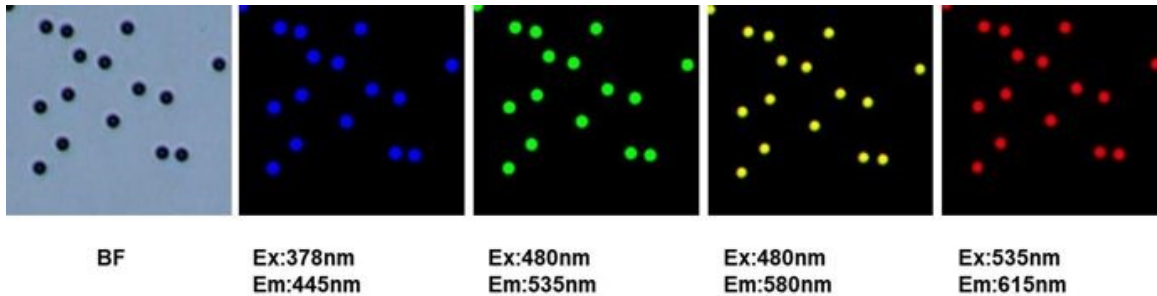


Countstar® Rigel S5 Advanced Image Cytometer

Product feature

Up to 4 fluorescent channel and one bright field analysis in the same time



13 different fluorescent analysis combinations

Specification	Excitation LED	375	480	525	620	460nm	480nm	505nm	535nm	565nm	600LP	665LP		
Detectors	460/50	●				DAPI, Hoechst, BFP								
	535/40	●	●			Amcyan, Brilliant Violet™ 510								
	580/25	●	●	●		Pacific Orange™, Brilliant Violet™ 570								
	600LP	●	●	●		Qdot® 605								
	665LP	●	●	●	●	Brilliant Violet™ 650								
												480nm	580nm	PE
												480nm	665LP	PC5, PC5.5, PerCP, PerCP-Cy5.5, PI, T-AAD
												525nm	580nm	PI
												525nm	665LP	T-AAD, Nile-Red, Alex Fluor 647-PE
												625nm	665LP	APC, Alex Fluor 647, Alex Fluor 660

User Friendly Cell Analysis Protocols



- Trypan blue Protocols: Obtain cell count, viability and concentration estimations based on trypan blue staining using a disposable consumable.
- AO/PI Viability Protocol: Run two fluorescence color assays in disposable consumable to determine the percentages of live, dead cells and concentration in the presents of debris and unwanted nonnucleated

cell types including red blood cells.

- **Affinity of Antibody:** This assay run as Green color assays in FITC binding antibody to determine the affinity of the biosimilar drug.
- **Surface Marker Assay:** Quantify specific cell populations based on surface marker expression (CD45+ CD4+, CD8 + MSC, CD56+ NK cells, etc.)
- **Cell Cycle:** Propidium iodide (PI) is a nuclear staining dye that is frequently applied in measuring cell cycle. The protocol determining cellular DNA content in cell cycle analysis
- **Cell Apoptosis:** Cell Apoptosis assay is a type used for determining the apoptosis percentage of cells by Annexin V-FITC/7-ADD staining method.
- **GFP transfection:** The green fluorescent protein (GFP) exhibits bright green fluorescence when exposed to light in the blue to ultraviolet range. This protocol can analyze counting and percentage of GFP.
- **Cell Killing:** Run three fluorescence color assays in disposable consumable to determine the CAR T/ NK-Mediated Cytotoxicity using Tracer and Viability Dyes

GMP and 21 CFR part 11 ready

Make a detailed record of any changes, edits, deletions, adjustments, etc. Electronic records cannot be deleted, including administrators. Electronic records include date, time, user name, machine serial number, and user's actions

FCS Express Software

The optional DeNovoTMFCS Express software makes graphs touchable and customizable fluorescence channel boost your experiment reach. Countstar Rigel S6 together with FCS Express is able to analyze for the cell apoptosis, cell cycle, transfection, affinity of antibody, CD marker and etc.

