



## **Company introduction:**

SIBET (Suzhou institute of biomedical engineering and technology, Chinese academy of sciences) is the only national research institute of Chinese academy of sciences with biomedical instruments, reagents and biological materials as its main research direction.

Changchun Huali Technology Co., Ltd is the partner of manufacturing and sales Branch of SIBE, and jointly established in Changchun city, Jilin province. Professional for medical equipment production, import and export business and rehabilitation of health products production and sales. Main products are quantum lipoprotein Reducer, Flow cytometry (cell analyzer), Holter monitor, Biliary drainage tube, Negative pressure drain, The drainage bag, Massage device, used for indirect rehabilitation products etc.

Adhering to the leading direction of "science and technology is the soul of an enterprise", the company has been cooperating with several research and development institutions in Jilin province before its establishment, and committed to the r&d and sales of high-tech products.

## **Product introduction:**

### **1, Quantum lipoprotein Reducer**

LDLR is kind of expressive trans-membrane glycoprotein. LDL (Low density Lipoprotein" means one class and mentioned lipoprotein particle with 18-25nm diameter, responsible to transport fatty acid molecule in blood to full body for cells use. LDL includes carrier protein B-100 (namely one kind of protein with 4536 amino acid), is the final stage of lowest density lipoprotein caused by our liver.

#### **Plaque forms atherosclerosis**

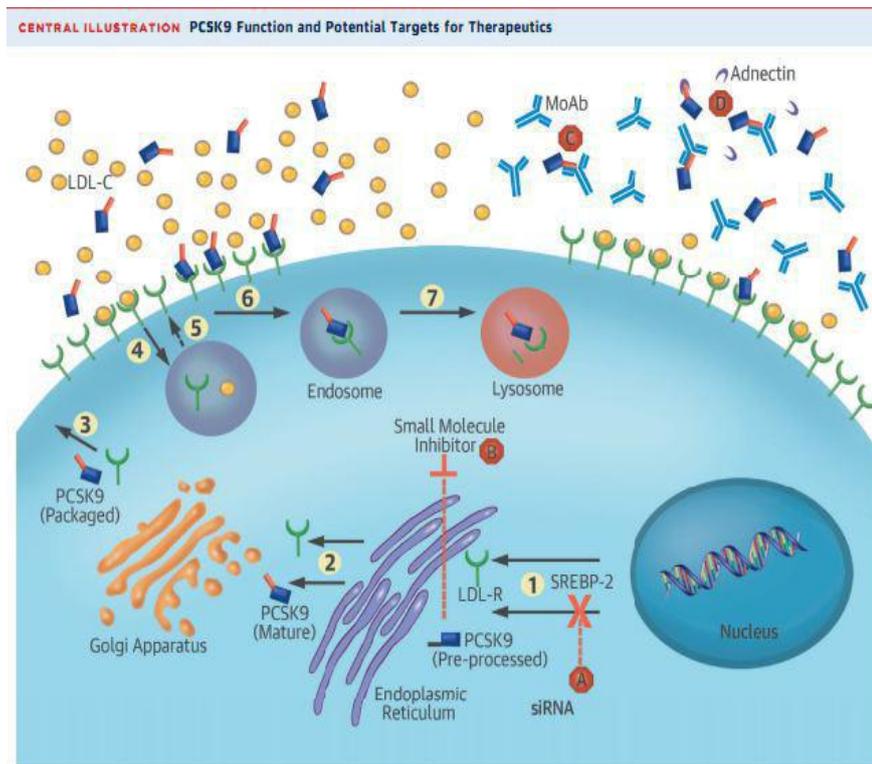
If LDL-C concentration enhanced in our blood, it will deposit on the cardio-cerebral vascular in areas such as the arterial wall, gradually formed atherosclerotic plaques, blocking the corresponding blood vessels, finally can lead to coronary heart disease, stroke and peripheral artery disease death disability such as the severity of the disease. It has been shown that LDL and its cholesterol (LDL-C) are often associated with cardiovascular and cerebrovascular diseases such as coronary heart disease, which should be noticed, so some people call LDL-C bad cholesterol.

#### **Causing variety of diseases to cause coronary heart disease**

It will cause severe diseases such as cerebral apoplexy and peripheral arterial disease. If the concentration of LDL-C increases in our blood, threatening our heart. if the level of the LDL-C exceeds the normal range, the risk of our heart will be increased badly. It will be deposited in the arterial wall of the blood vessels of the heart and brain, gradually forming atherosclerotic plaques and blocking the corresponding blood vessels.

The risk of the heart will be increased if LDL-C goes beyond normal.

#### **LDLR principle**



LDL lipoprotein Reducer will be metabolized by the way of LDL receptor, closing relationship between LDLR and lipid metabolism. The disorder of construction and function of LDLR will lead to severe diseases like coronary heart disease (CHD), atherosclerosis etc.

