



pH-LNP, pH-responsive liposomes

Cat. No. R-PHLNP

Lot. No. (See product label)

Alias	pH Liposome
Appearance	Dispersion/lyophilized powder/freeze-thawable dispersion
Molecular Formula	N/A
Solubility	Pure water dispersion
Storage	-20°C, protected from light
Purity	95%+
Shelf Life	1 month (dispersion)/3-6 months (lyophilized powder)/6-12 months (freeze-thawable dispersion)
Shipping Condition	low temperature transport
Application	delivery vehicle
Specification	50mg : Inquiry 100mg : Inquiry 500mg : Inquiry
Description	The main components of pH-responsive liposomes are: DOPE and CHEMS (carboxylated cholesterol), which can achieve sensitive detection of specific biomolecules or environments by introducing appropriate biosensing molecules. As a pH-sensitive lipid, DOPE's phosphoethanolamine head group is protonated under acidic conditions (pH<6.5), inducing the lipid membrane to transform from the lamellar phase (Lα) to the hexagonal phase (HII), forming a non-bilayer structure to promote drug release. The CHEMS carboxyl group is negatively charged at physiological pH (7.4), and forms an ion pair with

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the positively charged head of DOPE to stabilize the membrane structure; when the pH drops to the endosomal level (5.0-6.5), the protonation of the carboxyl group weakens the electrostatic interaction and accelerates the disintegration of the membrane structure. pH-responsive liposomes are functional liposomes with intracellular targeting and controlled release of drugs (such as genes, nucleic acids, peptides, proteins). Its key property lies in its pH responsiveness, that is, under specific pH conditions, liposomes can undergo structural changes to release the encapsulated drugs. This property mainly relies on the specific chemical bonds contained in the liposomes, such as acylhydrazone bonds and diselenium bonds. Customized services such as DSPE-PEG doping, DSPE-PEG-polypeptide/aptamer, DSPE-PEG-dye doping, cationic phospholipid (such as DOTAP) doping, cell membrane hybridization, and nanoparticle compounding are available to meet a variety of requirements.

Supplier

Xi'an Ruixi

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