Specifications

Technical Specifications

Model:	Countstar Rigel S5
Diameter range:	3 μ m ~ 180 μ m
Concentration range:	1 \times 10 ⁴ ~ 3 \times 10 ⁷ /mL
Objective magnification:	5x
Imaging element:	1.4 megapixel, CCD camera
Excitation Light	375nm, 480nm, 525nm
Emission Filter	460nm, 535nm, 580nm, 600LP
USB	1 \times USB 3.0 1 \times USB 2.0
Storage:	500GB
Power supply:	110–230 V/AC, 50/60Hz
Screen:	10.4 inch touchscreen
Weight:	13kg (28lb)
Size (W X D X H):	Machine: 254 \times 303 \times 453mm Package size: 430 \times 370 \times 610mm
Operating temperature:	10 $^{\circ}$ C ~ 40 $^{\circ}$ C
Working humidity:	20% ~ 80%



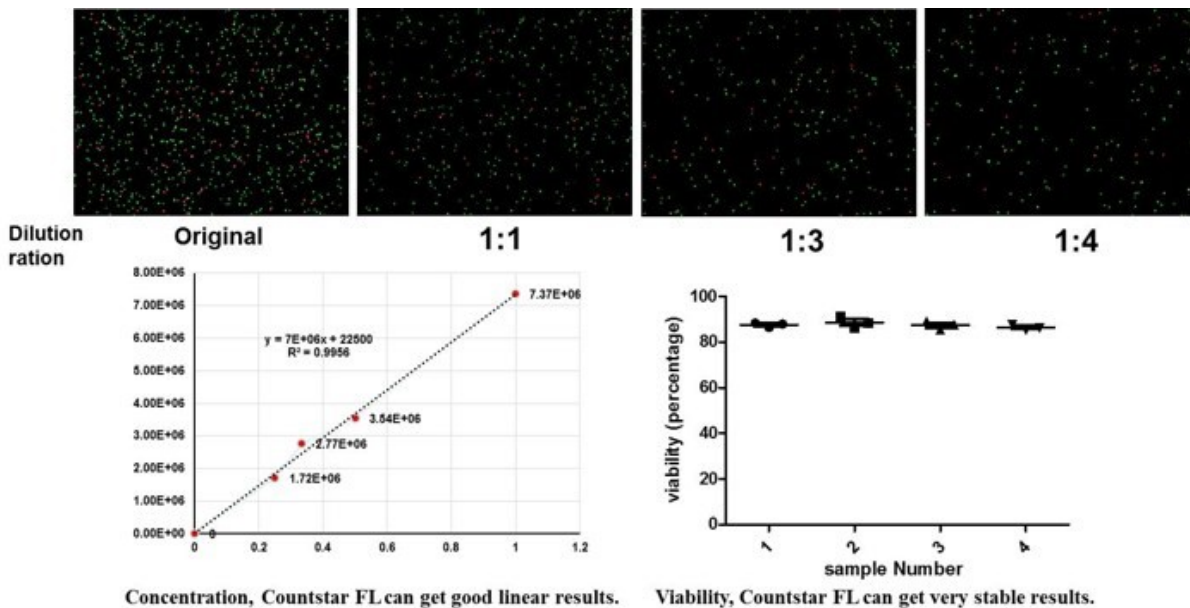
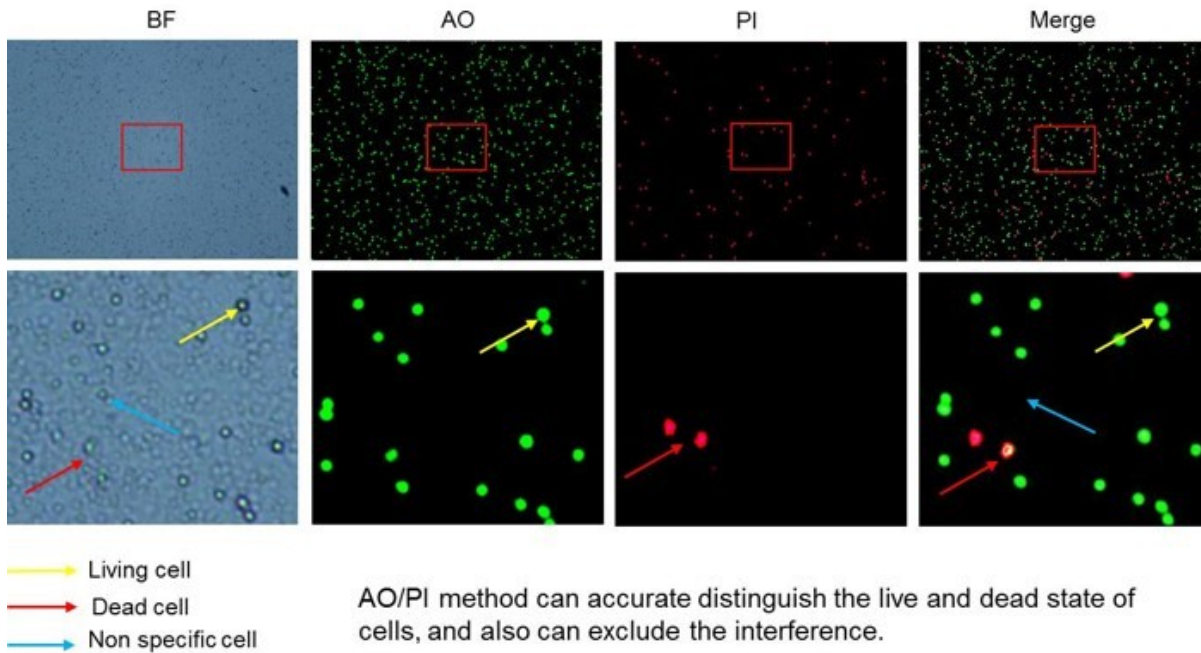
Bioswisstec AG
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8200 Schaffhausen

