

**SAFETY DATA SHEET (SDS)****IDENTIFICATION OF PRODUCT (MIXTURE) AND SUPPLIER (1):**

<b>Product Name:</b>	<b>Pathfinder® Herpes Simplex Virus Control Slides</b>
<b>Product Number:</b>	<b>30493</b> (1 slide)
<b>Intended Use:</b>	These are separately purchased kit components, identical to those found in the kits, which are to be used exclusively with the Bio-Rad Laboratories <b>Pathfinder® Herpes Simplex Virus Types 1 and 2</b> kit (Catalog# 25215) Refer to the <i>Instructions For Use, Package Insert</i> for additional product information.
<b>Manufactured by:</b>	<b>Bio-Rad Laboratories, Inc.</b>
<b>Address:</b>	6565 185th Avenue NE Redmond, WA 98052-5039, USA
<b>Website:</b>	<a href="http://www.bio-rad.com">www.bio-rad.com</a>
<b>Phone Number:</b>	1-800-2-BIORAD (1-800-224-6723); or 1-425-881-8300 (daytime PT)
<b>SDS e-mail contact:</b>	<a href="mailto:ro-sds@bio-rad.com">ro-sds@bio-rad.com</a>
<b>Technical Information Contacts:</b>	Bio-Rad provides a toll free line for technical assistance, available 24 hours a day, 7 days a week. In the United States of America and Puerto Rico, call toll free 1-800-2-BIORAD (1-800-224-6723). Outside the U.S.A., please contact your regional Bio-Rad office for assistance. <i>Refer to section 16 for non-US local Bio-Rad agent contact information.</i>
<b>Authorized Representative in the European Community:</b>	<b>FRANCE: Bio-Rad Laboratories</b> 3 boulevard Raymond Poincaré 92430 Marnes-la-Coquette Phone: +33 (0) 1 47 95 60 00 / Fax: +33 (0) 1 47 41 91 33 <a href="mailto:fds-msds.fr@bio-rad.com">[fds-msds.fr@bio-rad.com]</a>
<b>Emergency Phone Number:</b>	<b>This SDS is listed with CHEMTREC 1-800-424-9300 / 1-703-527-3887.</b> Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT with this product. <i>Refer to section 16 for non-US local Bio-Rad agent contact information.</i>

**HAZARDS IDENTIFICATION -- HAZARDOUS COMPONENTS (2):**

This product should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Specific warnings are given in the instructions for use. The absence of a specific warning should not be interpreted as an indication of safety. Refer to Section 16 for the full text of any *Risk (R)* and *Safety (S)* statement provided below


Component	Content
<b>Pathfinder® HSV Control Slides, 1 slide</b> <i>(Additional Required Items, available from Bio-Rad)</i>	- Each slide has 1 well each of <b>HSV-1</b> (American Tissue Culture Collection (ATCC) strain F(1)) and <b>HSV-2</b> (ATCC strain MS) <b>infected Vero</b> cells and 2 wells of <b>uninfected Vero cells</b> . The fixation process used in the production of these slides has been shown to inactivate HSV. - CAUTION: Handle the slides by the edges. Do not apply pressure to the surface of the foil bag.

**Markings according to the United Nations (UN) Globally Harmonized System (GHS), United States Hazard Communication Standard (HCS) and European Community (EC) 2008/1272/EC guidelines:** This product is not subject to labeling classification or identification according to GHS guidelines, United States Hazard Communication Standard (HCS) and EU 2008/1272/EC Regulations or other sources of literature known to us.

## COMPOSITION / INFORMATION ON INGREDIENTS -- HAZARDOUS COMPONENTS (3):

The following information is furnished for those product hazardous constituents that require regulatory control or disclosure at the concentration found in the product. Note that the information here is often based on data from the chemical raw material (LD<sub>50</sub>, exposure limits, etc.) and that the product contains a significantly diluted concentration in an aqueous solution; thus, the assessment below has taken hazard reduction processing into consideration when possible. The GHS and EU classifications were made according to the latest editions and expanded upon from company and literature data.

