HB220419

Human DiI-Low Density Lipoprotein (Human DiI-LDL)

Product Information

Product Name	Cat#	Size
Human DiI-Low Density Lipoprotein (Human DiI-LDL)	20614ES76	500 μg

Product Description

Low-density lipoprotein (Low Density Lipoprotein, referred to as LDL) is converted by the hydrolysis of lipoprotein lipase to remove triglycerides from very low-density lipoprotein (VLDL) and release free fatty acids. The removal of triglycerides increases the proportion of cholesterol and increases the density of the particles themselves, resulting in LDL. LDL binds specifically to receptors on the surface of spinal cells and then transports cholesterol to cells throughout the body through receptor-mediated endocytosis. Therefore, LDL can be used to study receptor-mediated endocytosis processes, especially in diseases such as atherosclerosis, and plasma-derived LDL can also be used to study LDL oxidation in function and metabolism.

Red fluorescently labeled human low-density lipoprotein (Human DiI-LDL) is LDL labeled with fluorescent probe Dil (1,1'-dioctadecyl-3,3,3',3'-tetramethyl-indocarbocyanine perchlorate), which can be used for Observe the LDL-binding sites of cultured cells, or screen mutants of LDL receptor-deficient cells. Cellular receptor levels can also be assessed by flow cytometry, or to detect receptor levels in tissue. DiI-LDL is a very good marker for studying endocytosis.

The Human DiI-LDL provided by YEASEN is sterile packaged and can be directly diluted for use. In addition to providing DiI-LDL, we also provide unlabeled LDL, as well as modified LDL such as acetylated LDL (Ac-LDL), and oxidatively modified LDL (Ox-LDL).

Product Properties

Concentration	0.8-3.0 mg/mL
Appearance	milky liquid
Absorbance Ratio	Dil/Protein=555 nm/275 nm=1.30
Buffer Components	0.02 mM EDTA in PBS, pH 7.4
Preparation	The purified LDL derived from human healthy plasma was directly labeled with DiI fluorescent probe, and then the labeled product was purified and recovered by ultracentrifugation and dialysis, and the filter was sterilized. Purified DiI-LDL was dissolved in PBS containing 0.02 mM EDTA, pH 7.4.

Shipping and Storage

The product is shipped with ice pack and can be stored at 4°C, protected from light for 6 weeks upon receipt.

Do not freeze! Be sure to use it aseptically!

Cautions

1.The diluted product is extremely unstable, it is recommended to use it immediately.

2.Precipitation may occur in long-term storage, which is a normal phenomenon. Centrifuge at low speed for 2 minutes to remove the precipitate and use it.

3.The binding of LDL to the LDL receptor requires the participation of Ca^{2+} and Mn^{2+}, and the presence of excess EDTA will inhibit its binding.

4.For your safety and health, please wear lab coats and disposable gloves for operation.

5.For research use only!

Instructions

1.Working solution preparation: Aseptically dilute DiI-LDL with cell culture medium to 20-40 μg/mL.

2.Cell preparation: Aspirate the medium in the culture plate, add the above LDL to the living cells, and culture at 37℃ for 4-5 hours.

3.At the end of the incubation, the medium containing Human DiI-Ox-LDL was aspirated and washed several times with probe-free medium.

4.Detect with fluorescence microscope or flow cytometer according to experimental requirements.

a) Fluorescence microscope observation

Use standard rhodamine excitation: emission filter (or recommended wavelength: Ex/Em=549nm/565nm); if necessary, please use PBS containing 3% formaldehyde for fixation, do not use methanol or acetone for fixation, because Dil Soluble in organic solvents. Note: Positive cells need to be set as a control.

b) Cell sorting (flow cytometry)

Cells were trypsinized or single-cell suspension was made by adding EDTA, and appropriate labeled purified cells were used as negative and positive controls for flow sorting gates. (The recommended wavelengths are Ex: 488/514/549 nm; Em: 565 nm).