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Applications

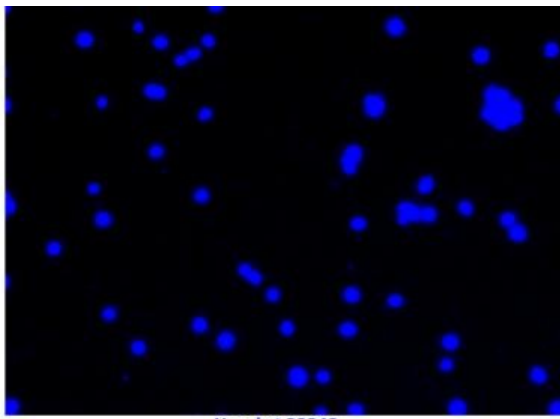
Dual-Fluorescence Viability

Acridine orange (AO) and Propidium iodide (PI) are nuclear nucleic acid binding dyes. The analysis excludes cell fragments, debris and artifacts particles as well as undersized events such as platelets, giving a highly accurate result. In conclusion, the Countstar system can be used for every step of the cell manufacturing process.



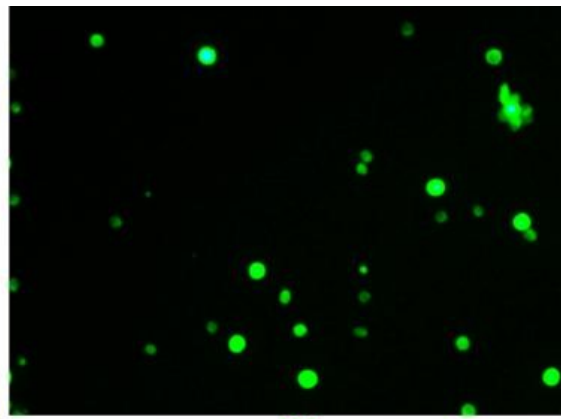
T/NK cell mediated cytotoxicity

By labeling the target tumor cells with CFSE or transfect with GFP. Hoechst 33342 is used for stain all cells (both T cells and tumor cells), alternatively, target tumor cells can be stained with CFSE, PI is used for stain the dead cells (both T cells and tumor cells). This staining strategy allows for the discriminate of different cells.



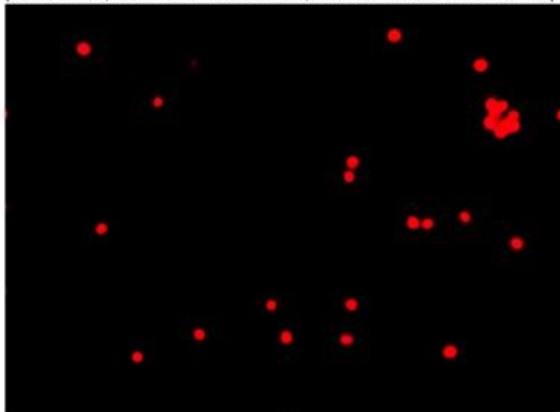
Hoechst 33342

(Stain all cells, both T cell and tumor cell, exclude the debris interference)