**Chemical Ingredient:** This product contains no chemical constituents that require regulatory control or disclosure at the concentration found in the product.

Biological Ingredient	Data / Information
<b>HSV Infected and Uninfected [Primate] Cell Line</b> [Slide component] 	HSV-1 (American Tissue Culture Collection [ATCC] strain F[1]) and HSV-2 [ATCC strain MS] infected and uninfected Vero cells (primate origin) have been solvent fixed and are not considered infectious or carcinogenic. Handle as if capable of transmitting infectious disease, in a Biosafety Level 2 lab, applying the guidelines from the current CDC/NIH <i>Biosafety in Microbiological and Biomedical Laboratories or WHO Laboratory Biosafety Manual</i> . Employ decontamination procedures with appropriate decon agent or disinfectant before discarding any materials utilized or returning equipment used to general use. Dispose of this material in accordance with local, regional, national and international regulations. Handle appropriately with the requisite Good Laboratory Practices, <i>Standard and Universal Precautions</i> .
<b>Animal proteins</b>	This material is of animal origin (murine and bovine) and may be a potential contact irritant. Hazard Unknown. Handle as potentially infectious. The chemical, physical and toxicological properties have not been thoroughly investigated. Handle appropriately with the requisite Good Laboratory Practices, <i>Standard and Universal Precautions</i> . Dispose of this material in accordance with local, regional, national and international regulations.
<b>Slides -- replacement, optional and/or separately purchased kit component</b>	These slides consist of 96-100% inert glass with a ~0-4% inert polymer coating and have been biologically and chemically processed. Because these slides are made of glass, they could potentially pose a slight physical cutting hazard, especially if broken or chipped, so handle carefully. Wear suitable gloves and/or other appropriate personal protective equipment and follow Good Laboratory Practices. Do not handle broken slides with unprotected hands. Broken slides contaminated with blood or other human source or potentially infectious material must be handled as <i>Sharps</i> per 29 CFR 1910.1030, OSHA Bloodborne Pathogen and other regulations; however, dispose of this material in accordance with local, regional, national and international regulations.
Note:	This replacement, optional and/or separately purchased component should be used only as intended with the <b>Pathfinder<sup>®</sup> Herpes Simplex Virus Types 1 and 2 DFA Kit</b> (Catalog# 25215), which must be handled by qualified personnel trained in laboratory procedures; lab workers should be aptly familiarized with their potential hazards as used in the assay. Refer to the Bio-Rad Laboratories <b>Pathfinder<sup>®</sup> Herpes Simplex Virus Types 1 and 2 DFA Kit SDS (#SDSen25215)</b> and kit instructions for safe handling of this kit replacement, optional and/or separately purchased material in the assay process.

### Related product information:

- Refer to section 2 for the full text of any *GHS* /2008/1272/EC statement coded above. Refer to section 16 for the full text of any *Risk (R)* and *Safety (S)* statement for the above kit component concentration.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection. Take off contaminated clothing and wash before reuse.

## EMERGENCY FIRST AID MEASURES (4):

Health Effects:	Because these slides are made of glass, they could potentially pose a slight physical cutting hazard, especially if broken or chipped.
Eye Contact:	Flush eyes with copious water for at least 15 minutes. OBTAIN MEDICAL ATTENTION.
Skin Contact:	Flush skin with copious water and wash affected area with soap and water. If blood-to-blood contact occurs or if more severe symptoms develop, consult a physician.
Inhalation:	No significant health effect is known.

If Swallowed:	OBTAIN MEDICAL ATTENTION. Call a physician or the local poison control center. Treat symptomatically and supportively. If vomiting occurs, keep head lower than hips to prevent aspiration.
Notes to Physician:	According to the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030), Universal Precautions apply. Persons handling human blood source samples should be offered hepatitis B vaccination prior to working with human source material.

