

EnVzyme™ Super

Animal Component-Free Cell Dissociation Reagent
For hard-to-dissociate cells
Vegetable origin
Sterile filtered

Product Code: TCL153

Product Description:

EnVzyme™ cell dissociation reagents are ready to use animal component-free reagents used as an alternative to trypsin for dissociation of adherent cells. These reagents are formulated to contain a proteolytic enzyme isolated from vegetable origin. Depending on their ability to dissociate different types of cells, they are available in two forms–

- EnVzyme™ Easy: For easy to dissociate cells
- EnVzyme™ Super: For hard to dissociate cells

Features

- Animal component-free: Derived from vegetable source. Eliminate the risk of viruses, BSE or other potential adventitious agents
- Gentle on cells: Gentle dissociation of cells without affecting the viability
- No inhibition required: EnVzyme™ reagents do not require addition of trypsin inhibitor for inactivation, hence they can be used conveniently with serum-free cultures.
- Retention of marker expression: Being gentle on the cells, EnVzyme™ reagents keep the cell surface epitopes unaltered. This feature makes them useful for marker expression analysis methodologies such as flow cytometry and immunocytochemistry*.

TCL153 is EnVzyme™ Super suitable for dissociation of hard-to-dissociate cells.

Directions:

1. Remove the spent medium from the culture vessel by aspiration.
2. Wash the monolayer by adding balanced salt solution without calcium and magnesium to the side of the flask opposite the cells.
3. Rinse the cell sheet by rocking the flask for 1 to 2 minutes and discard the wash solution.

4. Add EnVzyme™ Super solution to the side of the flask opposite the cells. The volume should be sufficient enough to completely cover the monolayer of the cells.

Note: Refer Table 1 for quantity of EnVzyme™ to be used for different culture vessels.

Table 1: EnVzyme™ quantity for different culture vessels

Culture vessel	Quantity of EnVzyme™ (µl)
96-well plate	50
48-well plate	100
24-well plate	100 – 200
12-well plate	200 – 300
6-well plate	400
T12.5 flask	300
T25 flask	500
T75 flask	1000
T175 flask	2000

5. Rock the flask to ensure that the dissociation solution covers the cell sheet.
6. Incubate the flask at 37°C and monitor the dissociation periodically by observing the flask under the microscope.
7. When dissociation is complete, the cells will be in suspension and appear rounded.
Note: In addition to rocking gently, the flasks may be tapped to expedite removal.
The exact time needed to dissociate cells will vary according to the cell line, cell density and time since last subculture. The dissociation process should be monitored closely to avoid cell damage.
8. Once the cell dissociation is complete add required quantity of medium.

9. Disperse the cells into a single cell suspension by pipetting repeatedly.
10. Count and seed the cells into fresh medium.

Osmolality in mOsm/Kg H₂O

260.00 -300.00

Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response

Maximum time required for complete dissociation of cells grown in T12.5 culture flask at 70 – 80% confluence:

Vero: 5 min

MDCK: 5 min

Quality Control:

Appearance

Colorless, clear solution.

pH

6.00 – 7.00

Cell lines tested:

Cell line	Culture Medium	EnVzyme™ Super	
		Approx. complete (min.)*	time for dissociation
MDCK	MEM + 10% FBS	6 – 7	
A549	Nutrient Mixture F12 + 10% FBS	3 – 4	
Hep2	DMEM + 10% FBS	3 – 4	
Vero	DMEM + 10% FBS	4 – 5	
MDCK, Serum-free	MDCK serum free medium	2 – 3	
Vero, Serum-free	Vero serum free medium	3 – 4	

* These are the approximate values of time required for complete dissociation of cells grown in T12.5 culture flask at 70 – 80% confluence. The duration may slightly vary depending on the culture vessel used, cell density (or the confluence) and time since last subculture.

Comparison of cell dissociation reagents:

Specifications	EnVzyme™ Easy / EnVzyme™ Super	Trypsin / Trypsin-EDTA	Accutase®	ZymeFree™
Origin	Vegetable origin (Non-animal)	Animal origin	Animal origin	Chemically defined (Non-animal)
Storage	-20°C	-20°C	-20°C	2 – 8°C
Inhibition required	Not required	Trypsin inhibitor	Not required	Not required
Activity at temperature	37°C	37°C	37°C	37°C
Compatibility with serum-free cultures	Compatible	Compatible	Compatible	Compatible
Compatibility with stem cells and primary cells	Compatible	Compatible	Compatible	-

Storage and Shelf Life:

Shipping temperature: -20°C

Upon receipt store the product at -20°C in a freezer that is not self-defrosting.

Once thawed, the product is stable for about 2 weeks at 2-8°C.

Repeated freezing and thawing reduces enzymatic activity and should be avoided.

Once thawed, the solution can be aliquoted in smaller volumes and frozen for future use.

Use before expiry date given on the product label.

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Disclaimer:

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