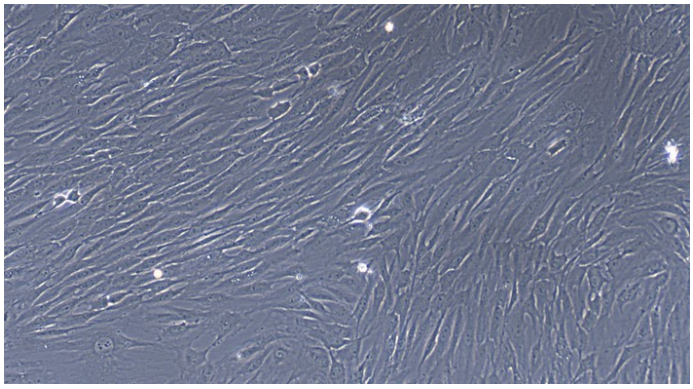
Primary Mouse Tracheal Smooth Muscle Cells (TSMC)

Primary Mouse Tracheal Smooth Muscle Cells (TSMC) provides a primary-cell model for investigating the biology of the specified cell population.
Muscle-cell models support investigations of cell specialization, metabolism and responses to stimulation.
Applications include cell-function studies, tissue-response research and evaluation of biological or chemical interventions under cell-specific culture conditions.

CTDS SKU	CDS10947
Pack size	1 x 0.5 million cells
Product category	Primary Cells

PRODUCT IMAGE



PRODUCT BACKGROUND

Primary Mouse Tracheal Smooth Muscle Cells (TSMC) is a primary cell product from mouse Trachea for physiologically relevant in vitro studies. The product is particularly relevant to Pulmonary cell series and Smooth muscle cells research. It can support research in cell physiology, signaling, metabolism, toxicology, drug response and cell-based assay development where a primary-cell model is preferred. Culture and passage conditions should follow the product-specific protocol. For research use only.

APPLICATIONS

Pulmonary cell series;Smooth muscle cells;Respiratory system;

BIOLOGICAL CHARACTERISTICS

Alternate name 1	Bronchial Tracheal Smooth Muscle Cells; Airway Smooth Muscle Cells
Alternate name 2	Tracheal Smooth Muscle Cells
Tissue / origin	Trachea
Cell growth type	Adherent Cells
Biosafety level	BSL-2
Tumorigenicity / cell status	Normal Cells

CULTURE REQUIREMENTS

Culture medium	DMEM + 5% FBS + Mouse Smooth muscle cell growth supplement + 1% Penicillin-Streptomycin Solution. Temperature: 37°C. Condition: 95% air, 5% carbon dioxide
Freezing medium	55% Complete Culture Medium + 40% FBS + 5% DMSO

RECEIPT AND CRYOPRESERVATION

Upon Receipt of Cells
1 mL cryovials are packed in dry ice for transportation. After receipt, clean the ceryovial with 70% IPA to disinfect. Stored in a -80°C refrigerator overnight and then transfer to liquid nitrogen or revive them directly as per your use.

Note If the dry ice is found to have evaporated or the cryovial cap is detached/ damaged or the cells seems damaged, please contact us immediately.

CULTURE AND RECOVERY INSTRUCTIONS

Recovery of Frozen Cells:

For Suspension Cell passaging, the following methods can be used as reference:

1) Shake the cryotube containing 1mL of cell suspension quickly within seconds in a 37°C water bath to thaw.
2) Add it to a centrifuge tube containing 4-6mL of complete medium and mix well. Centrifuge at 1000rpm for 3-5mins.
3) Discard the supernatant, and resuspend the cells in complete medium.
4) Then add the cell suspension to a culture flask (or dish) containing 6-8ml of complete medium and culture overnight at 37°C.
5) Observe the cell growth and cell density under a microscope the next day.
6) Cell subculture: If the cell density reaches 80%-90%, subculture can be performed.

For Adherent Cell passaging, the following methods can be used as reference:

1) Shake the cryotube containing 1mL of cell suspension quickly within seconds in a 37°C water bath to thaw.
2) Add it to a centrifuge tube containing 4-6mL of complete medium and mix well. Centrifuge at 1000rpm for 3-5mins.
3) Discard the supernatant, and rinse the cells 1-2 times with PBS without calcium and magnesium ions.
4) Add 0.25% (w/v) trypsin-0.53 mM EDTA to the culture flask (1-2 mL for T25 flask, 2-3 mL for T75 flask),
5) Place in a 37°C incubator for digestion for 1-2 minutes (difficult-to-digest cells can be properly prolonged for digestion time),
6) Observe the cell digestion under a microscope. If most of the cells become round and fall off, quickly take it back to the operating table, tap the culture flask a few times, and add 3-4 ml of culture medium containing 10% FBS to terminate digestion.

7) Gently mix and aspirate, centrifuge at 1000rpm for 3-5min, discard the supernatant. Add 1-2mL culture medium and mix evenly.
8) Divide the cell suspension into new T25 bottles at a ratio of 1:2.
9) Add 6-8ml of new complete culture medium prepared according to the instructions to maintain cell growth vitality, and perform subsequent passages at a ratio of 1:2~1:5 as per actual conditions.

CHARACTERIZATION AND QUALITY INFORMATION

Sterility	Bacteria: Negative Yeast: Negative Mycoplasma: Negative
Pathogen testing	HIV: Negative Hepatitis B: Negative
Markers / assay readout	Smooth-muscle panel: CD146+, PDGFRβ/CD140b+; intracellular α-SMA+, calponin+, SM22α+; CD31-/CD45-.
Assay / validation method	Flow cytometry marker characterization
Authentication / QC evidence	Smooth-muscle panel: CD146+, PDGFRβ/CD140b+; intracellular α-SMA+, calponin+, SM22α+; CD31-/CD45-.; Sterility: Bacteria: Negative Yeast: Negative Mycoplasma: Negative; Pathogen testing: HIV: Negative Hepatitis B: Negative

Catalogue confirmation note: Product-specific confirmation required: list only markers actually tested. Current text describes a suggested panel.

HANDLING AND STORAGE

Shelf life	12 months at time of shipping
Shipping	Shipped on Dry Ice at -20°C
Storage	Store at -176°C.
Intended use	For Research Use Only. Not for diagnostics or human use.

PRODUCT DISCLAIMER

The data indicated herein are as indicated and validated in our laboratory. As these cell lines are of human origin, they carry a risk of latent human viruses (e.g., Epstein-Barr virus, hepatitis B). Therefore they should be handled accordingly with precaution. These reagents are for research use only and not for in-vitro diagnostics or human use.

ADDITIONAL CLASSIFICATION

Product grouping	Primary Cells
Product subgroup	Mouse

Not a lot-specific certificate of analysis.