**FIREFIGHTING MEASURES (5):**

Extinguishing Media:	Use extinguishing media appropriate for the surrounding fire.
Hazardous Combustion Products:	Oxides of carbon or nitrogen may form when heated to decomposition.
Special Firefighting Procedures:	Conventional firefighting full protective equipment (with NIOSH-approved self-contained breathing apparatus) and procedures appropriate for the surrounding fire should be sufficient.

**ACCIDENTAL RELEASE MEASURES (6):**

- ◆ Avoid direct contact with skin, eyes, mucous membranes and clothing by wearing appropriate lab personal protective equipment (PPE) including gloves, lab coat and eye/face protection.
- ◆ In the event of a hazardous material spill, contain the spill if it is safe to do so, and immediately move to a safe area, free from potential aerosols, to decontaminate and/or safely remove any contaminated clothing, as necessary. IF ON SKIN (or hair): Rinse skin with water. Isolate the hazard area and ventilate if appropriate. Ensure that appropriate spill cleanup materials and PPE are available and used.
- ◆ Follow established laboratory policy and applicable CDC/NIH biosafety and/or OSHA/WISHA hazardous material spill and/or NFPA/Fire Code guidelines for appropriate hazardous chemical and/or biological material spill response and cleanup. Avoid release to the environment.
- ◆ Wear appropriate PPE. Clean the spill area with water and wipe dry. Material used to absorb the spill may require hazardous material waste disposal. Infectious, chemical and laboratory wastes must be handled and discarded in accordance with all local, regional, national and international regulations.
- ◆ Broken slides contaminated with blood or other human source or potentially infectious material must be handled as *Sharps* per 29 CFR 1910.1030, OSHA Bloodborne Pathogen and other regulations; however, dispose of this material in accordance with local, regional, national and international regulations.
- ◆ Refer to Sections 8 and 13 for more specifics.

**HANDLING AND STORAGE INFORMATION (7):**

Handling:	This test kit should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards. Follow proper Good Laboratory Practices and safety guidelines for handling chemical, biological and laboratory hazards. Do not smoke, eat, or drink in areas where patient samples and kit reagents are handled. Wash your hands after use. Wear appropriate personal protective equipment (PPE) including gloves, lab coat or equivalent and eye/face protection. Keep containers tightly closed; avoid splashing, spills and the generation of aerosols. Handle all human source specimens, materials and equipment used to perform the operations as though they were capable of transmitting infectious disease, as per <i>Standard</i> and <i>Universal Precautions</i> . All personal protective equipment should be removed before leaving the work area. Refer to Section 8 for more specifics. Avoid release to the environment. Do not allow undiluted product hazardous chemical ingredient or large quantities of it to reach ground water or water course Consult with your Environmental Health & Safety Office for assistance.
Storage:	Store the kit components as specified on the product label and/or in the product instructions provided with the test kit.

Caution, consult accompanying documents. Read and follow all the precautions and warnings in the kit product instructions.

These are separately purchased components, identical to those found in the kits, which are to be used exclusively with the Bio-Rad Laboratories kits listed in Section 1.

**EXPOSURE CONTROL / PERSONAL PROTECTION MEASURES (8):**

**Control Parameters: Component chemicals with limit values that require monitoring at the workplace:** The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

*Additional information:* The lists that were valid during the creation were used as basis.

The following personal protective equipment (PPE) is recommended to prevent blood or other potentially infectious or hazardous materials from reaching the user's work or street clothes, skin, mouth, mucous membranes and eyes, and to prevent hazard inhalation, under normal conditions of use and for the time during which the protective equipment is utilized:

