CROWN BIOSCIENCE

Dissociated Tumor Cells/ Tumor Infiltrating Lymphocytes

A JSR Life Sciences Company

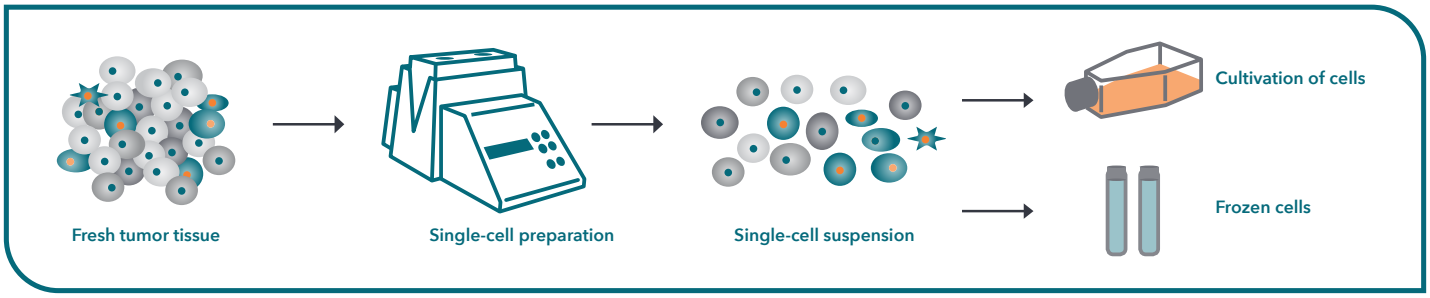
FACTSHEET

Overview

The availability of fresh primary tumor tissue is very important in preclinical cancer research. Crown Bioscience offers the infrastructure for prospective collection of fresh tumor tissue as well as subsequent preparation of dissociated tumor cells. These cells are viable and useful for a broad spectrum of downstream applications. Dissociated tumor cells contain various cell populations present in the tumor microenvironment such as tumor, stromal, and immune cells. Tumor Infiltrating Lymphocytes (TILs) have been described in several tumor types and are increasingly important for clinical outcome and prognostic analysis. Understanding of TILs is key in the development of immune therapies such as checkpoint inhibitors to PD-1 or CTLA-4.

Preparation of single-cell suspension from fresh tumor tissue

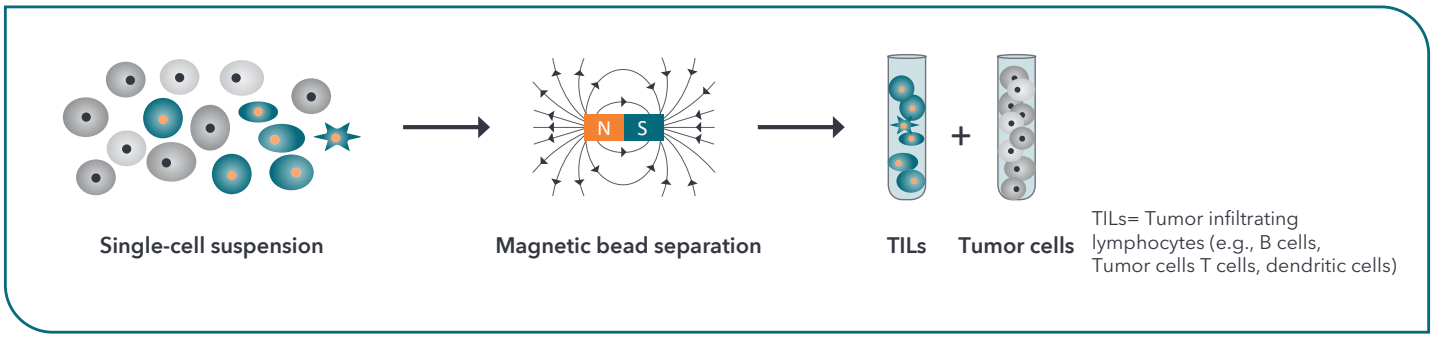
We prepare single-cell suspensions from freshly resected human tumor tissues on demand, according to proven Standard Operating Procedures. Tissues are obtained fully consented from approved medical centers following strict ethical standards. Viable fresh tissue is collected by Crown Bioscience nurses and is transported to our laboratories within four hours. Single-cell suspensions are immediately prepared upon receipt of the tissue by means of the gentleMACS™ Dissociator under standardized conditions. Subsequent application of cell suspensions may include cultivation for drug testing experiments, flow cytometry, or generation of patient-derived tumor xenograft (PDTX) models.



Isolation and characterization of TILs

TILs have been described in several tumor types and are increasingly important for clinical outcome and prognostic analysis. The composition of these cells varies between tumor types, organ sites, and patients. TILs can be isolated out of freshly prepared single-cell suspensions.

TILs are separated using a CD45 specific antibody and a magnetic, column-free system. Starting from CD45+ cells, other subfractions of immune cells can be isolated (CD4 and CD8). We offer direct characterization of immune cell subpopulations by flow cytometry. Different flow-based Multiplex Immune Panels are well established and ready for use.



Your Benefits

- Prospective, customized ISO-certified fresh tissue collection
- Complete patient consent
- Single-cell suspension preparation within 4 hours of surgery
- Preparation of standardized semi-automated single-cell suspension with high cell viability
- Optimized protocols for high yield of tumor cells and TILs
- Suited to PDTX models
- TILs can be subsequently characterized at Crown Bioscience by flow cytometry
- Comprehensive clinical data available, mutational status on request
- Matching viable Peripheral Blood Mononuclear Cells (PBMCs) available on request
- Short preparation time for high viability and preservation of cell surface epitopes

Get in touch

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