

**Product Name: Rat VisUCyte HRP Polymer-DAB Cell & Tissue Staining Kit**

**Reviewed on: 19 April 2017**

### 1. Identification of Substance:

- **Other means of identification: Catalog Number:** VCTS005  
Product Contains: Peroxidase Blocking Reagent, Mouse IgG Polymer HRP (contains ProClin 150), Rabbit IgG Polymer HRP (contains ProClin 150), Mouse/Rabbit IgG Polymer HRP (contains ProClin 150), Goat IgG Polymer HRP (contains ProClin 150), Rat IgG Polymer HRP (contains ProClin 150), Sheep IgG Polymer HRP (contains ProClin 150), DAB Chromogen (contains 3,3'-Diaminobenzidine), DAB Chromogen Buffer, Serum Blocking Reagent D, Dropper Bottle.
- **GHS product identifier:** Rat VisUCyte HRP Polymer-DAB Cell & Tissue Staining Kit
- **Application of the substance / the preparation:** For Research Use Only
- **Manufacturer/Supplier:**  
Bio-Techne - R&D Systems Inc.  
614 McKinley Place N.E.  
Minneapolis, MN 55413 USA  
1-800-343-7475
- **For product related questions call:** 1-800-343-7475. In Europe call: +44(0)1235-529449.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident call **CHEMTREC** at 1-800-424-9300 (US or Canada). Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

### 2. Hazard Identification:

- **Classification: Regulation (EC) No. 1272/2008 (CLP/EU-GHS), 29 CFR 1910.1200 (OSHA):**
- **Some components contain ProClin 150:**  
Skin Sens. 1;
- **Signal Word:** WARNING
- **Hazard Statements:** H317: May cause an allergic skin reaction.
- **Precautionary statements:** P261: Avoid breathing dust/fume/gas/mist/vapours/spray. P272: Contaminated work clothing should not be allowed out of the workplace. P280: Wear protective gloves.
- **Response:**  
IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: get medical attention. Wash contaminated clothing before reuse.
- **Classification according to EU Directives 67/548/EEC or 1999/45/EC:** The product is classified as a skin sensitizer according to Directive 1999/45/EC and its amendments.
- **R-Phrase:** R43: May cause sensitization by skin contact.
- **S-Phrase:** S36/37: Wear Suitable protective clothing and gloves.
- **Other hazards:** None



### 3. Information on Ingredients:

**Description:** ProClin 150.

Contains	CAS No.	EC-No.	Index-No.	Content
Mixture of 5-Chloro-2-Methyl-4-Isothiazolin-3-One (26172-55-4) and 2-Methyl-4-Isothiazolin-3-One (2682-20-4)	55965-84-9	-	613-167-00-5	<0.01%
Magnesium Nitrate	10377-60-3	233-826-7	-	<0.05%

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### 4. First Aid Measures:

- **IF IN EYES:** Rinse thoroughly with water for at least 15 minutes and immediately consult a physician.
- **IF ON SKIN (or hair):** Immediately take off contaminated clothing or shoes. Wash with plenty of soap and water. Consult a physician.
- **IF INHALED:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- **IF SWALLOWED:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Immediately consult a physician.

### 5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- **Special precautions for fire-fighters:** Self contained breathing apparatus and full protective Kit must be worn in case of fire.

### 6. Accidental Release Measures:

- **Person-related safety precautions:** Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
- **Measures for environmental protection:** Keep away from drains.
- **Measures for containment and cleaning:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

### 7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Use normal measures for preventive fire protection.
- **Conditions for safe storage:** Store in a cool, dry place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

### 8. Exposure Controls and Personal Protection:

- **Control parameters:** Contains no substances with occupational exposure limit values.
- **Individual protection measures:** Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
  - **Eye/face protection:** Wear approved safety goggles.
  - **Skin/hand protection:** Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
  - **Body protection:** Wear suitable protective clothing as protection against splashing or contamination.
  - **Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
  - **Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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### 9. Physical and Chemical Properties:

- **Appearance:** Clear Liquid
- **Odor:** Not available
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** -40° C
- **Boiling point/Boiling range:** 189° C
- **Flash point:** 118° C – closed cup
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available
- **Upper/lower flammability or explosive limits:** Not available
- **Vapor density :** Not available
- **Vapor pressure:** Not available
- **Relative density:** 1.03 g/cm<sup>3</sup>
- **Solubility in/Miscibility with Water:** Soluble
- **Partition coefficient: noctanol/water:** Not available
- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available

### 10. Stability and Reactivity:

- **Chemical Stability:** Stable under recommended storage conditions.
- **Conditions to avoid:** Strong oxidizing agents, reducing agents, Amines, Mercaptans
- **Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions – Carbon oxides, nitrogen oxides (NOx), Sulphur oxides, Hydrogen chloride gas.

