

Kit Summary

Product Code(s) AB213768
Product name Human CRISP3 ELISA Kit

TMB Stop Solution

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|----------------|-----------|-----------|----------|---------------------------------|---------------------------|
| Sulphuric acid | 231-639-5 | 7664-93-9 | 2 | Skin Corr. 1A (H314) | - |

Avidin-Biotin-Peroxidase Complex (ABC)

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-------|------------|----------|---|---------------------------|
| Proclin | - | 55965-84-9 | 0.2 | Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) | - |

Sample Diluent Buffer

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-----------|------------|----------|--|---------------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.02 | Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | - |

Antibody Diluent Buffer

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-----------|------------|----------|--|---------------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.02 | Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | - |

ABC Diluent Buffer

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-------|--------|----------|---------------------------------|---------------------------|
|---------------|-------|--------|----------|---------------------------------|---------------------------|

| | | | | | |
|--------------|-----------|------------|------|--|---|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.02 | Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | - |
|--------------|-----------|------------|------|--|---|

TMB Color Developing Agent

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-------|------------|----------|---|---------------------------|
| TMB | - | 54827-17-7 | 20 | STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) | - |

Lyophilized recombinant Human CRISP3 standard

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-----------|------------|----------|--|---------------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.02 | Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | - |

Biotinylated anti- Human CRISP3 antibody

| Chemical Name | EC-No | CAS-No | Weight % | Classification (Reg. 1272/2008) | REACH Registration Number |
|---------------|-----------|------------|----------|--|---------------------------|
| Sodium azide | 247-852-1 | 26628-22-8 | 0.02 | Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) | - |

GHS / CLP - GHS - Classification



Signal Word

Warning

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

P271 - Use only outdoors or in a well-ventilated area

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

P362 - Take off contaminated clothing and wash before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell

P405 - Store locked up

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

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

2.3 Other information

A safety datasheet follows for all potentially hazardous components – all other components are non-hazardous.

TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

Safety Data Sheet

Issuing date No data available

Revision Date 30-Jul-2018

Version 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product name TMB Stop Solution

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

| | |
|-------|----------------|
| Ozone | Not applicable |
|-------|----------------|

GHS Label elements, including precautionary statements

Not dangerous

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Chemical Name | CAS-No | Weight % | Classification (Reg. 1272/2008) |
|----------------|-----------|----------|---------------------------------|
| Sulphuric acid | 7664-93-9 | 1-5 | Skin Corr. 1A (H314) |

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

| | |
|---------------------------|--|
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. |
| Inhalation | Move to fresh air. |
| Ingestion | Clean mouth with water. Drink plenty of water. |
| Notes to physician | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Flammable properties | Not flammable. |
| Flash point | not determined |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Explosion Data | |
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |
| Protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|--|
| Personal precautions | Ensure adequate ventilation. |
| Environmental precautions | Try to prevent the material from entering drains or water courses. |
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
| Methods for cleaning up | Pick up and transfer to properly labeled containers. |

7. HANDLING AND STORAGE

| | |
|--|--|
| Advice on safe handling | Handle in accordance with good industrial hygiene and safety practice. |
| Technical measures/Storage conditions | Keep containers tightly closed in a dry, cool and well-ventilated place. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|-----------------------------|--|--|--|
| Sulphuric acid 7664-93-9 | TWA: 0.2 mg/m ³ thoracic fraction | TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³ | IDLH: 15 mg/m ³ TWA: 1 mg/m ³ |

NIOSH IDLH: *Immediately Dangerous to Life or Health*

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection No special protective equipment required.
Skin and body protection No special protective equipment required.
Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------------|---------------------------|------------------------------------|---------------------------|
| Appearance | No information available. | Odor | No information available. |
| Odor Threshold | No information available | Physical State @20°C | No information available |
| pH | No information available | Autoignition temperature | No information available |
| Flash point | No information available | Boiling point/boiling range | No information available |
| Decomposition temperature | No information available | Flammability Limits in Air | No information available |
| Melting point/range | No information available | solubility | No information available. |
| Explosion limits | No information available | Vapor Pressure @20°C (kPa) | No information available |
| Specific Gravity | No data available | VOC Content(%) | Not applicable |
| Evaporation rate | No information available | | |
| Vapor density | No data available | | |

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products None known based on information supplied.

