

## ULTRA Cell Conditioning Solution (ULTRA CC1)

**REF** 950-224  
05424569001

**REF** 951-224  
05424569214

**IVD**

### INTENDED USE

ULTRA Cell Conditioning Solution (ULTRA CC1) is a pre diluted solution intended for laboratory use as a pretreatment step in the processing of formalin-fixed, paraffin-embedded tissue samples, and cytological specimens for immunohistochemistry, in situ hybridization, and immunocytochemistry applications on the BenchMark ULTRA and BenchMark ULTRA PLUS instruments.

This product is intended for in vitro diagnostic (IVD) use.

### PRINCIPLE OF THE PROCEDURE

Fixation of tissue by formalin results in the formation of covalent bonds between the aldehyde and amino groups present in the tissue. The formation of these bonds denatures protein and can result in the loss of accessibility of epitopes or target nucleic acids. In addition, the formaldehyde can form methylene bridges cross linking tissue proteins thus reducing the penetration of the tissue to large molecules such as antibodies.

ULTRA CC1 is a Tris-based buffer with a slightly basic pH, which, at elevated temperatures is capable of hydrolyzing the covalent bonds formed by formalin in tissue. Removing these bonds allows renaturation of protein molecules and increases antibody or probe accessibility. Often these changes result in significant gains in antibody or probe binding and improved signal to noise ratios. The BenchMark ULTRA or BenchMark ULTRA PLUS instrument automatically applies ULTRA CC1 from the appropriate position (ULTRA CC1 bottle) of the automated fluidics module on the instrument as required by the procedure being run. The BenchMark ULTRA or BenchMark ULTRA PLUS instrument then automatically heats the slide to the appropriate temperature and time as selected by the user.

ULTRA CC1 is used with primary antibodies or probes on a BenchMark ULTRA or BenchMark ULTRA PLUS instrument for antigen or target retrieval to achieve appropriate immunohistochemistry (IHC), in situ hybridization (ISH), or immunocytochemistry (ICC) staining.

### MATERIAL PROVIDED

One 2 L bottle of ULTRA CC1 contains a Tris-based buffer, and 0.05% ProClin 950 solution, a preservative.

### Reconstitution, Mixing, Dilution, Titration

No reconstitution, mixing, dilution, or titration is required. Further dilution may result in loss of staining specificity.

### MATERIALS REQUIRED BUT NOT PROVIDED

Additional reagents including but not limited to VENTANA primary antibodies, probes, detection kits, and ancillary components, are not provided.

Not all products listed in the method sheet may be available in all geographies. Consult your local support representative.

The following reagents and materials may be required for staining but are not provided:

1. General purpose laboratory equipment
2. BenchMark ULTRA instrument
3. BenchMark ULTRA PLUS instrument

### STORAGE AND STABILITY

Upon receipt and when not in use, store at 15-30°C. Keep out of direct sunlight. Do not freeze or refrigerate as precipitate may form at storage temperatures below those recommended. If precipitate is noted due to cold temperatures, allow the bottle to return to room temperature and shake to dissolve precipitate.

This reagent is expiration dated. When properly stored, the reagent is stable to the date indicated on the label. Do not use reagent beyond the expiration date.

### WARNINGS AND PRECAUTIONS

1. For in vitro diagnostic (IVD) use.
2. For professional use only.
3. ProClin 950 solution is used as a preservative in this solution. It is classified as an irritant and may cause sensitization through skin contact. Take reasonable precautions when handling. Avoid contact of reagents with eyes, skin, and mucous membranes. Use protective clothing and gloves.
4. Materials of human or animal origin should be handled as biohazardous materials and disposed of with proper precautions. In the event of exposure, the health directives of the responsible authorities should be followed.<sup>1,2</sup>
5. Avoid contact of reagents with eyes and mucous membranes. If reagents come in contact with sensitive areas, wash with copious amounts of water.
6. Avoid microbial contamination of reagents, as it may cause incorrect results.
7. For further information on the use of this device, refer to the BenchMark ULTRA or BenchMark ULTRA PLUS instrument User Guide, and instructions for use of all necessary components located at [dialog.roche.com](http://dialog.roche.com).
8. Consult local and/or state authorities with regard to recommended method of disposal.
9. Product safety labeling primarily follows EU GHS guidance. Safety data sheet available for professional user on request.
10. To report suspected serious incidents related to this device, contact the local Roche representative and the competent authority of the Member State or Country in which the user is established.

