regulated

**Air transport**
Not regulated

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

**BCA Solution (BCA Reagent A)**
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>sodium carbonate (497-19-8)</td>
<td></td>
</tr>
<tr>
<td>sodium hydroxide (1310-73-2)</td>
<td></td>
</tr>
<tr>
<td>(2,2'-biquinoline)-4,4'-dicarboxylic acid, disodium salt (979-88-4)</td>
<td>Not subject to reporting requirements of the United States SARA Section 313</td>
</tr>
</tbody>
</table>

| CERCLA RQ                                      | 1000 lb                                  |

**Not listed on the United States TSCA (Toxic Substances Control Act) inventory**

**Not subject to reporting requirements of the United States SARA Section 313**

**Not subject to reporting requirements of the United States CERCLA RQ**

**Not subject to reporting requirements of the United States SARA Section 313**

### 15.2. International regulations

**CANADA**
No additional information available

**EU-Regulations**
No additional information available

**National regulations**
No additional information available

### 15.3. US State regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>State or local regulations</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
<tr>
<td>sodium hydroxide(1310-73-2)</td>
<td></td>
</tr>
</tbody>
</table>

## SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 05/11/2017
### Full text of H-phrases:

<table>
<thead>
<tr>
<th>H-Phrase</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H290</td>
<td>May be corrosive to metals</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

### SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.