### 11. Toxicological Information:

- **Acute toxicity:** LD50 Oral – rat – 862 mg/kg  
LD50 Dermal – rabbit- 2800 mg/kg
- **Skin corrosion/irritation:** Can cause severe burns. Skin – rabbit – Corrosive
- **Serious eye damage/irritation:** Rabbit – Corrosive to eyes
- **Respiratory or skin sensitization:** May cause allergic skin reaction.
- **Germ cell mutagenicity:** No data available
- **Carcinogenicity:** No data available
- **Reproductive toxicity:** No data available
- **Specific target organ toxicity (STOT) -single exposure:** No data available
- **Specific target organ toxicity (STOT) -repeated exposure:** No data available
- **Aspiration hazard:** Can cause severe burns.
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
  - Inhalation:** Harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
  - Ingestion:** Harmful if swallowed. Causes burns.
  - Skin contact:** Harmful if absorbed through skin. Causes burns.
  - Eye contact:** Causes eye burns.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:**
  - Short term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Not available.
  - Long term exposure: Potential immediate effects:** Not available. **Potential delayed effects:** Allergic contact dermatitis.
- **Effects of chronic exposure:** ProClin 150 at levels greater than or equal to 0.1% is not identified as probable, possible or a confirmed human carcinogen by IARC.
- **Numerical measures of toxicity:** Not available

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- Other Information: Not available

## 12. Ecological Information:

- **Ecotoxicity:** No data available
- **Biodegradability:** No data available.
- **Bioaccumulative potential:** No data available.
- **Mobility in soil:** No data available.
- **Other adverse effects:** Toxic to aquatic organisms.

## 13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilled material to soil, waterways, drains and sewers.

## 14. Transportation Information:

- **UN Number:** None
- **DOT regulations:** · **Hazard class:** None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
  - **Transport/Additional information:** Not dangerous according to the above specifications.

## 15. Regulations:

- **US Federal and State Regulations**
  - TSCA (Toxic Substances Control Act):** On TSCA Inventory
  - SARA 313 Components:** Not listed
  - SARA 311/312 Hazards:** Acute Health Hazard
  - CERCLA Reportable Quantity:** Not listed
  - California Proposition 65:** Not listed.

## 16. Other Information:

- **Notice to reader:** To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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### 2. Hazards Identification:

- Classification: Regulation (EC) No 1272/2008 [EU-GHS/CLP]: 3,3'-Diaminobenzidine (DAB) Chromogen

Carcinogenicity, 1B  
Germ Cell Mutagenicity, 2



Signal Word: DANGER

- Hazard Statements:** H341: Suspected of causing genetic defects. H350: May cause cancer.
- Precautionary Statements:** P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P280: Wear protective gloves/protective clothing/eye protection/face protection.
- Response:** P308 + P313 IF exposed or concerned: Get medical advice/attention.
- Classification according to EU Directives 67/548/EEC or 1999/45/EC:** T: Toxic, Xi: Irritant.
- R-phrases:** R45: May cause cancer. R68: Possible risk of irreversible effects. R36-Irritating to eyes, R37-Irritating to respiratory system, R38-Irritating to skin.
- S-phrases:** S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S53: Avoid exposure – obtain special instructions before use. S26, In case of contact with eyes, rinse immediately with plenty of water and see medical advice.
- Special Hazards:** none.

### 3. Information on Ingredients:

- Description: 3,3'-Diaminobenzidine (DAB) Chromogen

Contains	CAS No.	EC-No.	Index-No.	Content
3,3' Diaminobenzidine	91-95-2	202-110-6	612-239-00-3	<5%

### 4. First Aid Measures:

- After inhalation:** Move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
- After skin contact:** Wash off with soap and plenty of water. Take victim immediately to a hospital. Consult a physician.
- After eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this MSDS.
- After swallowing:** Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a physician. Show this MSDS.
- Most important symptoms and effects, both acute and delayed:** Unknown
- Indication of any immediate medical attention and special treatment needed:** No data available

### 5. Fire Fighting Measures:

- Suitable extinguishing agents:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Special hazards arising from the substance or mixture:** Carbon oxides, nitrogen oxides.
- Protective equipment:** Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
- Further information:** no data available

### 6. Accidental Release Measures:

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- **Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation, Avoid breathing vapors, mist, dust or gas. Evacuate personnel to safe areas.
- **Environmental precautions:** Do not let product enter drains.
- **Methods and materials for containment and cleaning up:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Absorb spill with inert material, then place in a suitable container. Contain spillage, and then collect for disposal according to local regulations.

### 7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with eyes and skin. Avoid formation of dust or aerosols. Obtain special instructions before use. Provide adequate exhaust ventilation at places where dust is formed.
- **Conditions for safe storage, including incompatibilities:** Keep container tightly closed and store in a well-ventilated place. Store locked up. Light sensitive.

### 8. Exposure Controls and Personal Protection:

- **Control parameters:** Contains no substances with known exposure limits.
- **Appropriate engineering controls:** Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling product.
- **Personal Protective Equipment:**
  - Eye and Face Protection:** Safety goggles. Face shield.
  - Skin Protection:** Handle with gloves. Gloves must be inspected prior to use. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
  - Body Protection:** Impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place.
  - Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use full-face respirator.

