



FITC-T7-LNP@MnO₂, fluorescein isothiocyanate-labeled T7 peptide lipid nanoparticles loaded with manganese dioxide

Cat. No. R-TF-WDX51

Lot. No. (See product label)

Alias	Fluorescein labeled T7 peptide lipid nanoparticles loaded with manganese dioxide
Appearance	Yellow or yellow-green solid powder
Molecular Formula	N/A
Solubility	Soluble in organic solvents
Storage	-20°C, protected from light
Purity	95%+
Shelf Life	1 year
Shipping Condition	low temperature transport
Application	biomedical imaging
Specification	10mg : Inquiry 25mg : Inquiry 50mg : Inquiry
Description	FITC-T7-LNP@MnO₂ is a structurally complex and functional nanocomposite. It uses lipid nanoparticles (LNP) as the core carrier. LNP is usually composed of ionizable lipids, cholesterol, phospholipids and polyethylene glycol lipids. It plays a key role in protecting payloads such as nucleic acids and drugs from degradation, and can also promote the stability of preparations and fusion with cell membranes. As a targeting peptide, T7 can specifically recognize and bind to

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specific receptors on the surface of target cells, endow the material with targeted transport capabilities, and accurately deliver cargo materials to target cells, improving the treatment effect while reducing damage to normal cells. MnO_2 nanomaterials are loaded on the surface of LNP. MnO_2 has special physical and chemical properties. For example, in the tumor microenvironment, it is responsive to acidic pH and high concentrations of glutathione (GSH). It can undergo chemical reactions and release oxygen, improve the hypoxic microenvironment of the tumor tissue, and enhance the Treatment effect. At the same time, MnO_2 can also be used in magnetic resonance imaging (MRI) to provide imaging basis for monitoring the distribution and action of drugs in the body. FITC, fluorescein isothiocyanate, is marked on the entire material surface. When excited by blue light of about 495nm, it emits bright green fluorescence of about 520nm. With this characteristic, FITC-T7-LNP@ MnO_2 can be clearly tracked and detected with the help of fluorescence microscopes, flow cytometers and other equipment, and its location and behavior in the organism or experimental system can be grasped in real time.

Supplier

Xi'an Ruixi

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