- Ventilation: Adequate lab ventilation is required. It is recommended that users handle potentially infectious human source material or patient samples in a biological safety cabinet (BSC), expressly if aerosols might be generated.
- Eye / Face Protection: Wear ANSI approved safety glasses, goggles or face shield with safety glasses or goggles. Contact lenses should not be worn when handling lab hazards.
- Protective Gloves: Suitable gloves must be worn at all times when handling kit reagents or patient samples to provide skin protection from splash and intermittent contact. Synthetic gloves such as nitrile, neoprene and vinyl are recommended because they are sturdy, effective and contain no natural latex ingredients associated with latex glove allergic reactions. Disposable (single use) gloves should be changed often and never reused. Wash hands thoroughly after removing gloves.
- Protective Clothing: Wear a lab coat, clinic jacket, gown, apron and/or smock. Disposable clothing is strongly recommended when handling biohazardous material. If reusable clothing is used, procedures for handling potentially infectious laundry under the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) are required.
- Respiratory Protection: Not required.
- Other: All personal protective equipment should be removed before leaving the work area and placed in an appropriately designated area or container for storage, processing, decontamination or disposal.
- Note: Occupational exposure limit values and health hazard data were given in section 3. Environmental Controls are included in the following sections.

**PHYSICAL AND CHEMICAL PROPERTIES (9):**

<b>Appearance:</b>	Solid Glass Slides.		
<b>Odour:</b>	Data is not available.	<b>Odour threshold:</b>	Not established.
<b>pH:</b>	Not applicable.		
<b>Boiling point:</b>	Not established.	<b>Melting point:</b>	Not established.
<b>Flash point:</b>	Not applicable. Flammable limits: LEL/LFL is <u>Not applicable</u> ; UEL/UFL is <u>Not applicable</u> .		
<b>Evaporation rate:</b>	Data is not available.		
<b>Flammability (solid, gas):</b>	Although the components have not been tested for fire hazard and explosion data, they are not expected to be fire hazards, but some of the kit packaging materials may burn under fire conditions.		
<b>Vapor pressure:</b>	Data is not available.		
<b>Vapor density:</b>	Data is not available.		
<b>Relative density:</b>	Not applicable.		
<b>Solubility:</b>	Not miscible.		
<b>Partition coefficient (n-octanol/water):</b>	Data is not available.		

<b>Auto igniting:</b>	Product is not known to be self-igniting.
<b>Decomposition temperature:</b>	Data is not available.
<b>Viscosity:</b>	Data is not available.
<b>Danger of explosion:</b>	Product is not known to present an explosion hazard.
No Other Standard Characteristics applicable to the identification or hazards of the product are known.	

## STABILITY AND REACTIVITY INFORMATION (10):

*NOTE:* Chemical reactions that could result in a hazardous situation (e.g. generation of flammable or toxic chemicals, fire or detonation) are listed here. Although not intended to be complete, an overview of important reactions involving common chemicals is provided to assist in the development of safe work practices.

Chemical Stability / Reactivity:	Stable under ordinary conditions of use and storage.
Conditions and Materials to Avoid:	None known when used as intended.
Hazardous Decomposition Products:	Oxides of carbon or nitrogen may form when heated to decomposition.
Hazardous Polymerization:	Has not been reported to occur.

## TOXICOLOGICAL INFORMATION -- GENERAL COMPOSITE (11):

Refer to Sections 2 and 3 for the kit component concentrations. The composite toxicological information for this product is:

### Acute Health Effects

Toxicity:	No significant toxic effect known.
Primary Irritant Effect:	No significant irritant effect known.
Serious Eye Damage / Irritation:	No significant irritant effect known.
STOT-Single Exposure:	Data is not available.
STOT-Repeated Exposure:	Data is not available.
Aspiration Hazard:	Data is not available.
Other Acute Health Effects:	Because these slides are made of glass, they could potentially pose a slight physical cutting hazard, especially if broken or chipped, so handle carefully, wear suitable gloves and/or other appropriate personal protective equipment and follow Good Laboratory Practices. Do not handle broken slides with unprotected hands.

