Breast TumorMACS™ Medium
human

Order no. 130-134-234

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1. Description

This product is for research use only.

Components	**500 mL TumorMACS Basal Medium, human** **10 mL Breast TumorMACS Supplement (50×), human**
Specifications	Osmolality: 300–340 mOsmol/kg pH: 7.2–7.6
Storage	Store TumorMACS Basal Medium, human protected from light at +2 to +8 °C. Do not freeze. The expiration date is indicated on the bottle label. Upon arrival store Breast TumorMACS Supplement (50×), human at –20 °C. Aliquots of the supplement should be stored at –20 °C. Avoid repeated freeze-thaw cycles. The expiration date is indicated on the vial label.

1.1 Background information

TumorMACS Media are optimized, standardized, and serum-free media for the reliable expansion of tumor cells from primary or xenotransplanted human tumor samples. Taking into account that different tumor entities have specific culture requirements, Miltenyi Biotec has developed tumor-specific TumorMACS Supplements. Accordingly, the appropriate specific medium should be used to achieve optimal cell culture results for a particular tumor entity. Circulating tumor cells and tumor cells from freshly dissociated tissue can be cultured over multiple passages, thus allowing for *in vitro* assays, such as drug screenings on primary cell cultures or characterization studies including gene expression or protein profiling. In addition, TumorMACS Media support the establishment of new cell lines and the generation of cell numbers that are sufficiently large for further experiments, such as *in vivo* transplantation studies in animals. TumorMACS Media efficiently expand cultures of primary tumor cells *in vitro* while maintaining the cell populations' heterogeneity and tumorigenic potential. The media are manufactured under controlled conditions using ingredients of high quality. TumorMACS Media offer consistent lot-to-lot performance and optimal conditions for the cultivation of primary tumor cells.

1.2 Applications

- Generation and expansion of tumor cell cultures from primary human breast tumors, xenografted human breast tumors, and circulating breast tumor cells.
- Establishment of primary tumor cell lines from primary human breast tumors, xenografted human breast tumors, and circulating breast tumor cells.
- The medium supports the transition of tumor cells into physiologically relevant 3D culture formats, including tumor organoids and tumoroids. For more information, please refer to www.miltenyibiotec.com/tumoroids.
- A detailed guideline for the initiation of primary tumor cell cultures is available at www.miltenyibiotec.com/tumorculture.

2. Protocol

2.1 Preparation of complete medium

Before Breast TumorMACS Medium can be used in cell culture, the two media components need to be mixed according to the following protocol to obtain the complete medium.

1. Thaw Breast TumorMACS Supplement (50×) at room temperature prior to use. Thawed material must be used immediately or aliquoted to the preferred sample volume, for example, 1 mL. Store aliquots at –20 °C. Avoid additional freeze-thaw cycles.
2. To obtain the complete medium add 10 mL Breast TumorMACS Supplement (50×) to 500 mL TumorMACS Basal Medium. The medium is ready-to-use now. Use the complete medium within 2 weeks when stored at +2 to +8 °C.

2.2 Culture of tumor cells

1. Plate 2×10^5 cells/cm² in TumorMACS Medium.
2. Incubate at +37 °C and 5–7.5% CO_2.
3. Change medium every 4–5 days or as soon as it turns yellowish.
4. Split or remove fibroblasts at a confluency of 80–90%.

Refer to **www.miltenyibiotec.com** for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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