Conditions to avoid None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------|--------------------|-------------|---|
| Sulphuric acid | 2140 mg/kg (Rat) | | 510 mg/m ³ (Rat) 2 h 347 ppm (Rat) 1 h |

Chronic toxicity

carcinogenicity

This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B)

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|----------------|-------|---------|-------|------|
| Sulphuric acid | A2 | Group 1 | Known | X |

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Target Organ Effects

Eyes. Respiratory system. Skin. Teeth.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

| Chemical Name | Toxicity to algae | Toxicity to fish | Toxicity to microorganisms | Toxicity to daphnia and other aquatic invertebrates |
|----------------|-------------------|--|----------------------------|---|
| Sulphuric acid | | 500: 96 h Brachydanio rerio mg/L LC50 static | | 29: 24 h Daphnia magna mg/L EC50 |

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical Name | California Hazardous Waste Status |
|----------------|-----------------------------------|
| Sulphuric acid | Toxic Corrosive |

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

| Chemical Name | CAS-No | Weight % | SARA 313 - Threshold Values % |
|----------------|-----------|----------|-------------------------------|
| Sulphuric acid | 7664-93-9 | 2 | 1.0 |

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|----|
| Acute Health Hazard | no |
| Chronic Health Hazard | no |
| Fire Hazard | no |
| Sudden Release of Pressure Hazard | no |
| Reactive Hazard | no |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|----------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Sulphuric acid | 1000 lb | | | X |

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|----------------|--------------------------|------------------------------------|--|
| Sulphuric acid | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

| Chemical Name | CAS-No | California Prop. 65 |
|----------------|-----------|---------------------|
| Sulphuric acid | 7664-93-9 | Carcinogen |

U.S. State Right-to-Know Regulations

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|----------------|---------------|------------|--------------|----------|--------------|
| Sulphuric acid | X | X | X | X | X |

International Regulations

| Chemical Name | Carcinogen Status | Exposure limits |
|----------------|-------------------|---------------------------------|
| Sulphuric acid | A2 | Mexico: TWA 1 mg/m ³ |

WHMIS Note: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H314 - Causes severe skin burns and eye damage

Revision Date 30-Jul-2018
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 30-Jul-2018

Version 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Avidin-Biotin-Peroxidase Complex (ABC)

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

| | |
|-----------------------------------|------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitization | Category 1 |

GHS Label elements, including precautionary statements



Signal Word

Warning

Hazard statements

H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

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

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P333 + P313 - If skin irritation or rash occurs: Get medical advice/ attention

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

P362 - Take off contaminated clothing and wash before reuse

P272 - Contaminated work clothing should not be allowed out of the workplace

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

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

| Chemical Name | CAS-No | Weight % | Classification (Reg. 1272/2008) |
|---------------|------------|----------|---|
| Proclin | 55965-84-9 | 0.1-1 | Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) |

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

| | |
|---------------------------|---|
| General advice | If symptoms persist, call a physician. |
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. May cause an allergic skin reaction. |
| Inhalation | Move to fresh air. If symptoms persist, call a physician. |
| Ingestion | Rinse mouth. If symptoms persist, call a physician. |
| Notes to physician | Treat symptomatically. May cause sensitization of susceptible persons. |

5. FIRE-FIGHTING MEASURES

| | |
|-----------------------------|----------------|
| Flammable properties | Not flammable. |
|-----------------------------|----------------|

| | |
|--|--|
| Flash point | not determined |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Explosion Data | |
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |
| Specific hazards arising from the chemical | Thermal decomposition can lead to release of irritating gases and vapors In the event of fire and/or explosion do not breathe fumes May cause sensitization by inhalation and skin contact |
| Protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|---|
| Personal precautions | Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| Environmental precautions | Try to prevent the material from entering drains or water courses. |
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
| Methods for cleaning up | Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up. |