Quantum lipoprotein Reducer is based on quantum biological technology, the crystal of the machine releases accurate quantum energy acting on the surface of body skin cell membrane. The quantum energy with biological attribute are selective absorbed by LDL receptor of skin cell membrane surface. The energy properties promote biochemical and biological stimulation of human tissues and cells, enhancing LDL expressing namely ApoB100 in LDL is recognized by the receptor combines LDL to the pit, thenceforth separating with the film, and forming endocytic vesicle. The effect of H<sup>+</sup>-ATPase was used in the endothelial membrane, pH will become acid, cholesterol generated through enzyme hydrolysis goes to transport vesicle after LDL and receptor separate and melt with enzyme system. LDL use normal blood lipid metabolism exited in our body to metabolize, Safe and Non-poisonous.

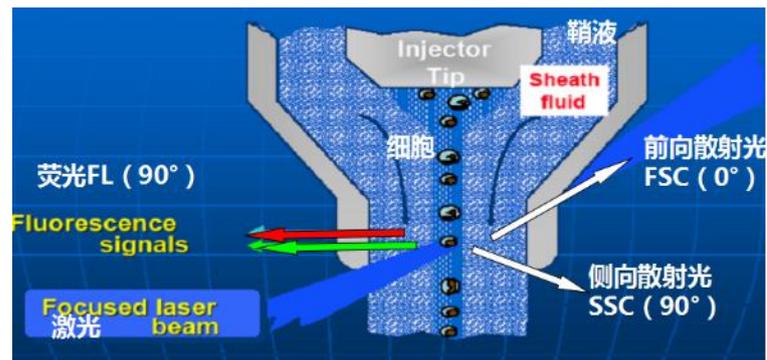
65%-70% LDL of plasma is cleaned depends on LDLR, less part (1/3) is taken dissimulation by surrounding tissue including vascular wall.

Quantum lipoprotein Reducer has the excellent function of correction of blood lipid metabolism disorder, increasing uptake of LDL by cell, reducing the level of plasma cholesterol to treat dyslipidemia (atherosclerosis and atherosclerotic plaque).

## 2,Flow cytometry (Cell analyzer)

Flow cytometry USES flow focusing technology to make cells focus at the center of the fluid and be irradiated by laser. By detecting the fluorescence intensity generated by the scattered light of cells and the specific binding dye, the cell size, intracellular particle content and extracellular protein are analyzed.

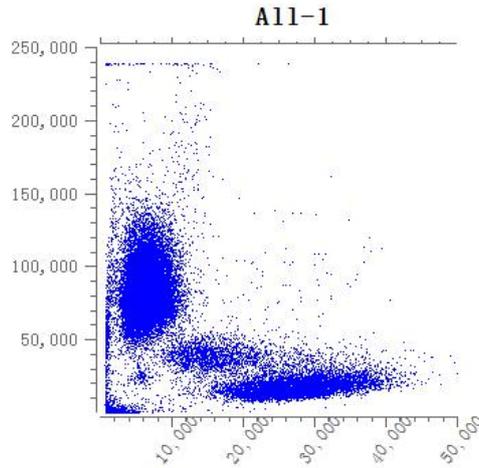
Flow cytometry is an important tool in cell biology research. It can analyze more than 10,000 cells per second, and it can conduct rapid, high-throughput statistical analysis on cell size, DNA content and extracellular protein, with high analytical sensitivity and up to 10 kinds of parameters, which is known as the "CT" of biological laboratory.



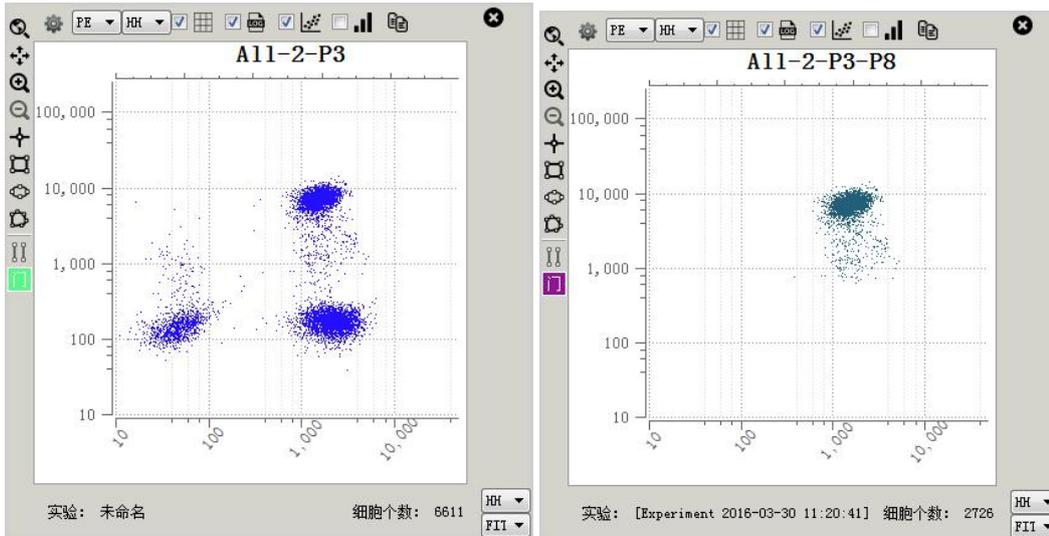
(Single-laser four-color flow cytometer)

