

## MATERIAL SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

#### 1.1 Identification of the Substance

Catalog Number AR0146  
 Product Name BCA Protein Assay Kit  
 Components: BCA Reagent A, BCA Reagent B, Albumin (BSA) Standards.

#### 1.2 Application of the substance or mixture

For research use only.

#### 1.3 Company Identification

Boster Biological Technology Co., Ltd.  
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### 2. HAZARDS IDENTIFICATION

#### 2.1 Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]

##### BCA Reagent A

Eye Irritation – Category 2

#### 2.2 Label elements

Signal word Warning  
 Hazard statement(s)  
 H319 Causes serious eye irritation  
 Precautionary statement(s)  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes.  
 Remove contact lenses, if present and easy to do. Continue rinsing  
 P337 + P313 - If eye irritation persists: Get medical advice/ attention  
 P264 Wash skin thoroughly after handling.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	EC-No.	Classification	Concentration
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Sodium carbonate □	497-19-8	207-838-8	Eye Irrit. 2 (H319)	2%
Bicinchoninic acid	979-88-4		Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)	1%

#### 4. FIRST AID MEASURES

<b>Skin contact</b>	Wash off immediately with soap and plenty of water.
<b>Eye contact</b>	Rinse immediately with plenty of water. Consult a physician.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>Inhalation</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Notes to physician</b>	Treat symptomatically.

#### 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Protective equipment for firefighters</b>	Wear self-contained breathing apparatus and protective suit.
<b>Special hazards arising from the substance or mixture</b>	None in particular
<b>Further information</b>	No data available □

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	For personal protection see section 8.
<b>Environmental precautions</b>	Do not let product enter drains.
<b>Methods and materials for containment and cleaning up</b>	Soak up with inert absorbent material.
<b>Reference to other sections</b>	For disposal see section 13.

#### 7. HANDLING AND STORAGE

<b>Handling</b>	Ensure adequate ventilation.
<b>Storage</b>	Store according to product specifications.

#### 8. EXPOSURE CONTROLS

##### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

##### Personal protective equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear suitable respiratory equipment
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<b>Hand protection</b>	Impervious gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
<b>Eye protection</b>	Safety glasses with side-shields
<b>Skin and body protection</b>	Lightweight protective clothing

#### **Environmental exposure controls**

Prevent product from entering drains

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

#### **Important Health Safety and Environment Information**

<b>a) Appearance Form:</b>	liquid
<b>b) Odour</b>	no data available
<b>c) Odour Threshold</b>	no data available
<b>d) pH</b>	no data available
<b>e) Melting point/freezing point</b>	no data available
<b>f) Initial boiling point and boiling range</b>	no data available
<b>g) Flash point</b>	no data available
<b>h) Evaporation rate</b>	no data available
<b>i) Flammability (solid, gas)</b>	no data available
<b>j) Upper/lower flammability or explosive limits</b>	no data available
<b>k) Vapour pressure</b>	no data available
<b>l) Vapour density</b>	no data available
<b>m) Relative density</b>	no data available
<b>n) Water solubility</b>	no data available
<b>o) Partition coefficient: noctanol/water</b>	no data available
<b>p) Auto-ignition temperature</b>	no data available
<b>q) Decomposition temperature</b>	no data available
<b>r) Viscosity</b>	no data available
<b>s) Explosive properties</b>	no data available
<b>t) Oxidizing properties</b>	no data available

## **10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	no data available
<b>Chemical Stability</b>	Stable under recommended storage and handling conditions.

<b>Possibility of hazardous reactions</b>	no data available
<b>Conditions to avoid</b>	Heat, flames and sparks.
<b>Incompatible materials</b>	no data available ☐
<b>Hazardous decomposition products</b>	None under normal use conditions.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

Sodium carbonate LD50 Oral - Rat - 4090 mg/kg

### Principle Routes of Exposure/Potential Health effects

<b>Eye irritant effect</b>	May cause irritation.
<b>Skin irritant effect</b>	May cause irritation.
<b>Sensitization</b>	no data available
<b>Mutagenicity</b>	no data available
<b>Reproductive toxicity</b>	no data available
<b>Carcinogenicity</b>	no data available
<b>Additional toxicological information</b>	no data available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	As supplied, the preparation is not expected to present significant adverse environmental effects.
<b>Mobility</b>	no data available
<b>Biodegradation</b>	no data available
<b>Bioaccumulation</b>	no data available

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal methods</b>	Dispose of waste in accordance to applicable national, regional, or local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

<b>DOT (US)</b>	Not dangerous goods
<b>IMDG</b>	Not dangerous goods
<b>IATA</b>	Not dangerous goods

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

### 15.2 Chemical Safety Assessment

No data available.