This product contains components classified as follows in accordance with the Regulation (EC) No. 1272/2008:

Table 1. Hazard information.

Hazard	Code	Statement
	H317	May cause an allergic skin reaction.
	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.
	P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
	P501	Dispose of contents/ container to an approved waste disposal plant.

This product contains CAS # 55965-84-9, a mixture of: 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1).

### INSTRUCTIONS FOR USE

Refer to the appropriate primary antibody, probe, staining kit or detection kit method sheet for the recommended staining protocol and to the instrument User Guide for detailed instructions and additional protocol options.

ULTRA CC1 is poured into the appropriate bulk fluid bottle (ULTRA CC1 bottle) of the automated fluidics module on the BenchMark ULTRA and BenchMark ULTRA PLUS instruments. ULTRA CC1 is applied automatically as required by the protocol being run.

### PERFORMANCE CHARACTERISTICS

#### ANALYTICAL PERFORMANCE

ULTRA CC1 is applied to tissue specimens following the removal of paraffin embedded sections and prior to the application of reagents used in the detection of the target antigen or nucleic acid, in conjunction with the BenchMark ULTRA or BenchMark ULTRA PLUS instrument. Expected results are quantitative only when testing the sensitivity and specificity of each specific antigen or target nucleic acid sequence. As a standalone reagent, this product cannot be tested for specificity or sensitivity.

Multiple VENTANA primary antibodies and probes have been developed with ULTRA CC1 in IHC, ICC and ISH applications. As part of the testing for those assays, the following performance characteristics were demonstrated for ULTRA CC1:

1. Within-run, between-day, and between-instrument precision on the BenchMark ULTRA and BenchMark ULTRA PLUS instruments.
2. Sensitivity and specificity of staining across a range of normal and neoplastic tissue types and assay-specific target tissues.

All studies met their acceptance criteria.

## TROUBLESHOOTING

For corrective action, refer to the instrument User Guide or contact your local support representative.

## REFERENCES

1. Occupational Safety and Health Standards: Occupational exposure to hazardous chemicals in laboratories. (29 CFR Part 1910.1450). Fed. Register.
2. Directive 2000/54/EC of the European Parliament and Council of 18 September 2000 on the protection of workers from risks related to exposure to biological agents at work.

**NOTE:** A point (period/stop) is always used in this document as the decimal separator to mark the border between the integral and the fractional parts of a decimal numeral. Separators for thousands are not used.

## Symbols

Ventana uses the following symbols and signs in addition to those listed in the ISO 15223-1 standard (for USA: see [dialog.roche.com](http://dialog.roche.com) for definition of symbols used):



Global Trade Item Number



Unique Device Identifier



Indicates the entity importing the medical device into the European Union

## REVISION HISTORY

Rev	Updates
G	Added the BenchMark ULTRA PLUS instrument. Added REF and material number for product available in specific geographies.

## INTELLECTUAL PROPERTY

VENTANA, BENCHMARK, and the VENTANA logo are trademarks of Roche. All other trademarks are the property of their respective owners.

© 2022 Ventana Medical Systems, Inc.

## CONTACT INFORMATION



Ventana Medical Systems, Inc.  
1910 E. Innovation Park Drive  
Tucson, Arizona 85755  
USA  
+1 520 887 2155  
+1 800 227 2155 (USA)

[www.roche.com](http://www.roche.com)



Roche Diagnostics GmbH  
Sandhofer Strasse 116  
D-68305 Mannheim  
Germany  
+800 5505 6606

