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Material Safety Data Sheet (MSDS)

Product Identity Information

Product Name: SMAD4 Colorimetric Cell-Based ELISA Kit

Product Catalog Number: OKAG01042

Potential Hazards

Reagents: Some kit reagents are not considered to be hazardous according to 29CFR 1910.1200(d). They are mixtures that contain less than 1% hazardous chemicals and less than 0.1% carcinogenic chemicals. All potential hazards are listed below:

- **α -Target Antibody, α -Phospho-Target Antibody, α -GAPDH Antibody:** See MSDS for Antibodies.
- **HRP-Conjugated Antibodies:** 0.2% Kathon CG/ICP, See MSDS for Antibodies.
- **15x Wash Buffer:** 0.2% Kathon CG/ICP, 1% Tween-20.
- **SDS Solution:** 1% Sodium Dodecyl Sulfate (SDS).
- **Blocking Buffer:** 0.05% Sodium Azide and 0.5% Triton X-100.
- **Primary Antibody Diluent:** 0.05% Sodium Azide and 0.5% Triton X-100.
- **Quenching Buffer:** 0.05% Sodium Azide, and 1% Hydrogen Peroxide (H₂O₂).
- **Crystal Violet Solution:** 0.05% Crystal Violet.
- **Ready-to-Use Substrate:** < 0.02% Hydrogen Peroxide and < 0.1% 3,3',5,5'-Tetramethylbenzidine (TMB).
- **Stop Solution:** 2N Sulfuric Acid (H₂SO₄).

Health Hazard Data

Emergency Overview:

Crystal Violet: Carcinogen (2); Eye and skin irritant; Flammable liquid; Toxic by inhalation, ingestion, and skin absorption; Organ Damage (Eyes, Heart, Kidney, Liver, Nerves).

Hydrogen Peroxide: Carcinogen; Corrosive; Flammable Oxidizer; Organ Damage (Eyes, Respiratory system, Skin); Toxic by ingestion.

Kathon CG: Carcinogen; Corrosive; Flammable Oxidizer; Harmful by ingestion; Harmful if inhaled and extremely destructive of tissues of mucous membranes and upper respiratory tract; Organ Damage (Blood, Central Nervous System, Eye, Gastrointestinal tract, Kidney); Skin and respiratory sensitizer (causes allergies).

N-Methyl-2-Pyrrolidone: Flammable; May be harmful if ingested; May irritate eyes, respiratory system, and skin with prolonged contact; Organ Damage (Bone marrow, lymphatic system, spleen, thymus); Teratogen (May cause harm to fertility or unborn child).

Propylene Carbonate: May be harmful if ingested; May irritate eyes, respiratory system, and skin with prolonged contact.

SDS: Flammable Solid; Organ Damage (Eyes and Lungs); Skin Irritant; Toxic by ingestion and skin absorption.

Sodium Azide: May react with lead and copper plumbing to form highly explosive metal azides; Highly toxic by ingestion and skin absorption; Organ Damage (Brain, Central nervous system, Heart).

Sulfuric Acid: Corrosive; Organ Damage (Eyes, Lungs, and Teeth).

Triton X-100: Toxic by ingestion; Organ Damage (Eyes); Skin Irritant.

Tween-20: Toxic by inhalation, ingestion, and skin absorption. May cause eye, skin, or respiratory system irritation.

Routes of Entry: Avoid ingestion and inhalation; avoid contact with skin and eyes.

Threshold Limit Value and Source: The chemical, physical and toxicological properties of these components have not been thoroughly investigated. Allergy-prone individuals should be particularly cautious with proteins or other materials of biological origin.

Carcinogenic Effects Data: Not available.

Chronic Effects of Overexposure: Not available.

Solubility in Water: Liquids except detergents are readily miscible in water.

Precautionary Statements

Keep away from clothing and combustible materials. Avoid breathing the fumes and vapors from kit components. Wear protective gloves, clothing, eyewear, and face protection.

Emergency and First Aid Procedures

Swallowing: If any component of this kit is swallowed, wash mouth thoroughly and drink a large amount of water. If vomiting or not breathing, consult a physician or Poison Control Center immediately.

Skin: Take off contaminated clothing and shoes immediately. If any component of this kit contacts the skin, immediately wash the affected area thoroughly with soap and copious amounts of water. If irritation persists, contact a physician.

Inhalation: If any component of this kit is inhaled, move the affected individual to an area with fresh air. If not breathing, perform CPR and get immediate medical attention.

Eyes: If any component of this kit contacts the eyes, immediately flush the eye with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids with fingers. If irritation persists, contact a physician immediately.

Fire and Explosion Hazard Data

Flammability: May be combustible at high temperatures or near sources of ignition.

Flash Point: Not available.

Extinguishing Media: Use dry chemicals.

Unusual Fire and Explosion Hazard: None known.

Physical Data

All Antibodies: Clear Solution.

15x Wash Buffer: Clear Solution.

1% SDS Solution: Clear Solution.

Blocking Buffer: Clear Solution.

Primary Antibody Diluent: Clear Solution.

Quenching Buffer: Clear Solution.

Crystal Violet Solution: Violet Solution.

Ready-to-Use Substrate: Clear/Yellow Solution.

Stop Solution: Clear Solution.

Note: Boiling points, vapor pressure, vapor density, specific gravity, melting point and evaporation rate not available.

Stability and Reactivity

Stability and Reactivity: Product stable at 4°C or lower.

Conditions to Avoid: Not available.

Materials to Avoid: Not available.

Hazardous Decomposition Products: Not available.

Toxicology Information

Toxicology to Animals: LD50/LC50, not available.

Chronic Effect on Humans: Not available.

Other Toxic Effects on Humans: May cause slight irritation in case of eye contact, inhalation or ingestion.

Spill and Leak Procedures

In event of spill or leak:

1. Wear lab coat, chemical resistant gloves and safety glasses.
2. Wipe up all spills with a suitable absorbent and dispose properly.
3. Wash down the spill site.
4. Dispose in accordance with all federal, state and local regulations.

Special Precautions

1. The compounds in this kit are sold only for research use to personnel familiar with the toxicology of organic chemicals.
2. The compounds in this kit are sold only in milliliter and microliter quantities for use in biological research. No other use is recommended.