## 16. OTHER INFORMATION

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Boster Corporation cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification: Regulation (EC) No. 1272/2008 [CLP/GHS]

#### BCA Reagent B

Eye Irritation – Category 2

Chronic aquatic toxicity – Category 2

### 2.2 Label elements

Signal word                      Warning

Hazard statement(s)

H319 Causes serious eye irritation

H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

P337 + P313 If eye irritation persists: Get medical advice/ attention

P264 Wash face, hands and any exposed skin thoroughly after handling

P273 Avoid release to the environment

P280 Wear protective gloves/ eye protection/ face protection

P391 Collect spillage

P501 Dispose of contents/ container to an approved waste disposal plant

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	EC-No.	Classification	Concentration
Copper Sulphate	7758-98-7□	231-847-6	Acute Tox. 3, H301 Skin Irrit. 2, H315	4%

			Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	
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#### 4. FIRST AID MEASURES

<b>Skin contact</b>	Wash off immediately with soap and plenty of water.
<b>Eye contact</b>	Rinse immediately with plenty of water. Consult a physician.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>Inhalation</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Notes to physician</b>	Treat symptomatically.

#### 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Protective equipment for firefighters</b>	Wear self-contained breathing apparatus and protective suit.
<b>Special hazards arising from the substance or mixture</b>	None in particular
<b>Further information</b>	No data available <input type="checkbox"/>

#### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	For personal protection see section 8.
<b>Environmental precautions</b>	Do not let product enter drains.
<b>Methods and materials for containment and cleaning up</b>	Soak up with inert absorbent material
<b>Reference to other sections</b>	For disposal see section 13.

#### 7. HANDLING AND STORAGE

<b>Handling</b>	Wear personal protective equipment. Ensure adequate ventilation.
<b>Storage</b>	Store according to product specifications.

#### 8. EXPOSURE CONTROLS

##### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

##### Personal protective equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear suitable
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	respiratory equipment
<b>Hand protection</b>	Impervious gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
<b>Eye protection</b>	Safety glasses with side-shields
<b>Skin and body protection</b>	Lightweight protective clothing

#### **Environmental exposure controls**

Prevent product from entering drains

## **9. PHYSICAL AND CHEMICAL PROPERTIES**

#### **Important Health Safety and Environment Information**

<b>a) Appearance Form:</b>	liquid
<b>b) Odour</b>	no data available
<b>c) Odour Threshold</b>	no data available
<b>d) pH</b>	no data available
<b>e) Melting point/freezing point</b>	no data available
<b>f) Initial boiling point and boiling range</b>	no data available
<b>g) Flash point</b>	no data available
<b>h) Evaporation rate</b>	no data available
<b>i) Flammability (solid, gas)</b>	no data available
<b>j) Upper/lower flammability or explosive limits</b>	no data available
<b>k) Vapour pressure</b>	no data available
<b>l) Vapour density</b>	no data available
<b>m) Relative density</b>	no data available
<b>n) Water solubility</b>	no data available
<b>o) Partition coefficient: noctanol/water</b>	no data available
<b>p) Auto-ignition temperature</b>	no data available
<b>q) Decomposition temperature</b>	no data available
<b>r) Viscosity</b>	no data available
<b>s) Explosive properties</b>	no data available
<b>t) Oxidizing properties</b>	no data available

## **10. STABILITY AND REACTIVITY**

<b>Reactivity</b>	no data available
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<b>Chemical Stability</b>	Stable under recommended storage and handling conditions.
<b>Possibility of hazardous reactions</b>	no data available
<b>Conditions to avoid</b>	no data available
<b>Incompatible materials</b>	None in particular
<b>Hazardous decomposition products</b>	None under normal use conditions.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity** LD50 Oral - Rat - 300 mg/kg

### Principle Routes of Exposure/Potential Health effects

<b>Eye irritant effect</b>	May cause irritation
<b>Skin irritant effect</b>	May cause irritation
<b>Sensitization</b>	no data available
<b>Mutagenicity</b>	no data available
<b>Reproductive toxicity</b>	no data available

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
<b>Mobility</b>	no data available
<b>Biodegradation</b>	no data available
<b>Bioaccumulation</b>	no data available

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal methods</b>	Dispose of waste in accordance to applicable national, regional, or local regulations.
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

<b>DOT (US)</b>	Not dangerous goods Proper shipping name Copper sulphate Hazard class 9.0 UN/ID No 3077 Packing group III
<b>IMDG</b>	Not dangerous goods Proper shipping name Copper sulphate Hazard class 9.0



	UN/ID No 3077 Packing group III
<b>IATA</b>	Not dangerous goods Proper shipping name Copper sulphate Hazard class 9.0 UN/ID No 3077 Packing group III

## 15. REGULATORY INFORMATION

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### organic solvents

not applicable.

#### Harmful Substances Whose Names Are to be Indicated on the Label

not applicable.

#### Pollution Release and Transfer Registry (Class II):

not applicable.

#### German hazard class for Water

3 Appendix No. 4

#### Poisonous and Deleterious Substances Control Law

Deleterious

### 15.2 Chemical Safety Assessment

No data available.

