



Product Sheet

## IRR-MRC-5 [irradiated MRC-5] (ATCC® 55-X™)

Please read this **FIRST**



### Intended Use

This product is intended for research use only. It is not intended for any animal or human therapeutic or diagnostic use.

### Complete Growth Medium

The base medium for this cell line is ATCC-formulated Eagle's Minimum Essential Medium, Catalog No. 30-2003. To make the complete growth medium, add the following components to the base medium: fetal bovine serum to a final concentration of 10%.

### Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: IRR-MRC-5 [irradiated MRC-5] (ATCC® 55-X™)

American Type Culture Collection  
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Or contact your local distributor

### Description

**Organism:** *Homo sapiens*, human  
**Tissue:** lung  
**Cell Type:** fibroblast  
**Age:** 14 weeks gestation  
**Gender:** male  
**Morphology:** fibroblast  
**Growth Properties:** adherent

### Batch-Specific Information

Refer to the Certificate of Analysis for batch-specific test results.

### SAFETY PRECAUTION

ATCC highly recommends that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris.

### Unpacking & Storage Instructions

1. Check all containers for leakage or breakage.
2. Remove the frozen cells from the dry ice packaging and immediately place the cells at a temperature below  $-130^{\circ}\text{C}$ , preferably in liquid nitrogen vapor, until ready for use.

### Handling Procedure for Frozen Cells

To insure the highest level of viability, thaw the vial and initiate the culture as soon as possible upon receipt. If upon arrival, continued storage of the frozen culture is necessary, it should be stored in liquid nitrogen vapor phase and not at  $-70^{\circ}\text{C}$ . Storage at  $-70^{\circ}\text{C}$  will result in loss of viability.

1. Thaw the vial by gentle agitation in a  $37^{\circ}\text{C}$  water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes).
2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions.
3. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete growth medium and spin at approximately  $125 \times g$  for 5 to 7 minutes.
4. Resuspend cell pellet with the recommended complete growth medium (see the specific batch information for the culture recommended dilution ratio). and dispense into a  $25 \text{ cm}^2$  or a  $75 \text{ cm}^2$  culture flask. It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the complete growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).
5. Incubate the culture at  $37^{\circ}\text{C}$  in a suitable incubator. A 5%  $\text{CO}_2$  in air atmosphere is recommended if using the medium described on this product sheet.

### Handling Procedure for Flask Cultures

#### Use of Feeder Cells:

1. Select an appropriate culture vessel for co-cultivation, as feeder layer cells cannot be easily transferred by enzymatic dissociation or scraping.
2. Dilute irradiated cells to a concentration such that the culture will be one-third confluent. Consider the surface area and volume of the culture vessel and the expected plating efficiency of the irradiated cells.
3. Although feeder cells may be added to the cultures at any time, seeding the feeder layer 24 hours before use is recommended. Before adding primary cells, examine the feeder layer cultures to ensure proper confluence.
4. The fibroblastic feeder layer will deteriorate with continued incubation (2-3 weeks). Remove most of this fibroblastic cell layer by selective treatment with a (0.05%) trypsin solution leaving the epithelial test cells still attached to the vessel substrate. Add fresh feeder cells as necessary.



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### Comments

These cells have been growth-arrested by irradiation with 10,000 rads and will begin to deteriorate 2 weeks after plating. We recommend that you do not keep the cells in culture for longer than 2 weeks.

### References

References and other information relating to this product are available online at [www.atcc.org](http://www.atcc.org).

### Biosafety Level: 1

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

### ATCC Warranty

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### Disclaimers

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at [www.atcc.org](http://www.atcc.org)

Additional information on this culture is available on the ATCC web site at [www.atcc.org](http://www.atcc.org).

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