### Biohazard Potential:

**HSV-1** (American Tissue Culture Collection (ATCC) strain F(1)) and **HSV-2** (ATCC strain MS) infected and uninfected **Vero** cells (primate origin) have been solvent fixed and are not considered infectious or carcinogenic. Patient blood samples tested with this kit represent an unknown, heightened hazard. Employ *Standard* and *Universal* Precautions; handle these reagents, all human blood and specimens as if capable of transmitting infectious disease, in a Biosafety Level 2 laboratory, applying the guidelines from the current CDC/NIH *Biosafety in Microbiological and Biomedical Laboratories*, WHO *Laboratory Biosafety Manual* or equivalent. Persons handling blood samples should have the option of receiving hepatitis B vaccination.

### Chronic Toxicity

Sensitization:	No sensitization effect known.
Carcinogenicity:	No carcinogenic effect known. No component, mixture or constituent has been classified as a carcinogen by NTP, IARC or OSHA OSHA (Occupational Health and Safety Administration, U.S. Department of Labor).
Germ Cell Mutagenicity:	Data is not available.
Reproductive hazard:	No reproductive toxic effect known.



## Pathfinder<sup>®</sup> Herpes Simplex Virus Control Slides

[Catalog 30493]

### ECOLOGICAL INFORMATION (12):

This product was not tested. The following assessment is based on information for the ingredients.

Toxicity:	No information found.
Persistence and degradability:	No information found.
Bioaccumulation potential:	No information found.
Mobility in soil:	No information found.
PBT and vPvB assessment:	No information found.
Other adverse affects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Avoid release to the environment.

### DISPOSAL CONSIDERATIONS (13):

Disposal of hazardous and/or laboratory wastes, product or packaging must be conducted in accordance with all applicable local, regional, national and international regulations. This section specifies the general and United States RCRA requirements. Processing, use or contamination of the kit components may change waste management requirements and options. Contact your Environmental Health & Safety Office for your specific disposal procedures.

#### Recommended Product Disposal:

- **Broken slides** contaminated with blood or other human source or potentially infectious material must be handled as *Sharps* per 29 CFR 1910.1030, OSHA Bloodborne Pathogen and other regulations; however, dispose of this material in accordance with local, regional, national and international regulations.
- **All human source** and other potentially infectious material must be appropriately decontaminated or disposed of as infectious material; check your international, national, regional and local ordinances accordingly.

Do not allow undiluted product or large quantities of it to reach ground water or water course

**Recommended Unclean Packaging Disposal:** Dispose in accordance with all applicable local, regional, national and international regulations.

### TRANSPORT INFORMATION (14):

Shipping of product, packaging and waste must be conducted in accordance with all applicable local, regional, national and international regulations. Processing, use or contamination of the kit components may change shipping requirements and options. Contact your Environmental Health & Safety Office for your specific shipping procedures.

**Recommended Unused Product Multi-Modal Transportation:** According to US DOT, IATA and UN "Model Regulations", the product must be transported as follows: No known transport restrictions.

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

### REGULATORY INFORMATION (15):

**Composite HMIS Rating:** Health: 0 Flammability: 0 Reactivity: 0

**California Proposition 65:** The product does not contain listed substances.

**Carcinogenicity Categories:** No component, mixture or constituent has been classified as a carcinogen by NTP (National Toxicity Program), IARC (International Agency for Research on Cancer), TLV-CAR (Threshold Limit Value established by ACGIH) or OSHA (Occupational Health and Safety Administration, U.S. Department of Labor).

## National Regulations:

**WHMIS Classification:** This SDS contains the required information in accordance with the **Workplace Hazardous Materials Information System (WHMIS) Canadian Standard** for the hazard classification criteria for this product.

**Mexican Standard:** This SDS contains the required information for preparation in accordance with the **Mexican Standard (NMX-R-019-SCFI-2011) SISTEMA ARMONIZADO DE CLASIFICACIÓN Y COMUNICACIÓN DE PELIGROS DE LOS PRODUCTOS QUÍMICOS GLOBALLY HARMONIZED SYSTEM (GHS)**.

**Australian Code:** This SDS contains the required information for preparation according to the *Australian Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals* under Section 274 of the *Work Health and Safety Act*.  
*Australian Inventory of Chemical Substances:* All pertinent ingredients are listed.