7. HANDLING AND STORAGE

| | |
|--|---|
| Advice on safe handling | Ensure adequate ventilation. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist. |
| Technical measures/Storage conditions | Keep out of the reach of children. Keep container tightly closed. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. |

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| | |
|--------------------------------------|---|
| Exposure Guidelines | This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies. |
| Engineering measures | Showers Eyewash stations Ventilation systems |
| Personal protective equipment | |
| Eye/face protection | Tightly fitting safety goggles. Face-shield. |
| Skin and body protection | No special protective equipment required. |
| Respiratory protection | If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. |
| Hygiene measures | When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing. |

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------------|---------------------------|------------------------------------|---------------------------|
| Appearance | No information available. | Odor | No information available. |
| Odor Threshold | No information available | Physical State @20°C | No information available |
| pH | No information available | Autoignition temperature | No information available |
| Flash point | No information available | Boiling point/boiling range | No information available |
| Decomposition temperature | No information available | Flammability Limits in Air | No information available |
| Melting point/range | No information available | solubility | No information available. |
| Explosion limits | No information available | Vapor Pressure @20°C (kPa) | No information available |
| Specific Gravity | No data available | VOC Content(%) | Not applicable |
| Evaporation rate | No information available | | |
| Vapor density | No data available | | |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Stability | Stable under recommended storage conditions. |
| Incompatible products | None known based on information supplied. |
| Conditions to avoid | None known based on information supplied. |
| Hazardous decomposition products | None known based on information supplied. |
| Hazardous polymerization | Hazardous polymerization does not occur. |

11. TOXICOLOGICAL INFORMATION

Acute toxicity

| | |
|----------------------------|---|
| Product Information | Irritating to skin, eyes and / or respiratory tract. May cause sensitization of susceptible persons |
| Inhalation | May cause irritation of respiratory tract |
| Eye contact | May cause irritation |
| Skin contact | May cause irritation |
| Ingestion | Ingestion may cause irritation to mucous membranes |

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---------------|------------------|-------------|-----------------|
| Proclin | 53 mg/kg (Rat) | | |

Chronic toxicity

| | |
|-----------------------------|---|
| Chronic toxicity | Repeated contact may cause allergic reactions in very susceptible persons Avoid repeated exposure |
| carcinogenicity | Not listed by ACGIH, IARC, NTP, or CA Prop 65. |
| Sensitization | As a precaution the product should be treated as a sensitizer. |
| Target Organ Effects | None known. |

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging

Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT

Not dangerous goods

IATA

Not dangerous goods

ADR

Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

| | |
|--|-----|
| Acute Health Hazard | yes |
| Chronic Health Hazard | no |
| Fire Hazard | no |
| Sudden Release of Pressure Hazard | no |
| Reactive Hazard | no |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations**International Regulations****WHMIS Note:**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H301 - Toxic if swallowed H311 - Toxic in contact with skin H314 - Causes severe skin burns and eye damage H318 - Causes serious eye damage H317 - May cause an allergic skin reaction H331 - Toxic if inhaled H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects

Hazard statements

H315 - Causes skin irritation

H317 - May cause an allergic skin reaction

H319 - Causes serious eye irritation

Revision Date 30-Jul-2018

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 30-Jul-2018

Version 3

1. PRODUCT AND COMPANY IDENTIFICATION

Product name TMB Color Developing Agent

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

| | |
|---|------------|
| Skin corrosion/irritation | Category 2 |
| Serious eye damage/eye irritation | Category 2 |
| Specific target organ systemic toxicity (single exposure) | Category 3 |

GHS Label elements, including precautionary statements



Signal Word

Warning

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Precautionary Statements - EU (§28, 1272/2008)

