

Application guide

Examples of how you can apply fluorescent cell counting in your research.

Research area Method example	Immunology	Cell therapy	Oncology	Tissue engineering
Small cells	Counting peripheral blood mononuclear cells	Count cells necessary for therapeutic use	Count small cancer cell lines (e.g. small cell lung cancer)	Count small donor cells used in tissue engineering
Cells with debris	Count white blood cells within whole blood samples	Counting mesenchymal stem cells after isolation	Counting freshly isolated cells in tumor digestions	Counting freshly isolated donor cells for tissue engineering
Heterogeneous populations	Distinguish between different types of white blood cells	Distinguish between different types of stem cells	Counting different types of tumor cells from one donor	Distinguishing different cells within donor tissue
Transfection efficiency	Determine transfection efficiency of immune cells	Determine transfection efficiency of CAR-T cells	Determine transfection efficiency of tumor cells for research	Determine transfection efficiency of donor cells/cell lines
Viability	Determine the viability of the white blood cell population	Viability analysis: multiple times before use of cells in therapy	Determine cancer cell viability to check treatment efficiency	Determine primary cell viability to ensure culture quality