**Markings according to European Community 1999/45/EC, 2001/59/EC, 2001/60/EC, 2006/102/EC guidelines:** This product is not subject to EU labeling classification or identification according to EU Directives 1999/45/EC, 2001/59/EC, 2001/60/EC, 2006/102/EC and other sources of literature known to us.

<b>OTHER INFORMATION (16):</b>
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**Risk Phrases:** *None*

**Safety Phrases:** *None*

This product should be handled only by qualified personnel trained in laboratory procedures and familiar with their potential hazards.

Specific warnings are given in the instructions for use. The absence of a specific warning should not be interpreted as an indication of safety.

These are separately purchased kit components, identical to those found in the kits, which are to be used exclusively with the Bio-Rad Laboratories kits listed in Section I.

Sources of key data used to compile the Safety Data Sheet:

- Raw Material Vendor Safety Data Sheets
- United Nations (UN) Globally Harmonized System (GHS)
- United States OSHA Hazard Communication Standard (HCS)1910.1200
- Canadian Workplace Hazardous Materials Information System (WHMIS)
- European Community (EC) Regulations 2008/1272/EC, 2010/453/EC, 2006/1907/EC
- Mexican Standard NMX-R-019-SCFI-2011
- Australian Code of Practice on Preparation of Safety Data Sheets for Hazardous Chemicals (Section 274 of the Work Health and Safety Act)
- EU Directives 1999/45/EC, 2001/59/EC, 2001/60/EC, 2006/102/EC
- Registry of Toxic Effects of Chemical Substances (RTECS)
- International Agency for Research on Cancer (IARC)
- Threshold Limit Value established by American Conference of Governmental Industrial Hygienists (ACGIH)
- National Toxicity Program (NTP)
- Occupational Safety and Health Administration, U.S. Department of Labor (OSHA)
- National Institute for Occupational Safety and Health (NIOSH)
- World Health Organization. *Laboratory Biosafety Manual*
- CDC/NIH *Biosafety in Microbiological and Biomedical Laboratories*
- Australian Inventory of Chemical Substances (ACIS) [7-27-2012]*
- California Proposition 65

**Chemical safety assessment:** Mixtures covered in this SDS were classified using the EU Regulation 1272/2008/EC and/or UN Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Fourth edition unless otherwise specified.

Key / legend to abbreviations and acronyms used in the safety data sheet:

- ACGIH – American Conference of Governmental Industrial Hygienists
- ACIS – Australian Inventory of Chemical Substances
- ANSI – American National Standards Institute
- CAS – Chemical Abstracts Service
- CDC – Centers for Disease Control, USA
- CNS – Central Nervous System

DOT – Department of Transportation  
EC<sub>50</sub> – half maximal effective concentration  
EU – European Union  
GHS – Globally Harmonized System  
HCS – Hazard Communication Standard, USA  
IATA – International Air Transport Association  
IARC – International Agency for Research on Cancer  
ICAO – International Civil Aviation Organization  
IDLH – Immediately Dangerous to Life or Health  
IMDG – International Maritime Dangerous Goods  
IPCS – International Programme on Chemical Safety  
LC<sub>50</sub> – median lethal concentration, 50%  
LD<sub>50</sub> – median lethal dose, 50%  
NIOSH – National Institute for Occupational Safety and Health  
NTP – National Toxicity Program  
OEL – Occupational Exposure Limit  
PEL – Permissible Exposure Limit  
ppm – parts per million  
RTECS # – Registry of Toxic Effects of Chemical Substances number  
SDS – Safety Data Sheet  
STEL – Short Term Exposure Limit  
TLV/TWA – Threshold Limit Value / Time-Weighted Average  
UN – United Nations  
US EPA – United States Environmental Protection Agency  
US OSHA – Occupational Safety and Health Administration, U.S. Department of Labor  
WHMIS – Workplace Hazardous Materials Information System (Canadian)  
WHO – World Health Organization (United Nations)

*Additional information:* The lists that were valid during the creation were used as basis.