P280 - Wear protective gloves/ eye protection/ face protection

P271 - Use only outdoors or in a well-ventilated area

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

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

P362 - Take off contaminated clothing and wash before reuse

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

P312 - Call a POISON CENTER or doctor/ physician if you feel unwell

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

P405 - Store locked up

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

Other information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**3.1 Substances**

| Chemical Name | CAS-No | Weight % | Classification (Reg. 1272/2008) |
|---------------|------------|----------|---|
| TMB | 54827-17-7 | 10-30 | STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) |

For the full text of the H-Statements mentioned in this Section, see Section 16**4. FIRST AID MEASURES**

| | |
|---------------------------|---|
| General advice | If symptoms persist, call a physician. |
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If symptoms persist, call a physician. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician. |
| Inhalation | Move to fresh air. If symptoms persist, call a physician. |
| Ingestion | Rinse mouth. If symptoms persist, call a physician. |
| Notes to physician | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|-------------------------------------|---|
| Flammable properties | Not flammable. |
| Flash point | not determined |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Use personal protective equipment. Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions Try to prevent the material from entering drains or water courses.

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. After cleaning, flush away traces with water. Prevent product from entering drains. Dam up.

7. HANDLING AND STORAGE

Advice on safe handling Ensure adequate ventilation. Wear personal protective equipment. Use only in area provided with appropriate exhaust ventilation. Do not breathe vapors or spray mist.

Technical measures/Storage conditions Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering measures
 Showers
 Eyewash stations
 Ventilation systems

Personal protective equipment

Eye/face protection Tightly fitting safety goggles. Face-shield.

Skin and body protection No special protective equipment required.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Provide regular cleaning of equipment, work area and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------------|---------------------------|------------------------------------|---------------------------|
| Appearance | No information available. | Odor | No information available. |
| Odor Threshold | No information available | Physical State @20°C | No information available |
| pH | No information available | | |
| Flash point | No information available | Autoignition temperature | No information available |
| Decomposition temperature | No information available | Boiling point/boiling range | No information available |
| Melting point/range | No information available | | |
| | | Flammability Limits in Air | No information available |
| Explosion limits | No information available | | |
| | | solubility | No information available. |
| Specific Gravity | No data available | Vapor Pressure @20°C (kPa) | No information available |
| Evaporation rate | No information available | VOC Content(%) | Not applicable |
| Vapor density | No data available | | |

10. STABILITY AND REACTIVITY

| | |
|---|--|
| Stability | Stable under recommended storage conditions. |
| Incompatible products | None known based on information supplied. |
| Conditions to avoid | None known based on information supplied. |
| Hazardous decomposition products | None known based on information supplied. |
| Hazardous polymerization | Hazardous polymerization does not occur. |

11. TOXICOLOGICAL INFORMATION

Acute toxicity

| | |
|----------------------------|--|
| Product Information | Irritating to skin, eyes and / or respiratory tract. |
| Inhalation | May cause irritation of respiratory tract |
| Eye contact | May cause irritation |
| Skin contact | May cause irritation |
| Ingestion | Ingestion may cause irritation to mucous membranes |

Chronic toxicity

| | |
|-----------------------------|-------------------------|
| Chronic toxicity | Avoid repeated exposure |
| Target Organ Effects | None known. |

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

| | |
|--|-----|
| Acute Health Hazard | yes |
| Chronic Health Hazard | no |
| Fire Hazard | no |
| Sudden Release of Pressure Hazard | no |
| Reactive Hazard | no |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

WHMIS Note:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION**Full text of H-Statements referred to under sections 2 and 3**

H335 - May cause respiratory irritation H315 - Causes skin irritation H319 - Causes serious eye irritation

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

Revision Date 30-Jul-2018

Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS

Safety Data Sheet

Issuing date No data available

Revision Date 30-Jul-2018

Version 2

1. PRODUCT AND COMPANY IDENTIFICATION

Product name Lyophilized recombinant Human CRISP3 standard

Recommended use For research use only

Supplier Address Abcam Inc
1 Kendall Square, Ste 341
Cambridge, MA 02139-1517
USA
Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free)
Fax: (866) 739-9884 or (866) 457-9616 (both US toll free)

