Accutase Cell Detachment Solution - 100 ml

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Accutase Cell Detachment Solution with EDTA and Phenol Red – 100 ml

Accutase is a ready-to-use, sterile-filtered cell detachment solution designed as a gentle alternative to trypsin/EDTA for dissociating adherent mammalian cells from standard tissue culture plasticware and adhesion-coated surfaces. It combines proteolytic and collagenolytic enzyme activity in a balanced salt solution to deliver effective yet controlled dissociation, preserving cell-surface proteins and supporting high post-passage viability and rapid reattachment.

The Accutase formulation is based on Dulbecco's phosphate-buffered saline (DPBS) with EDTA and phenol red as a visual pH indicator. The enzymes are of non-mammalian and non-bacterial origin, making Accutase particularly well suited to stem cell research, vaccine workflows, and any application where animal- or microbially-derived contaminants must be minimised. The solution auto-inhibits at 37 °C, so no neutralising reagent or serum-containing medium is required after detachment – cells can be transferred directly into fresh medium.

Key Features

Ready-to-use 1x sterile-filtered liquid – no dilution or reconstitution required

Combined proteolytic and collagenolytic enzyme activity for gentle dissociation

Each batch standardised to a defined dissociation activity for lot-to-lot consistency

Non-mammalian and non-bacterial enzyme origin

Auto-inhibits at 37 °C – no neutralising solution needed

Formulated in Dulbecco's PBS with EDTA

Phenol red included as visual pH indicator

pH 6.8 – 7.8

Typical Applications

Accutase gently dissociates a wide variety of adherent and sensitive cell types, including human embryonic stem cells (hESCs), human induced pluripotent stem cells (iPSCs), neural stem cells, primary neurons, and routinely cultured adherent lines such as HeLa, HEK 293, CHO, MDCK, Vero, NIH/3T3, BHK-21 and A549. Typical use cases include:

Routine subculture and passaging of adherent mammalian cells

Gentle single-cell dissociation of hESCs, iPSCs and other sensitive lines

Sample preparation for flow cytometry and FACS analysis

Analysis of cell-surface markers where epitope integrity matters

Cell migration, proliferation and apoptosis assays

Quiescence assays by serum starvation and oncogene transfection studies

Tumor cell and neural crest cell migration assays

Production scale-up in bioreactor workflows

For routine work, apply approximately 10 ml of Accutase per 75 cm^2 of culture surface and incubate for 5–10 minutes at room temperature. The optimal incubation time should be determined for each cell line and should not exceed one hour. Prior to addition, rinse the cell layer with a Ca^{2+}/Mg^{2+}-free salt solution such as DPBS without calcium and magnesium to remove residual serum and divalent cations.

Handling & Storage

Store the unopened bottle frozen at -15 °C or below. Thaw either at room temperature or overnight at +2 °C to +8 °C. Do not thaw Accutase in a 37 °C water bath, as elevated temperatures reduce enzyme activity. After thawing, the solution can be stored for up to 2 months at +2 °C to +8 °C; do not store at room temperature. Do not pre-warm the reagent to 37 °C before application – add it directly to washed cells at room temperature. For long-term shelf life, single-use aliquoting is recommended to avoid repeated thaw cycles. Always work under aseptic conditions.

Quality

Manufactured under strict quality standards. Each batch of Accutase is sterile-filtered and tested for sterility, pH, appearance and dissociation activity to ensure consistent, reproducible performance from lot to lot.

Product Specifications

Specification	Detail
Product type	Cell detachment / dissociation reagent
Format	Sterile-filtered liquid, ready-to-use
Volume	100 ml
Working concentration	1x (ready-to-use)
Enzyme activity	Combined proteolytic and collagenolytic
Enzyme origin	Non-mammalian and non-bacterial
Buffer system	Dulbecco's PBS with EDTA

Cytion GmbH
Nikola-Tesla-Str. 3
69124 Heidelberg
Tel: +49 (0)6221 405780
info@cytion.com
cytion.com

Registered office Heidelberg
VAT ID: DE283292917
Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB

pH indicatorPhenol red
pH range6.8 – 7.8
AppearanceClear, pale red to orange solution
Storage temperature-15 °C or below
Stability after thawingUp to 2 months at +2 °C to +8 °C
Recommended use volume~10 ml per 75 cm² culture surface
Typical incubation time5 – 10 minutes at room temperature
Shipping conditionsFrozen on dry ice
Intended useFor research use and further manufacturing only
Formulation (Composition per Liter)
Accutase is a registered trademark of Innovative Cell Technologies, Inc.

SPECIFICATIONS

Sodium chloride (NaCl)	8000.00
Disodium hydrogen phosphate (Na2HPO4)	1150.00
Potassium chloride (KCl)	200.00
Potassium dihydrogen phosphate (KH2PO4)	200.00
EDTA · 4Na (tetrasodium EDTA)	220.00
Phenol red	3.00
Proprietary enzyme blend (proteolytic and collagenolytic activity)	1x

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