**This revision:** Updated, reformatted and added new GHS information.

#### **Bio-Rad Laboratories:**

**Department issuing SDS:** Environmental Health and Safety

**Contact for general SDS information:** Redmond Operations, Environmental Health & Safety, 6565 185th Ave. NE, Redmond, WA 98052, USA, Phone: 425-881-8300 (8 am to 5 pm PT), [ro-sds@bio-rad.com](mailto:ro-sds@bio-rad.com)

**Customer support contact:** Clinical Diagnostics Group, 4000 Alfred Nobel Drive, Hercules, CA 94547, USA  
Phone: 1-800-224-6723, [www.bio-rad.com/diagnostics](http://www.bio-rad.com/diagnostics)

#### **Contact Local Bio-Rad Agents for general information:**

**Australia**, Bio-Rad Laboratories Pty. Ltd., Level 5, 446 Victoria Road, Gladesville NSW 2111 • Phone 61-2-9914-2800 • Telefax 61-2-9914-2888  
**Austria**, Bio-Rad Laboratories Ges.m.b.H., Hummelgasse 88/3-6, A-1130 Vienna • Phone 43-1-877-8901 • Telefax 43-1-876-5629  
**Belgium**, Bio-Rad S.A.-N.V. Begoniastraat 5, B-9810 Nazareth Eke • Phone 3293855511 • Telefax 3293856554  
**Brazil**, Bio-Rad do Brasil, Praia de Botafogo, 440-3rd Floor, Botafogo, RJ CEP 22250-040, Rio de Janeiro • Phone 5521-3237-9400 • Telefax 55 21 2527-3099  
**Canada**, Bio-Rad Laboratories, Ltd., 2403 Guénette Street, Montréal, Québec H4R 2E9 • Phone 1-514-334-4372 or 1-800-361-1808 • Telefax 1-514-334-4415  
**China**, Bio-Rad Laboratories Shanghai Ltd. 3rd Floor, #18 Dong Fang Road, Bldg E, Poly Plaza, Pudong, Shanghai PRC • Phone 86-21-64260808 • Telefax 86-21-64264988  
**Czech Republic**, Bio-Rad spol. s r.o., Nad ostrovem 1119/7, 147 00 Prague 4 • Phone 420-241-430-532 • Telefax 420-241-431-642  
**Denmark**, Bio-Rad Laboratories, Symbion Science Park, Fruebjergvej 3, DK-2100 Copenhagen East • Phone +45 44 52-10 00 • Telefax +45 44 52-10 01  
**Finland**, Bio-Rad Laboratories, Linnanherrankuja 16, FIN-00950 Helsinki • Phone 358-9-804-22-00 • Telefax 3589-7597 5010  
**France**, Bio-Rad Laboratories, 3 boulevard Raymond Poincaré, 92430 Marnes-la-Coquette • Phone +33 (0)1 47 95 60 00 • Telefax +33 (0)1 47 41 91 33  
**Germany**, Bio-Rad Laboratories GmbH, Heidemannstrasse 164, D-80939 Munich • Phone +49-(0)89-318840 • Telefax +49-(0)89-31884100  
**Greece**, Bio-Rad Laboratories M.E.P.E., 2-4 Mesogeion Street, Fourth Floor 115 27 Athens • Phone 30-210-7774396 • Telefax 30-210-7774376  
**Hong Kong**, Bio-Rad Pacific Ltd., Unit 1101, 11/F DCH Commercial Centre, 25 Westlands Road, Quarry Bay • Phone 852-2789-3300 • Telefax 852 2789-1290  
**Hungary**, Bio-Rad Hungary Ltd., Futó Street 47-53, H-1082 Budapest, Hungary • Phone + 36-1-459-6100 • Telefax + 36-1-459-6101  
**India**, Bio-Rad Laboratories (India) Pvt. Ltd., Bio-Rad House, 86-87, Udyog Vihar, Phase - IV, Gurgaon, Haryana 122 015 • Phone 91-124-4029300 • Telefax 91-124-2398115  
**Israel**, Bio-Rad Laboratories Ltd., 14 Homa Street, New Industrial Area, Rishon Le Zion 75655 • Phone 972-3-9636050 • Telefax 972-3-9514129  
**Italy**, Bio-Rad Laboratories S.r.l., Via Cellini 18/A, 20090 Segrate, Milan • Phone +39-02-216091 • Telefax +39-02-21609-398  
**Japan**, Bio-Rad Laboratories K.K., Tennoz Central Tower 20F, 2-2-24 Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-0002 • Phone 81-3-6361-7070 • Telefax 81-3-5463-8483  
**Korea**, Bio-Rad Korea Ltd., 10th Floor, Hyunjuk Building, 832-41, Gangnam-gu, Seoul 135-080 • Phone 82-2-3473-4460 • Telefax 82-2-3472-7003



