




# Recombinant Trypsin Solutions

An animal components-free cell dissociation solutions, designed as an alternative to porcine trypsin for the dissociation of cells

	Recombinant Trypsin Solution	Recombinant Trypsin-EDTA Solution
<b>REF</b>	03-078-1	03-079-1
	Room Temperature (15-30°C)	

## Instructions for Use

### Product Description

Animal components-free (ACF) recombinant trypsin solutions, developed as an alternative to porcine trypsin. The solutions do not contain any chymotrypsin, carboxypeptidase A, and other protease contaminant.

Recombinant Trypsin Solution formulations were developed for efficient dissociation of adherent cell types from surfaces and tissues and were optimized for sensitive cells, such as primary human mesenchymal stem cells (hMSC). The addition of EDTA usually accelerates the dissociation phase.

Recombinant Trypsin Solutions are pure enzyme solutions, which help maximize the yield of functionally viable cells from culture vessels, while preventing the toxicity effect induced by other non-desirable proteases. In addition, recombinant trypsin eliminates the risk of viruses, or other potential adventitious agents found in animal derived components.

### Source

Recombinant Trypsin raw material is produced by submerged microbial fermentation. Solutions are derived from a production process which does not utilize any raw materials and/or processing aids of animal origin.

### Features

- Ready-to-use
- Non-animal or human origin
- Increased specificity
- Eliminates contaminating activities found in bulk production of enzymes
- Free from undesirable proteases such as carboxypeptidase A and chymotrypsin
- Optimized for hMSC (from a variety of sources), cultured in both serum-free and serum-containing systems

### Precaution and Disclaimer

1. Do not use if a visible precipitate is observed in the solution.
2. Do not use beyond the expiration date indicated on the product label.
3. Caution: not for direct administration into humans or animals.

### Storage and Stability

Stable at room temperature (15-30°C) until the expiry date stated on the label.

## Instructions for use

The following instructions are applicable for most cell lines. Actual procedures and concentrations should be determined by experience with individual cell lines (see notes below).

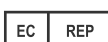
1. Wash the cells with DPBS w/o Ca, Mg (Cat No. 02-023-1).
2. Add 1ml of Recombinant Trypsin Solution to each T-25 tissue culture flask.
3. Incubate the flask at 37°C for 2 min or longer as necessary. Verify cell's detachment using inverted microscope.  
**Note:** The time needed to dislodge cells will vary depending upon cell type, cell density and medium used.
4. When cells are completely detached, add 5-10 ml of culture medium (MSC NutriStem® XF, Cat. No. 05-200-1). Alternatively use diluted (1:50, in DPBS) Soybean Trypsin Inhibitor (SBTI, Cat. No. 03-048-1).
5. Pellet the cells by centrifugation, and discard the supernatant.
6. Resuspend the cells in growth medium, and seed as desired.

## Quality Control

Recombinant Trypsin Solution performance is tested on hMSC. Additional standard evaluations are pH, Osmolality and sterility tests.

## Quality Assurance

- For in vitro diagnostic use, research use or for use as ancillary material in manufacturing cell, gene or tissue-based products.
- Listed in Europe under CE IVD class I, thus comply with European In-Vitro Diagnostic Devices Directive (98/79/EC) requirements.
- Manufactured under ISO 13485 QMS and in compliance with applicable cGMP guidelines.
- Manufactured under controlled environments and processes in accordance with:
  - ISO 13408 – Aseptic Processing of Health Care Products.
  - ISO 14644 – Airborne Particulate Cleanliness Classes in Clean Rooms and Clean Zones.



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## Product Label Symbols



Indicates the manufacturer's catalogue number so that the product can be identified.



Indicates the manufacturer's batch code so that the batch or lot can be identified. Note: Synonyms for batch code are lot number and batch number.



Indicates the date after which the product is not to be used.



Indicates the temperature limits to which the product can be safely exposed.



Indicates a product that has been manufactured using accepted aseptic techniques.



Indicates that the product meets the requirements of the applicable EC directives



Indicates a product that is intended to be used as an in vitro diagnostic medical device.



Indicates the need for the user to consult the instructions for use.

## Auxiliary Products

Product Name	Cat. No.
MSC NutriStem® XF Basal Medium	05-200-1
MSC NutriStem® XF Supplement Mix	05-201-1
MSC Attachment Solution	05-752-1
NutriFreez™ D10 Cryopreservation Medium	05-713-1
Soybean Trypsin Inhibitor 50X	03-048-1
Dulbecco's PBS (w/o Ca & Mg)	02-023-1