### Function of flow cytometry

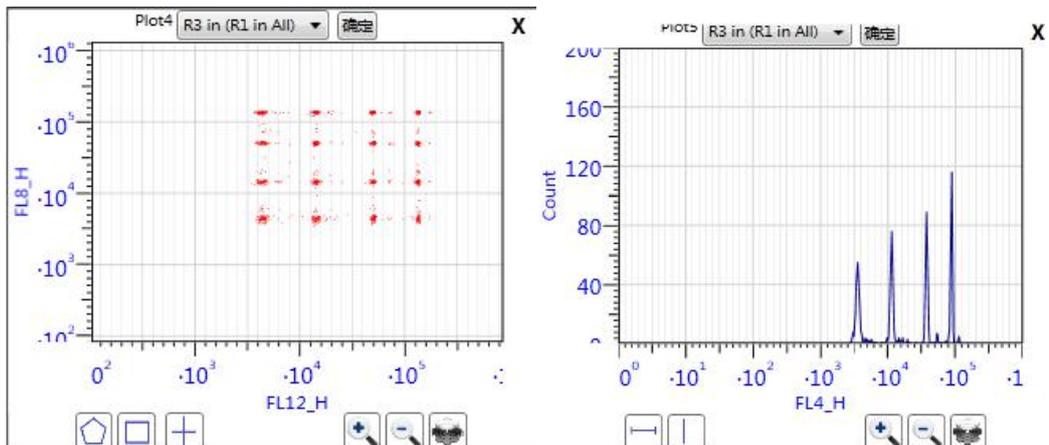
1) white blood cell count was performed by CD45 staining with white blood cells, and the scatter diagram of CD45 -- SSC was determined as shown in the figure



2) lymphocyte subsets were analyzed by labeling CD3, CD4 and CD8 with fluorescent antibodies to achieve the analysis of CD3+CD4+ and CD3+CD8+ subsets



3) liquid-phase microarray detection can be used to identify coding fluorescent microspheres, so as to realize free protein molecular detection.





**Features:**

Single laser four colors

Excitation light: 405nm,488nm,638nm optional

Number of fluorescent channels: 4 colors (typical configuration: 525/45nm, 592/43nm, 692/40nm, 785/60nm)

Analysis speed:  $\geq 10000$  PCS/s

The forward lateral scattering light has a resolution of 0.5 $\mu$ m

Fluorescence sensitivity PE $\leq 100$ MESF, FITC $\leq 200$ MESF

### **3, Cardiac fatigue test and ECG Holter Monitor**

Every year, 540,000 people die of sudden cardiac death in China, twice as many as died in the tangshan earthquake and eight times as many as died in the wenchuan earthquake. More than 50 percent of patients with sudden cardiac death are "healthy people" who have never been diagnosed with heart disease before. Sudden cardiac death occurs suddenly, rescue success rate is very low, the international rescue success rate is less than 2%, the domestic rescue success rate is less than 1%. Early identification of high-risk groups for sudden cardiac death and timely intervention can prevent the occurrence of sudden cardiac death in two-thirds of high-risk groups.

Accurately locate the high-risk group of sudden cardiac death, take reasonable first aid measures, the success rate of first aid for patients with sudden cardiac death can be increased by 70 times. The heart fatigue test can accurately target the high-risk group of sudden cardiac death one year in advance (current follow-up data show that the targeted high-risk group is 625 times more likely to suffer sudden cardiac death than the general population).

**Prevention:** early detection of high-risk groups of sudden cardiac death, timely intervention, can prevent two-thirds of high-risk groups from sudden cardiac death.

**First aid:** accurately locate the high-risk group of sudden cardiac death, take reasonable first aid measures, the success rate of first aid for patients with sudden cardiac death

That's a 70-fold increase.

**Our Professional Service:**

**Our term will monitor heart testing data from the holter monitor to analysis the heart risk in five dimensions:**

1. Measurement of cardiac capacity or quality
2. Measurement of heart nutrition and energy supply
3. Measure the controlled degree of heart and elbow
4. Type and quantity of cardiac event inducing factors were evaluated
5. Severity assessment of cardiac event triggers

**Our monitoring product:**

ECG holter Monitor is a device for checking ECG, which is applicable for family and individual user, it is a good helper to early prevent from cardiovascular diseases and reduce risks. Intelligent design, achieves remote health management by using with mobile application, it can automatically start measurement, store ECG, upload data, download health conclusion and obtain doctor advice at the first moment.



**Specification f ECG holter monitor/ECG electrocardiogram**

Channel	3/12channels
Storage Medium	Flash Memory SD card
Recording Time	24/48 hours
Dimensions	70mm×50mm×20mm
Data Transfer	USB 2.0 / Bluetooth
weight	40g
Recording accuracy	< 30s
Input impedance	≥9MΩ
Short range recording (IPAD or PC)	1000 segment
	Real-time 12channel ECG display
	Patient medical record management function
Alarm function (Patient cables fall off)	
Dynamic and Static dual function	
Pacemaker detection	
Batteries	1 AA alkaline battery

More products will be updated soon.

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