**Mexico**, Bio-Rad, S.A., Avenida Eugenia 197, Piso 10-A, Col. Narvarte, Delegacion Benito Juarez, C.P. 03020 Mexico, D.F. • Phone +52 (55) 5488-7670 • Telefax +52 (55) 1107-7246

**The Netherlands**, Bio-Rad Laboratories B.V., Fokkerstraat 2-8, 3905 KV Veenendaal • Phone +31-318-540666 • Telefax +31-318542216

**New Zealand**, Bio-Rad New Zealand, 189 Bush Road Unit B, Albany, Auckland • Phone 6494152280 • Telefax 6494152284

**Norway**, Bio-Rad Laboratories, Johan Scharffenbergs vei 91, N-0694 Oslo • Phone 4723384130 • Telefax 4723384139

**Poland**, Bio-Rad Polska Sp. z o.o., Nakielska Str. 3, 01-106 Warsaw • Phone 48-22-3319999 • Telefax 48-22-3319988

**Portugal**, Bio-Rad Laboratories, Lda., Edifício Prime, Av. Quinta Grande, 53 – Fracção 3B Alfragide 26114-521 Amadora • Phone 351-21-472-7700 • Telefax 351-21-472-7777

**Russia**, Bio-Rad Laboratorii, Business Centre “West Bridge”, Leningradsky pr-t H.37A Bld. 14, 125167 Moscow • Phone 7-495-72114 04 • Telefax 7-495-721-14-12

**Singapore**, Bio-Rad Laboratories (Singapore) Pte. Ltd., 27 International Business Park, #01-02 iQuest @IBP, Singapore 609924 • Phone 65-6415-3170 • Telefax 656415-3189

**South Africa**, Bio-Rad Laboratories (Pty) Ltd., 34 Bolton Road, Parkwood, Johannesburg 2193 • Phone 27-11-442-85-08 • Telefax 27-11-442-85-25

**Spain**, Bio-Rad Laboratories, S.A., C/ Caléndula, 95, Edificio M. Miniparc II, El Soto de la Moraleja, 28109 Madrid • Phone 34-91-590-5200 • Telefax 34-91-590-5211

**Sweden**, Bio-Rad Laboratories A.B., Vintergatan 1, Box 1097, S-172 22 Sundbyberg • Phone 46-8-555-127-00 • Telefax 46-8-555-127-80

**Switzerland**, Bio-Rad Laboratories AG, Nenzlingerweg 2, CH-4153 Reinach BL • Phone 41-61-717-95-55 • Telefax 41-61-717-95-50

**Thailand**, Bio-Rad Laboratories Ltd., 1st & 2nd Floor, Lumpini I Bldg., 239/2 Rajdamri Rd., Lumpini, Pathumwan, Bangkok 10330 • Phone 662-651-8311 • Telefax 662-651-8312

**United Kingdom**, Bio-Rad Laboratories Ltd., Bio-Rad House, Maxted Road, Hemel Hempstead, Herts HP2 7DX • Phone +44-(0)20-8328-2000 • Telefax +44-(0)20-8328-2550

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