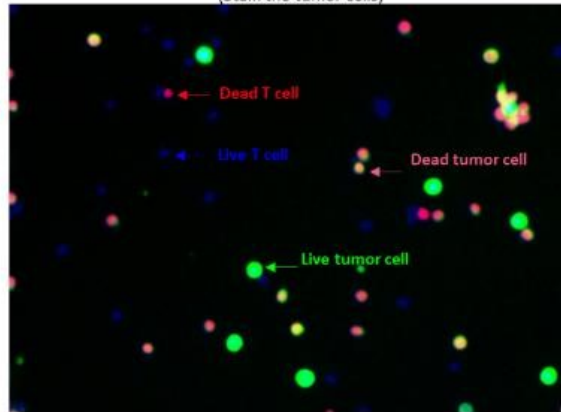
CFSE

(Stain the tumor cells)



PI

(Stain all dead cells, both T cell and tumor cell)



Merge



Live tumor cell: Hoechst 33342+CFSE+PI-



Dead tumor cell: Hoechst 33342+CFSE+PI+



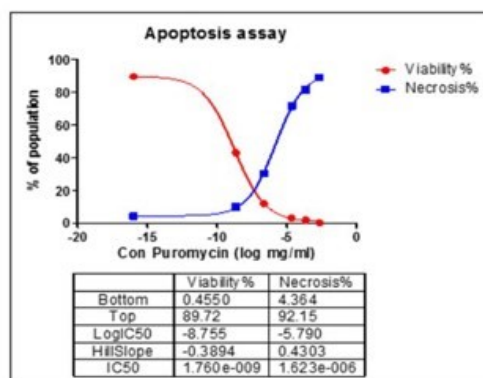
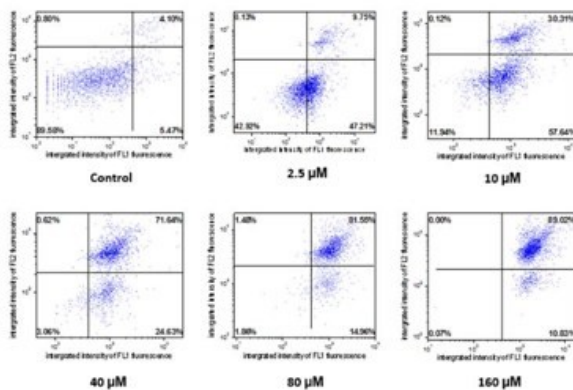
Live T cell: Hoechst 33342+CFSE-PI-



Dead T cell: Hoechst 33342+CFSE-PI+

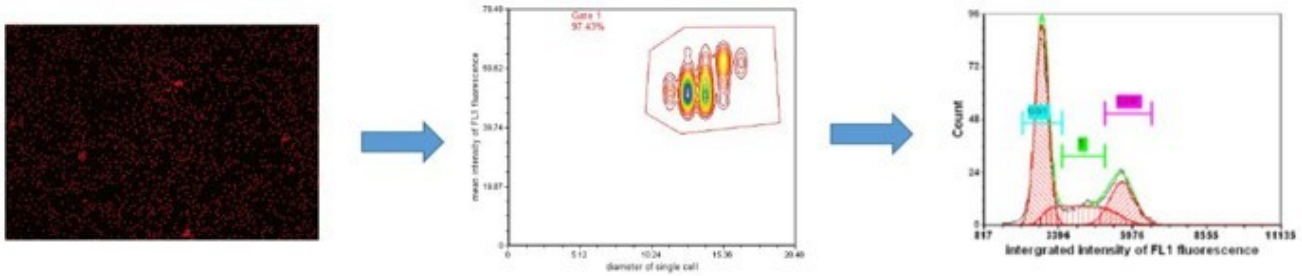
Cell Apoptosis

The different phases of apoptosis are segmented into an early, middle and late stage. Specified indicators can document the single stages of apoptosis. The Countstar® Rigel S6 offers a visualized image-based solution and analyzes all of these steps with pre-loaded protocols in depth.



