1. PRODUCT AND COMPANY IDENTIFICATION

Product name Smad4 Colorimetric Cell-Based ELISA Kit

Catalog number EKC1530

Recommended use Research use only

Supplier address Boster Biological Technology Co., Ltd.

3942 B Valley Ave, Pleasanton, CA 94566, USA

E-mail address support@bosterbio.com

Emergency telephone number Tel: 888-466-3604

2. HAZARDS IDENTIFICATION

OSHA/HCS Status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Hazardous Ingredients

1. -target antibody, -phospho-target antibody, -GAPDH antibody: < 0.1% Sodium azide
2. 10X TBS: 0.2% Kathon CG/ICP
3. 15X Wash buffer: 0.3% Kathon CG/ICP, 1.5% Tween-20
4. HRP-conjugated antibodies: 0.2% Kathon CG/ICP, 0.1% Tween-20
5. Dye 1/2 -conjugated antibodies: 0.2% Kathon CG/ICP, 0.1% Tween-20
6. SDS solution: 1% Sodium Dodecyl Sulfate (SDS)
7. Blocking buffer: 0.5% Triton X-100, 0.1% Tween-20
8. Primary antibody diluent: 0.2% Kathon CG/ICP, 0.5% Triton X-100, 0.1% Tween-20
9. Quenching buffer: 1% Hydrogen peroxide (H2O2)
10. Crystal violet solution: 0.05% crystal violet
11. Ready-to-use substrate: < 0.02% hydrogen peroxide and < 0.1% 3,3',5,5'-Tetramethylbenzidine (TMB)
12. Stop solution: 2N Sulfuric acid (H2SO4)

Classification of the substance or mixture

Sulfuric Acid: Corrosive to Metals (Category 1), H290 Skin corrosion (Category 1A), H314 Serious eye damage (Category 1), H318

Hydrogen Peroxide (quenching buffer): Acute toxicity, Oral (Category 4), H302 Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Short-term (acute) aquatic hazard (Category 2), H401 Long-term (chronic) aquatic hazard (Category 3), H412

Kathon CG/ICP: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Skin corrosion (Category 1C), H314 Serious eye damage (Category 1), H318 Skin sensitization (Category 1), H317 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410 For the full text of the H-Statements mentioned in this Section, see Section 16.

Triton X-100: Acute toxicity, Oral (Category 4), H302 Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410

SDS (Sodium dodecyl sulfate): Flammable solids (Category 2), H228 Acute toxicity, Oral (Category 4), H302 Acute toxicity, Inhalation (Category 4), H332 Skin irritation (Category 2), H315 Serious eye damage (Category 1), H318 Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335 Short-term (acute) aquatic hazard (Category 2), H401 Long-term (chronic) aquatic hazard (Category 3), H412

Crystal Violet: Acute toxicity, Oral (Category 4), H302 Serious eye damage (Category 1), H318 Carcinogenicity (Category 2), H351 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410

Sodium azide: Acute toxicity, Oral (Category 2), H300 Acute toxicity, Inhalation (Category 2), H330 Acute toxicity, Dermal (Category 1), H310 Specific target organ toxicity - repeated exposure, Oral (Category 2), Brain, H373 Short-term (acute) aquatic hazard (Category 1), H400 Long-term (chronic) aquatic hazard (Category 1), H410

GHS label elements, including precautionary statements

Hazard pictograms



Signal word/s

Warning Danger Danger Danger

Hazard statements

Sulfuric Acid (Stop Solution): H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage. P264 Wash skin thoroughly after handling.

Hydrogen Peroxide (quenching buffer): H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.

Kathon CG/ICP: H314 Causes severe skin burns and eye damage (H314). H317 May cause an allergic skin reaction. H410 Very toxic to aquatic life with long lasting effects.

Triton X-100: H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H410 Very toxic to aquatic life with long lasting effects.

SDS (Sodium dodecyl sulfate): H228 Flammable solid. H302 + H332 Harmful if swallowed or if inhaled. H315 Causes skin irritation. H318 Causes serious eye damage. H335 May cause respiratory irritation. H401 Toxic to aquatic life. H412 Harmful to aquatic life with long lasting effects.

Crystal Violet: H302 Harmful if swallowed. H318 Causes serious eye damage. H351 Suspected of causing cancer. H410 Very toxic to aquatic life with long lasting effects.

Sodium azide: H300 + H310 + H330 Fatal if swallowed, in contact with skin or if inhaled. H373 May cause damage to organs (Brain) through prolonged or repeated exposure if swallowed. H410

Very toxic to aquatic life with long lasting effects.

Response

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. EYE CONTACT: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. SKIN CONTACT: Take off immediately all contaminated clothing. Rinse skin with water/shower. INHALATION: Move to an outside area and breath fresh air. Clear the nose by blowing.

Storage Not applicable.

Disposal Not applicable.

Hazards not otherwise classified

None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS numbers/other identifiers

Chemical Name	CAS-No	Weight %
Sodium azide	26628-22-8	<0.1
Kathon CG/ICP	26172-55-4	2.5
Tween-20	9005-64-5	1.8
Sodium Dodecyl Sulfate (SDS)	151-21-3	1
Triton X-100	9002-93-1	1
Hydrogen peroxide	7722-84-1	1
Crystal violet	548-62-9	0.05
3,3',5,5'-Tetramethylbenzidine (TMB)	54827-17-7	0.1
Sulfuric acid	7664-93-9	<20

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. FIREFIGHTING 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.
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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation.

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

Methods and materials for containment and cleaning up Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice.

Storage Store the entire kit at 4°C upon arrival.

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 protection	No special protective equipment required.
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	Form: liquid
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Partition coefficient: n-octanol/water	No data available
Water solubility	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available

Oxidizing properties	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	Inhalation: No data available. Dermal: No data available.
Skin corrosion/irritation	No data available
Serious eye damage/eye irritation	No data available
Respiratory or skin sensitization	No data available
Germ cell mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available
Aspiration hazard	No data available

12. ECOLOGICAL INFORMATION

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

13. DISPOSAL CONSIDERATIONS

Product Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. REGULATORY INFORMATION

U.S. federal regulations

SARA 302/313 components The following components are subject to reporting levels established by SARA Title III, Section 302/313:

Chemical Name	CAS-No	Weight %
Sodium azide	26628-22-8	<0.1
Kathon CG/ICP	26172-55-4	2.5
Tween-20	9005-64-5	1.8
Sodium Dodecyl Sulfate (SDS)	151-21-3	1
Triton X-100	9002-93-1	1
Hydrogen peroxide	7722-84-1	1
Crystal violet	548-62-9	0.05
3,3',5,5'-Tetramethylbenzidine (TMB)	54827-17-7	0.1
Sulfuric acid	7664-93-9	<2

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.

California proposition 65

This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION

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.