## 16. OTHER INFORMATION

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Boster Corporation cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.

## 2. HAZARDS IDENTIFICATION

### Classification: Albumin (BSA) Standards

This substance does not meet the classification criteria to be listed as a hazardous material according to the EC Directives 67/548/EEC, 1999/45/EC, 1272/2008. (EC) No. 1272/2008 [CLP/GHS].

- Pictogram:** Not applicable.
- Signal Word:** Not applicable.
- Hazard statements:** Not applicable.
- Precautionary statements:** Not applicable.
- Response:** Not applicable.
- Hazard Symbol / R-Phrase / S-Phrase:** Not applicable.
- Label Elements:** Not applicable.
- Special Hazards:** Not applicable.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

No components need to be disclosed according to the applicable regulations.

### 4. FIRST AID MEASURES

<b>Skin contact</b>	Wash off immediately with soap and plenty of water.
<b>Eye contact</b>	Rinse immediately with plenty of water. Consult a physician.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
<b>Inhalation</b>	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
<b>Notes to physician</b>	Treat symptomatically.

### 5. FIRE FIGHTING MEASURES

<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
<b>Protective equipment for firefighters</b>	Wear self-contained breathing apparatus and protective suit.
<b>Special hazards arising from the substance or mixture</b>	Nature of decomposition products not known.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions</b>	For personal protection see section 8.
<b>Environmental precautions</b>	Do not let product enter drains.
<b>Methods and materials for containment and cleaning up</b>	Keep in suitable, closed containers for disposal.
<b>Reference to other sections</b>	For disposal see section 13.

### 7. HANDLING AND STORAGE

<b>Handling</b>	No special handling advice required.
<b>Storage</b>	Store according to product specifications.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### a) Control parameters

#### Components with workplace control parameters

Contains no substances with occupational exposure limit values

### b) Exposure controls

#### Appropriate engineering controls

Follow general industrial hygiene and safety practice.

#### Personal protective equipment

<b>Respiratory protection</b>	In case of insufficient ventilation wear suitable respiratory equipment
<b>Hand protection</b>	Impervious gloves
<b>Eye protection</b>	Safety glasses with side-shields
<b>Skin and body protection</b>	Lightweight protective clothing

#### Environmental exposure controls

Prevent product from entering drains

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Important Health Safety and Environment Information

<b>a) Appearance Form:</b>	liquid
<b>b) Odour</b>	no data available
<b>c) Odour Threshold</b>	no data available
<b>d) pH</b>	no data available
<b>e) Melting point/freezing point</b>	no data available
<b>f) Initial boiling point and boiling range</b>	no data available
<b>g) Flash point</b>	no data available
<b>h) Evaporation rate</b>	no data available
<b>i) Flammability (solid, gas)</b>	no data available
<b>j) Upper/lower flammability or explosive limits</b>	no data available
<b>k) Vapour pressure</b>	no data available
<b>l) Vapour density</b>	no data available
<b>m) Relative density</b>	no data available
<b>n) Water solubility</b>	no data available
<b>o) Partition coefficient: noctanol/water</b>	no data available
<b>p) Auto-ignition temperature</b>	no data available

q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available
t) Oxidizing properties	no data available

## 10. STABILITY AND REACTIVITY

Reactivity	no data available
Chemical Stability	Stable under recommended storage and handling conditions.
Possibility of hazardous reactions	no data available
Conditions to avoid	no data available
Incompatible materials	Strong oxidizing agents, strong acids/alkalis
Hazardous decomposition products	no data available

## 11. TOXICOLOGICAL INFORMATION

Acute toxicity no data available

Principle Routes of Exposure/Potential Health effects

Eye irritant effect	no data available
Skin irritant effect	no data available
Sensitization	no data available
Mutagenicity	no data available
Germ cell mutagenicity	no data available
Reproductive toxicity	no data available
Carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP, OSHA.
Additional toxicological information	no data available

## 12. ECOLOGICAL INFORMATION

Ecotoxicity	no data available
Mobility	no data available
Biodegradation	no data available
Bioaccumulation	no data available

## 13. DISPOSAL CONSIDERATIONS

Disposal methods	Dispose of waste in accordance to applicable national, regional, or local regulations.
Contaminated packaging	Dispose of as unused product.

## 14. TRANSPORT INFORMATION

<b>DOT (US)</b>	Not dangerous goods
<b>IMDG</b>	Not dangerous goods
<b>IATA</b>	Not dangerous goods

## 15. REGULATORY INFORMATION

### SARA 302 Components

The following components are subject to reporting levels established by SARA Title III, Section 302:

Sodium azide      CAS-No.  
26628-22-8

### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards

No SARA Hazards

### Massachusetts Right To Know Components

Sodium azide      CAS-No.  
26628-22-8

### California Prop. 65 Components

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

## 16. OTHER INFORMATION

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since Boster Corporation cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein.