

# ImmunoCruz™ mouse LSAB Staining System: sc-2050



The Power to Question

## PRODUCT

The mouse ImmunoCruz™ Staining System includes 15 ml each negative control (normal mouse IgG), peroxidase block, serum block (5% normal goat serum, two 15 ml vials provided), biotinylated secondary antibody and HRP-Streptavidin reagent. Each of these reagents is pre-diluted and ready to use for immunohistochemical staining of formalin-fixed, paraffin-embedded tissue sections. Also included are 50x peroxidase substrate, 50x DAB chromogen and 10x substrate buffer. Number of slides: 150.

Primary antibody is provided by the researcher. Primary antibody should be diluted to 0.5–5 µg/ml, as determined by titration, in serum block (two 15 ml vials provided).

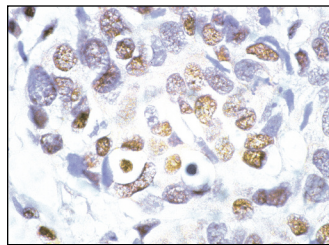
Additional control sera may be purchased separately for the preparation of additional serum block. Normal goat serum: sc-2043 is for use with rabbit and mouse primary antibodies; normal donkey serum: cat # sc-2044 is for use with goat primary antibodies. Neat sera are provided in 1 ml volumes.

## PROCEDURE

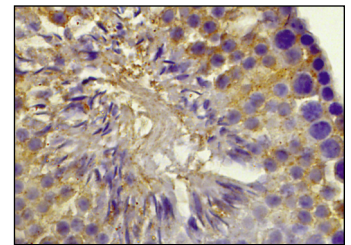
ImmunoCruz™ Staining Systems utilize a horseradish peroxidase (HRP)-streptavidin complex for staining of formalin-fixed, paraffin-embedded tissue sections.

- Clean glass slides with 95% ethanol, treat with subbing solution and air dry. Alternatively, use pre-treated slides.
- Cut 4–6 micron thick tissue sections using microtome and apply to slides. Deparaffinize as follows: 3x xylenes for 5 minutes each, 2x 100% ethanol for 10 minutes each and 2x 95% ethanol for 10 minutes each. Wash in deionized H<sub>2</sub>O for 1 minute on stir plate. Aspirate excess liquid from slides.
- Optional: To unmask antigens by heat treatment, place slides in container and cover with 10 mM sodium citrate buffer, pH 6.0. Heat at 95° C for 5 minutes. Top off with fresh buffer and heat at 95° C for 5 minutes (optimal incubation time may vary for each tissue type). Allow slides to cool in buffer for 20 minutes. Wash in deionized H<sub>2</sub>O three times for 2 minutes each on stir plate. Aspirate excess liquid from slides.
- All subsequent steps are carried out at room temperature in a humidified chamber. Allow all ImmunoCruz™ Staining System reagents to reach room temperature prior to use. Tissue sections should not be allowed to dry out at any time during the procedure.
- Optional: To quench endogenous peroxidase activity, incubate specimens for 5 minutes in 1–3 drops peroxidase block (white cap). Rinse with PBS and transfer to a PBS wash for 2 minutes on stir plate. Aspirate excess liquid from slides.
- Incubate specimens for 20 minutes in 1–3 drops of serum block (blue cap). Aspirate serum from slides.
- Dilute primary antibody to 0.5–5 µg/ml as determined by titration. Antibody should be diluted in serum block (provided) or in 5% normal serum in PBS using goat serum (cat # sc-2043) for rabbit and mouse primary antibodies or donkey serum (cat # sc-2044) for goat primary antibodies. Add diluted primary antibody in sufficient volume to cover the tissue.
- Incubate for 2 hours. Rinse with PBS, then wash in PBS twice for 2 minutes each on stir plate. Aspirate excess liquid from slides.
- Incubate specimens for 30 minutes in 1–3 drops of biotinylated secondary antibody (green cap). Rinse with PBS, then wash in PBS twice for 2 minutes each on stir plate. Aspirate excess liquid from slides.
- Incubate specimens for 30 minutes in 1–3 drops of HRP-streptavidin complex (purple cap). Rinse with PBS, then wash in PBS twice for 2 minutes each on stir plate. Aspirate excess liquid from slides.
- During the above incubation step, prepare HRP substrate in the substrate mixing bottle (yellow cap) as follows (sufficient for 15–20 slides): remove tip from mixing bottle and combine 1.6 ml deionized H<sub>2</sub>O, 5 drops 10x substrate buffer (orange cap), 1 drop 50x DAB chromogen (yellow cap) and 1 drop 50x peroxidase substrate (yellow cap).
- Add 1–3 drops of HRP substrate to each slide. Develop until light brown staining is visible, usually 30 seconds– 10 minutes, although up to 20 minutes may be required. The section may be checked for staining by rinsing with deionized H<sub>2</sub>O and viewing under a microscope. If necessary, add additional HRP substrate and continue to incubate. Rinse with deionized H<sub>2</sub>O and transfer to deionized H<sub>2</sub>O wash for 2 minutes on stir plate.
- Optional: Counterstain slides in Gill's formulation #2 hematoxylin for 5–10 seconds. Immediately wash with several changes of deionized H<sub>2</sub>O.
- Optional: Destain with acid alcohol and bluing reagent. Wash with tap water.
- Dehydrate sections as follows: 2x 95% ethanol for 10 seconds each, 2x 100% ethanol for 10 seconds each and 3x xylenes for 10 seconds each. Wipe off excess xylene from edges of slide.
- Immediately add 1–2 drops of permanent mounting medium and cover with glass coverslip. Observe by light microscopy.

## DATA



Ub (P4D1): sc-8017. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue showing nuclear localization of ubiquitin.



Integrin  $\alpha$ 1b (C-20): sc-6602. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis showing membrane localization.

## STORAGE

Store at 4° C. **\*\*DO NOT FREEZE.\*\*** Stable for one year from the date of shipment.

## RESEARCH USE

For research use only; not for use in diagnostic procedures.

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - PRODUCT AND COMPANY INFORMATION

Component Name: Hydrogen Peroxide Solution

Supplier: Santa Cruz Biotechnology, Inc.  
2145 Delaware Ave.  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

Emergency: ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

## SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENT

<u>Substance Name</u>	<u>CAS #</u>	<u>SARA 313</u>
Hydrogen Peroxide-1802 (Solution in H2O) 90 atom% 180	-	NO

<u>Ingredient Name</u>	<u>CAS #</u>	<u>%</u>	<u>SARA 313</u>
Hydrogen Peroxide	7722-84-1	≤ 5	Yes
Water	7732-18-5	≥ 95	No

## SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW  
Target organ(s): Eyes. Skin.

HMIS RATING  
HEALTH: 0  
FLAMMABILITY: 0  
REACTIVITY: 1

NFPA RATING  
HEALTH: 0  
FLAMMABILITY: 0  
REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

## SECTION 4 - FIRST AID MEASURES

ORAL EXPOSURE  
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE  
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE  
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE  
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

FLASH POINT  
N/A

AUTOIGNITION TEMP  
N/A

FLAMMABILITY  
N/A

## EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

## FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

METHODS FOR CLEANING UP  
Absorb on sand or vermiculite and place in closed containers for disposal.  
Ventilate area and wash spill site after material pickup is complete.

## SECTION 7 - HANDLING AND STORAGE

HANDLING  
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing.  
Avoid prolonged or repeated exposure.

STORAGE  
Suitable: Keep tightly closed. Store at 2-8°C

SPECIAL REQUIREMENTS  
Light sensitive.

## SECTION 8 - EXPOSURE CONTROLS / PPE

ENGINEERING CONTROLS  
Safety shower and eye bath. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT  
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges.  
Hand: Protective gloves.  
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES  
Wash thoroughly after handling.

EXPOSURE LIMITS	Country Source	Type	Value
Poland	NDS		1.5 MG/M3
Poland	NDS Ch		4 MG/M3
Poland	NDSP		-

## SECTION 9 - PHYSICAL/CHEMICAL PROPERTIES

Form .....liquid

pH .....N/A

BP/BP Range .....N/A

MP/MF Range .....N/A

Freezing Point .....N/A

Vapor Pressure .....23.3 mmHg 30 °C

Vapor Density .....1.1 g/l

Saturated Vapor Conc. ....N/A

SG/Density .....1 g/cm3

Bulk Density .....N/A

Odor Threshold .....N/A

Volatile% .....N/A

VOC Content .....N/A

Water Content .....N/A

Solvent Content .....N/A

Evaporation Rate .....N/A

Viscosity .....N/A

continued...

Surface Tension .....N/A  
Partition Coefficient .....N/A  
Decomposition Temp. ....N/A  
Flash Point .....N/A  
Explosion Limits .....N/A  
Flammability .....N/A  
Autoignition Temp .....N/A  
Refractive Index .....1.335  
Optical Rotation .....N/A  
Miscellaneous Data .....N/A  
Solubility .....N/A  
N/A = not available

## SECTION 10 - STABILITY AND REACTIVITY

### STABILITY

Stable: Stable.  
Conditions to Avoid: Rust. Light.  
Materials to Avoid: Brass Iron and iron salts., Finely powdered metals Copper,  
Copper alloys, Galvanized iron, Zinc, Nickel

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Oxygen.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

## SECTION 11 - TOXICOLOGICAL INFORMATION

### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: May cause eye irritation.  
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
Ingestion: May be harmful if swallowed.

### TARGET ORGAN(S) OR SYSTEM(S)

Eyes. Respiratory system. Skin.

### SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

## SECTION 12 - ECOLOGICAL INFORMATION

No data available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

## SECTION 14 - TRANSPORT INFORMATION

### DOT

Proper Shipping Name: None  
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

## SECTION 15 - REGULATORY INFORMATION

### US CLASSIFICATION AND LABEL TEXT

US Statements: Target organ(s): Eyes. Skin.

### UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

## CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

## SECTION 16 - OTHER INFORMATION

*The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.*

2/15/2011

# MATERIAL SAFETY DATA SHEET

## PRODUCT AND COMPANY INFORMATION

Component Name: DAB 50X Concentrate Liquid Horseradish Peroxidase (HRP)  
Substrate System

Supplier: Santa Cruz Biotechnology, Inc.  
2145 Delaware Ave.  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

Emergency: ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

## 1. HAZARDOUS INGREDIENTS

REAGENT: 3,3'-Diaminobenzidine Tetrahydrochloride  
WEIGHT: 360.1 g/mole  
FORMULA: C<sub>12</sub>H<sub>14</sub>N<sub>4</sub>

TOXIC: MAY CAUSE CANCER. POSSIBLE MUTAGEN. AVOID ALL CONTACT.

NATURE OF HAZARD: Harmful if swallowed, inhaled, or absorbed through skin. May cause skin irritation.

## 2. PHYSICAL DATA

APPEARANCE: Clear amber solution.

MELTING/FREEZING POINT: 0° C (water)

BOILING POINT: 100° C (water)

SOLUBILITY: Water.

## 3. FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Water, Foam, Dry Chemical, CO<sub>2</sub>

SPECIAL FIRE FIGHTING PROCEDURES: Use respirator and protective clothing. Toxic fumes could be emitted when water is evaporated with fire.

## 4. HEALTH HAZARD DATA

ACUTE EFFECTS: Harmful if swallowed, inhaled, or absorbed through skin. may cause irritation.

CHRONIC EFFECTS: Suspected carcinogen. Lab experiments have shown mutagenic effects. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

FIRST AID: In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing and shoes. If swallowed, wash out mouth with water provided person is conscious.

EFFECTS OF OVEREXPOSURE:

INHALATION: Adverse health effects from vapors and spray mists in poorly ventilated areas may include irritation of the mucous membranes of the nose, throat, respiratory tract and symptoms of headache and nausea.

SKIN CONTACT: Avoid all contact. May cause cancer.

EYE CONTACT: Avoid all contact.

## 5. EMERGENCY AND FIRST AID PROCEDURES

SEE FIRST AID ABOVE.

## 6. REACTIVITY DATA

STABILITY: Stable

HAZARDOUS DECONTAMINATION PRODUCTS: Carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur.

INCOMPATIBILITY MATERIALS TO AVOID: Strong oxidizing agents and strong bases.

## 7. SPILL OR LEAK PROCEDURE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Contain spill then clean up with copious amounts of soap and water containing 20% bleach. Avoid contact with skin or clothing.

WASTE DISPOSAL METHODS: Observe all Federal, State, and Local laws concerning health and pollution. Dilute with equal amounts of bleach and flush with copious amounts of water.

## 8. SPECIAL PROTECTION INFORMATION

Good housekeeping procedures and laboratory practice is best preventative. Use in well ventilated areas. Store in refrigerated conditions. Do not allow product to enter storm or sanitary sewers, lakes, rivers, streams, or public water supplies. Notify local authorities if this happens or is threatened.

## 9. OTHER INFORMATION

*The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.*

2/15/2011