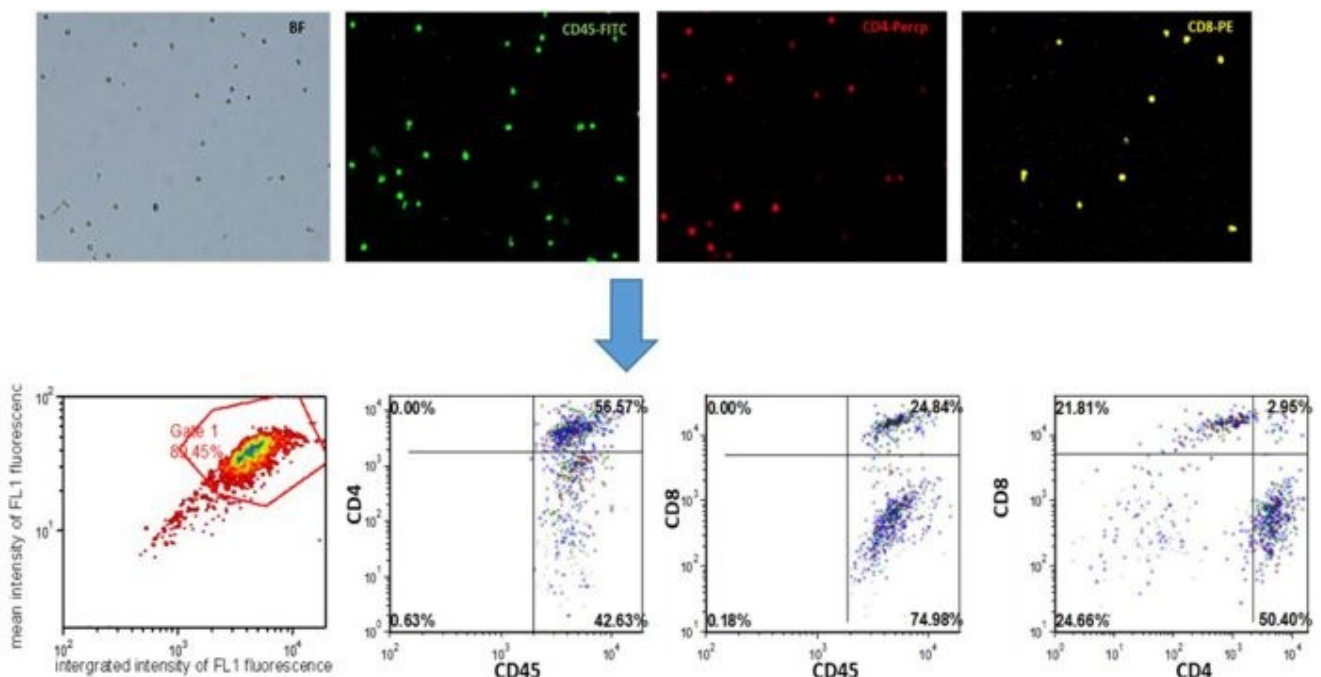
Cell Cycle

Countstar Rigel S6 enables users to get the result of a cell cycle quickly and accurately. Countstar Rigel S6 can analyze proportion of cell in different phase of the cell cycle.



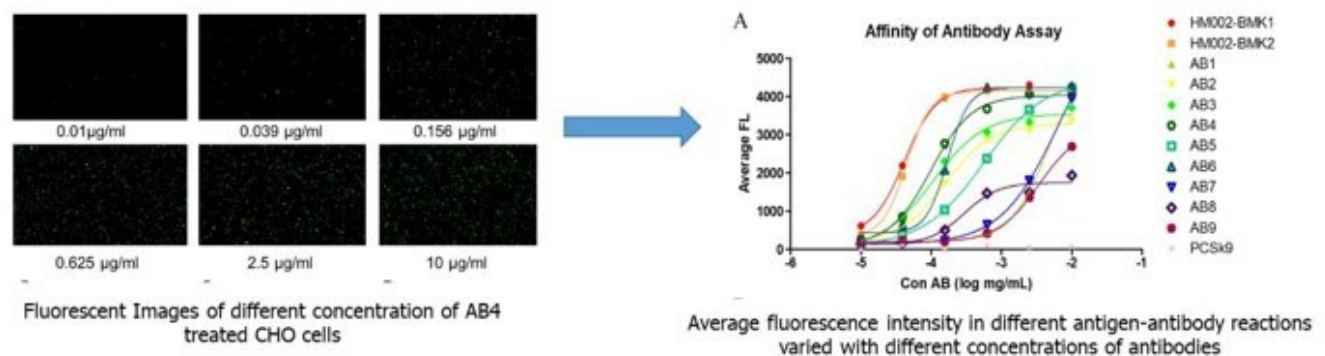
Surface Marker Analysis

A lymphocyte subsets analysis is a typical experiment performed in cell related research fields and various diseases diagnosis. Countstar® Rigel S6 offers a faster and easier way to make immune cell typing more efficient. With visible cell images and powerful data analysis.