E-mail address technical@abcam.com

Emergency telephone Tel: (617)225-2272 or 888-77-ABCAM (22226) (US toll free) - Monday-Friday 8am-9pm EST

2. HAZARDS IDENTIFICATION

GHS - Classification

| | |
|-------|----------------|
| Ozone | Not applicable |
|-------|----------------|

GHS Label elements, including precautionary statements

Not dangerous

Other information

Caution - substance not yet tested completely

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

| Chemical Name | CAS-No | Weight % | Classification (Reg. 1272/2008) |
|---------------|------------|----------|--|
| Sodium azide | 26628-22-8 | <0.1 | Acute Tox. 2 (H300) Acute Tox. 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) (EUH032) |

For the full text of the H-Statements mentioned in this Section, see Section 16

4. FIRST AID MEASURES

| | |
|---------------------------|--|
| Eye contact | Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. |
| Skin contact | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. |
| Inhalation | Move to fresh air. |
| Ingestion | Clean mouth with water. Drink plenty of water. |
| Notes to physician | Treat symptomatically. |

5. FIRE-FIGHTING MEASURES

| | |
|--|--|
| Flammable properties | Not flammable. |
| Flash point | not determined |
| Suitable extinguishing media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Explosion Data | |
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |
| Protective equipment and precautions for firefighters | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear to prevent contact with skin and eyes. |

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|--|
| Personal precautions | Ensure adequate ventilation. |
| Environmental precautions | Try to prevent the material from entering drains or water courses. |
| Methods for containment | Prevent further leakage or spillage if safe to do so. |
| Methods for cleaning up | Pick up and transfer to properly labeled containers. |

7. HANDLING AND STORAGE

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Technical measures/Storage conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering measures Showers
Eyewash stations
Ventilation systems

Personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|----------------------------------|---------------------------|------------------------------------|---------------------------|
| Appearance | No information available. | Odor | No information available. |
| Odor Threshold | No information available | Physical State @20°C | No information available |
| pH | No information available | Autoignition temperature | No information available |
| Flash point | No information available | Boiling point/boiling range | No information available |
| Decomposition temperature | No information available | Flammability Limits in Air | No information available |
| Melting point/range | No information available | solubility | No information available. |
| Explosion limits | No information available | Vapor Pressure @20°C (kPa) | No information available |
| Specific Gravity | No data available | VOC Content(%) | Not applicable |

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible products None known based on information supplied.

Conditions to avoid None known based on information supplied.

Hazardous decomposition products None known based on information supplied.

Hazardous polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Product Information Product does not present an acute toxicity hazard based on known or supplied information

Chronic toxicity

Target Organ Effects None known.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS

Waste disposal methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging Do not re-use empty containers.

| Chemical Name | RCRA - Halogenated Organic Compounds | RCRA - P Series Wastes | RCRA - F Series Wastes | RCRA - K Series Wastes |
|---------------------------|--------------------------------------|--|------------------------|------------------------|
| Sodium azide - 26628-22-8 | | P105 | | |
| Chemical Name | | California Hazardous Waste Status | | |
| Sodium azide | | Ignitable Reactive | | |

14. TRANSPORT INFORMATION

DOT Not dangerous goods

IATA Not dangerous goods

ADR Not dangerous goods

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

| | |
|------------------------------|----|
| Acute Health Hazard | no |
| Chronic Health Hazard | no |
| Fire Hazard | no |

| | |
|--|----|
| Sudden Release of Pressure Hazard | no |
| Reactive Hazard | no |

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

| Chemical Name | Hazardous Substances RQs | Extremely Hazardous Substances RQs | RQ |
|---------------|--------------------------|------------------------------------|--|
| Sodium azide | 1000 lb | 1000 lb | RQ 1000 lb final RQ RQ 454 kg final RQ |

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

International Regulations

WHMIS Note:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H300 + H310 - Fatal if swallowed or in contact with skin H400 - Very toxic to aquatic life H410 - Very toxic to aquatic life with long lasting effects

Revision Date 30-Jul-2018
Revision Note No information available.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of MSDS