### 9. Physical and Chemical Properties:

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|--|--|
| <ul style="list-style-type: none"> <li>▪ <b>Appearance:</b> Liquid</li> <li>▪ <b>Odor:</b> Not available</li> <li>▪ <b>Odor threshold:</b> Not available</li> <li>▪ <b>pH:</b> Not available</li> <li>▪ <b>Melting point/freezing point:</b> Not available</li> <li>▪ <b>Partition coefficient: noctanol/water:</b> Not available</li> <li>▪ <b>Flash point:</b> Not available</li> <li>▪ <b>Water solubility:</b> Not available</li> <li>▪ <b>Evaporation rate:</b> Not available</li> <li>▪ <b>Flammability (solid, gas):</b> Not available</li> </ul> | <ul style="list-style-type: none"> <li>▪ <b>Upper/lower flammability or explosive limits:</b> Not available</li> <li>▪ <b>Vapor density :</b> Not available</li> <li>▪ <b>Vapor pressure:</b> Not available</li> <li>▪ <b>Relative density:</b> Not available</li> <li>▪ <b>Boiling point/Boiling range:</b> Not available</li> <li>▪ <b>Auto igniting:</b> Not available</li> <li>▪ <b>Decomposition temperature:</b> Not available</li> <li>▪ <b>Viscosity:</b> Not available</li> </ul> |
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### 10. Stability and Reactivity:

- **Reactivity:** No data available
- **Chemical Stability:** No data available
- **Possibility of hazardous reactions:** No data available
- **Conditions to avoid:** Light
- **Incompatible materials:** Strong oxidizing agents.
- **Hazardous decomposition products:** No data available

### 11. Toxicological Information:

- **Acute toxicity:** Rat oral – LD50 = 3,000 mg/kg; mouse oral – LD50 = 1834 mg/kg

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- **Skin corrosion/irritation:** Can cause burns of the skin and mucous membranes.
- **Serious eye damage/irritation:** Can cause burns, reduced vision or blindness.
- **Respiratory or skin sensitization:** no data available
- **Germ cell mutagenicity:** Mutagenic effects.
- **Carcinogenicity:** Rat – oral: tumorigenic, skin and appendages.
- **Reproductive toxicity:** no data available.
- **Specific target organ toxicity (STOT) -single exposure:** no data available
- **Specific target organ toxicity (STOT) -repeated exposure:** no data available.
- **Aspiration hazard:** Can cause severe burns. Causes respiratory tract irritation.
- **Information on likely routes of exposure:** Routes of entry anticipated; oral, dermal, inhalation.
- **Symptoms related to the physical, chemical and toxicological characteristics:**
  - Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.
  - Ingestion:** May be harmful if swallowed.
  - Skin contact:** May be harmful if absorbed through skin. May cause skin irritation.
  - Eye contact:** May cause eye irritation.
- **Delayed and immediate effects and also chronic effects from short and long term exposure:** no data available.
- **Effects of chronic exposure:** no data available
- **Numerical measures of toxicity:** no data available
- **Other Information:** RTECS: DV8750000

### 12. Ecological Information:

- **Ecotoxicity:** no data available.
- **Biodegradability:** no data available
- **Bioaccumulative potential:** no data available.
- **Mobility in soil:** no data available.
- **Other adverse effects:** no data available

### 13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilt material to soil, waterways, drains and sewers.

### 14. Transport Information:

- **UN Number:** None
- **DOT regulations:** -Hazard class: None
- **Land transport ADR/RID (cross-border):** Not regulated.
- **Maritime transport IMDG:** Not regulated.
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:** Not regulated.
- **Transport/Additional information:** Not dangerous according to the above specifications.

### 15. Regulations:

- **US Federal and State Regulations**
  - TSCA (Toxic Substances Control Act):** 3,3' Diaminobenzidine and Hydrochloric acid are listed.
  - SARA 313:** 3,3' Diaminobenzidine is not listed. Hydrochloric acid (acid aerosol) is listed.
  - SARA 311/312 Hazards:** 3,3' Diaminobenzidine: Chronic health hazard. Hydrochloric acid: Acute Health Hazard.

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**CERCLA Reportable Quantity:** 3,3' Diaminobenzidine is not listed. Hydrochloric acid: 5,000 lbs.

**California Proposition 65:** 3,3' Diaminobenzidine and Hydrochloric acid are not listed on California's listing of known or potential carcinogens.

### 16. Other Information:

- **R-phrases:** R45: May cause cancer. R68: Possible risk of irreversible effects. R36-Irritating to eyes, R37-Irritating to respiratory system, R38-Irritating to skin.
- **S-phrases:** S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible). S53: Avoid exposure – obtain special instructions before use. S26, In case of contact with eyes, rinse immediately with plenty of water and see medical advice.
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