

Safety Data Sheet

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Catalog Number: VPK-5155
Product Name: SARS-CoV-2 Spike Protein S1 ELISA Kit
Recommended Use: Laboratory Research Reagents

MANUFACTURER:

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SECTION 2. HAZARDS IDENTIFICATION


SARS-CoV-2 Spike S1 Standard (Part No. 51553D): One 25 µL vial of 200 µg/mL recombinant SARS-CoV-2 Spike Protein S1.

Assay Diluent (Part No. 310804): One 50 mL bottle.

10X Wash Buffer (Part No. 310806): One 100 mL bottle.

Classification:

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 (H373)
Acute aquatic toxicity, Category 1 (H400)
Chronic aquatic toxicity, Category 1 (H410)

Pictogram	
Signal Word	Danger
Hazard Statements:	Fatal if swallowed, in contact with skin or if inhaled (H300 + H310 + H330), May cause damage to organs through prolonged exposure (H373), Very toxic to aquatic life with long lasting effects (H410).
Precautionary Statements:	Do not breathe dust/fume/gas/mist/vapors/spray (P260), Do not get in eyes, on skin, or on clothing (P262), Wash skin thoroughly after handling (P264), Do not eat, drink, or smoke when using this product (P270), Use only outdoors or in a well-ventilated area (P271), Avoid

release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), Wear respiratory protection (P284), IF SWALLOWED: immediately call a POISON CENTER / doctor. Rinse mouth (P301 + P310 + P330), IF ON SKIN: gently wash with plenty of soap and water. Immediately call a POISON CENTER or doctor (P302 + P350 + P310), IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER / doctor (P304 + P340 + P310), Get medical advice/attention if you feel unwell (P314), Take off contaminated clothing and wash before reuse (P362), Collect spillage (P391), Store in a well-ventilated place. Keep container tightly closed (P403 + P233), Store locked up (P405), Dispose of contents/container to an approved waste disposal plant (P501).

Triton X-100 Solution (Part No. 310805): One 15 mL bottle containing 5% Triton X-100 in TBS.


Classification:

Acute toxicity, Oral, Category 4 (H302)

Eye irritation, Category 2A (H319)

Acute aquatic toxicity, Category 2 (H401)

Chronic aquatic toxicity, Category 2 (H411)

Pictogram	
Signal Word	Warning
Hazard Statements: Harmful if swallowed (H302), Causes serious eye irritation (H319), Toxic to aquatic life with long lasting effects (H411).	
Precautionary Statements: Wash skin thoroughly after handling (P264), Do not eat, drink, or smoke when using this product (P270), Avoid release to the environment (P273), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: call a POISON CENTER if you feel unwell. Rinse mouth (P301 + P312 + P330), IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing (P305 + P351 + P338), If eye irritation persists: get medical advice/attention (P337 + P313), Collect spillage (P391), Dispose of contents/container to an approved waste disposal plant (P501).	


Stop Solution (Part No. 310808): One 12 mL bottle

Classification:

Corrosive to metals, Category 1 (H290)

Skin corrosion, Category 1A (H314)

Serious eye damage, Category 1 (H318)

Pictogram	
Signal Word	Danger
Hazard Statements: May be corrosive to metals (H290), Causes severe skin burns and eye damage (H314).	
Precautionary Statements: Keep only in original container (P234), Wash skin thoroughly after handling (P264), Wear protective gloves/protective clothing/eye protection/face protection (P280), IF SWALLOWED: rinse mouth. Do NOT induce vomiting (P301 + P330 + P331), IF ON SKIN (or hair): take off immediately all contaminated clothing Rinse skin with water/shower (P303 + P361 + P353), IF INHALED: remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER / doctor (P304 + P340 + P310), IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER / doctor (P305 + P351 + P338 + P310), Wash contaminated clothing before reuse (P363), Absorb spillage to prevent material damage (P390), Store locked up (P405), Store in corrosive resistant stainless steel container with a resistant inner liner (P406), Dispose of contents/container to an approved waste disposal plant (P501).	

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

SARS-CoV-2 Spike S1 Standard (Part No. 51553D): One 25 µL vial of 200 µg/mL recombinant SARS-CoV-2 Spike Protein S1.

Assay Diluent (Part No. 310804): One 50 mL bottle.

10X Wash Buffer (Part No. 310806): One 100 mL bottle.

CHEMICAL NAME	CONCENTRATION	CAS #
Thimerosal	0.02%	54-64-8

Triton X-100 Solution (Part No. 310805): One 15 mL bottle containing 5% Triton X-100 in TBS.