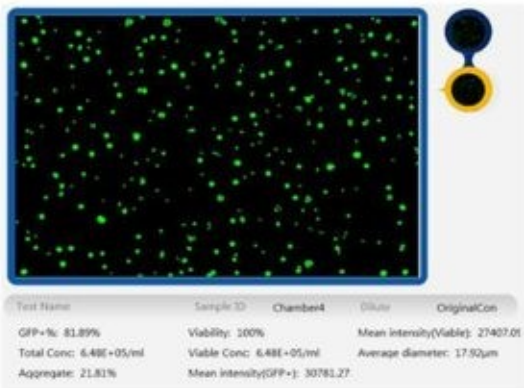
Affinity of antibody

Detect affinity of antibody in cell level is an important indicator of monoclonal antibody detection using immunofluorescence method. The Countstar® Rigel S6 offers a rapid, direct and reliable evaluating method for the affinity of antibody detection in antibody drug screening

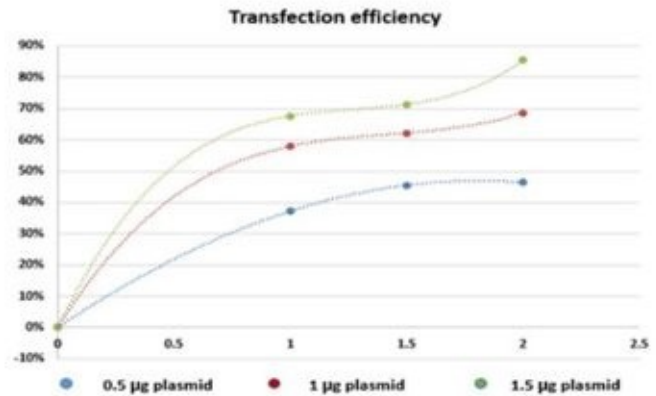


GFP Transfection Efficiency

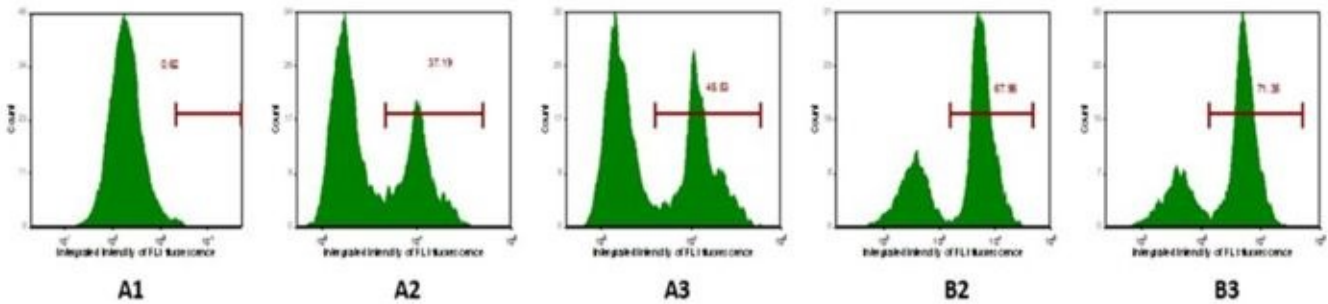
In cell and molecular biology, the GFP gene is frequently used as a reporter of expression. Currently, scientists are commonly using the fluorescent microscopes or flow cytometers to analyze the transfection efficiency of mammalian cells. But Flow cytometer requires a high-qualified and experienced operator. While Countstar Rigel S6 enables users to get the result of a transfection efficiency assay quickly and accurately.



Screenshot of result on Countstar FL



Transfection efficiency of 3 concentrations of plasmid



FCS express analysis results of transfection