CHEMICAL NAME	CONCENTRATION	CAS #
Triton X-100	5%	9002-93-1

Stop Solution (Part No. 310808): One 12 mL bottle

CHEMICAL NAME	CONCENTRATION	CAS #
Sulfuric Acid	0.5 N	7664-93-9

SECTION 4. FIRST-AID MEASURES

- IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
- IN CASE OF SKIN CONTACT, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. REMOVE CONTAMINATED CLOTHING AND SHOES. CALL A PHYSICIAN.
- IN CASE OF CONTACT WITH EYES, FLUSH WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. ASSURE ADEQUATE FLUSHING BY SEPARATING THE EYELIDS WITH FINGERS. CALL A PHYSICIAN.

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media: Water spray, alcohol-resistant foam, dry chemical or CO₂
- Special protective equipment: Self-contained breathing apparatus

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Evacuate area
- Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
- Absorb with sand or vermiculite, sweep up, place in a bag and hold for waste disposal.
- Avoid raising dust.
- Ventilate area and wash spill site after material pickup is complete.

SECTION 7. SAFETY HANDLING AND STORAGE

- Should be handled by trained personnel observing good laboratory practices.
- Avoid breathing vapor.
- Avoid skin contact or swallowing.
- May cause allergic reaction in sensitized individuals.
- Store in properly labeled containers at temperature on label

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

- Engineering measures: Handle in accordance with good industrial hygiene and safety practices. Wash hands immediately after handling the product.
- Personal protective equipment: Face shield or safety glasses, gloves, protective clothing, suitable respiratory equipment in cases of inadequate ventilation.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Form: liquid
- Odor: no data available
- pH: no data available
- Boiling point / range: no data available
- Melting point / range: no data available
- Flash point: no data available
- Evaporation rate: no data available

- Vapor pressure: no data available
- Vapor density: no data available
- Relative density: no data available
- Water solubility: no data available
- Autoignition temperature: no data available
- Decomposition temperature: no data available
- Viscosity: no data available
- Explosive properties: no data available
- Oxidizing properties: no data available

SECTION 10. STABILITY AND REACTIVITY

- Stability: no data available
- Reactivity: no data available
- Conditions to avoid: no data available
- Incompatible materials: no data available
- Decomposition products: no data available

SECTION 11. TOXICOLOGICAL INFORMATION

- Acute toxicity
 - Triton X-100: LD50 oral 1.800 mg/kg (rat), LD50 dermal 8.000 mg/kg (rabbit)
 - Thimerosal: LD50 Oral 75 mg/kg (rat); LD50 Subcutaneous 98 mg/kg (rat)
 - Sulfuric Acid: LD50 Oral 2.140 mg/kg (rat); LC50 Inhalation 2 hr, 510 mg/m³ (rat)
- Skin corrosion/irritation
 - Sulfuric Acid: Extremely corrosive and destructive to tissue (rabbit)
 - All other hazardous components: no data available
- Serious eye damage/irritation
 - Triton X-100: Moderate eye irritation-24 h (rabbit)
 - Thimerosal: Mild eye irritation (rabbit)
 - Sulfuric Acid: Severe eye irritation (rabbit)
- Respiratory or skin sensitization
 - Thimerosal: prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals
 - All other hazardous components: no data available
- Germ cell mutagenicity: no data available
- Carcinogenicity: no data available
- Reproductive toxicity: no data available

SECTION 12. ECOLOGICAL INFORMATION

- Ecotoxicity
 - Triton X-100: Toxicity to Daphnia and other aquatic invertebrates- EC50 26 mg/L-48h (Daphnia)
 - Thimerosal: no data available

- Sulfuric Acid: LC50 42 mg/L in 96 hrs (mosquito fish); mortality NOEC 19.5 mg/L in 96 hrs (rainbow trout); mortality LOEC 4.6 mg/L in 8 days (fathead minnow); growth inhibition LOEC 2.68 mg/L in 6 days (algae)
- Mobility: no data available
- Biodegradation
 - Triton X-100: not readily biodegradable
 - All other hazardous components: no data available
- Bioaccumulation: no data available

SECTION 13. DISPOSAL CONSIDERATIONS

For small quantities: Cautiously add to a large stirred excess of water. Adjust the pH to neutral. Flush the aqueous solutions down the drain with plenty of water.

SECTION 14. TRANSPORT INFORMATION- IATA

- Hazard Class: 8
- Subsidiary Class: none
- Packing Group: II
- UN-No: UN2796

NOTE: THIS PRODUCT IS SHIPPED AS "DANGEROUS GOODS IN EXCEPTED QUANTITIES" UNDER IATA REGULATION 2.6.2.2.

SECTION 15. REGULATORY INFORMATION

- Safety, health and environmental regulations/legislation specific for the substance or mixture: no data available
- Chemical safety assessment: no data available

SECTION 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and should be used only as a guide for experienced personnel. Cell Biolabs, Inc. shall not be held liable for any damage resulting from the handling or from contact with the above product(s).

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