PLGA-PEGs

ACRL-PLGA-PEG-ALK
Acrylate-poly(Lactide-co-glycolide)-b-poly(ethylene glycol)-alkyne (ACRL-PLGA-PEG-ALK) is a biofunctional amphiphilic block copolymer with alkynyl group at the end of PEG and acrylate at the end of polycaprolactone. Alkynyl groups are useful for coupling via click chemistry reactions with azide, while acrylate groups can be used for radical initiator induced polymerization or UV light sensitive photo-polymerization. It is often used to form crosslinked polymer network and prepare PEG hydrogel. ACRL-PLGA-PEG-ALK is used to prepare micelles or nanoparticles with alkynyl on the micelle surface for bioconjugation via click chemistry and acrylate in the micelle core for crosslinking. Hydrophobic drugs is encapsulated in the PLGA-core for targeted drug delivery.

(9218)
- PLGA Molar Weight: 10000, 5000
- PEG Molar Weight: 5000, 3400, 2000
- Package Size: 100 mg

MPEG-PLGA
Poly(lactide-co-glycolide)-b-poly(ethylene glycol) methyl ether (MPEG-PLGA) is one the most commonly used biodegradable amphiphilic block copolymers (ABCs) for drug delivery applications. PEG is the hydrophilic part and PLGA is the hydrophobic part. Amphiphilic block copolymers (AmBc) consist two chemically different homopolymer blocks. One of the block is hydrophilic and the other one is hydrophobic. These macromolecules have the properties to self-assemble into micelles when dissolved in an aqueous media.

(2753)
- PLGA Molar Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molar Weight: 1000, 2000, 5000
- Package size: 1g, 10g

mPEG-PLGA-COOH
Methoxy poly(ethylene glycol)-b-poly(lactide-co-glycolide) carboxylic acid (mPEG-PLGA-COOH) is a biodegradable amphiphilic block copolymer (ABCs) with terminated -COOH with PLGA block for drug drug conjugation. PEG is the hydrophilic and PLGA is the hydrophobic part.

Amphiphilic block copolymers (ABC) consist two chemically different homopolymer blocks. One of the block is hydrophilic and the other one is hydrophobic. These macromolecules have the properties to self-assemble into micelles when dissolved in an aqueous media.

(9780)
- PLGA Molar Weight: 2K, 5K, 10K
- PEG Molar Weight: 1K, 2K, 5K
- Package Size: 100mg, 1g

PLGA-PEG-ALK/PLGA-PEG-Alkyne
Poly(L-lactide-co-glycolide)-b-poly(ethylene glycol)-alkyne (PLGA-PEG-ALK, PLGA-PEG-Alkyne) is a functional amphiphilic block copolymer with alkynyl group at the end of PEG. Alkynyl groups are useful for coupling via click chemistry reactions with azide, PLGA-PEG-Alkyne is used to prepare micelles or nanoparticles with alkynyl on the micelle surface for bioconjugation via click chemistry. Hydrophobic drugs is encapsulated in the PLGA-core for targeted drug delivery.

(3491)
- PLGA Molar Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molar Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g

PLGA-PEG-BIO
Poly(L-lactide-co-glycolide)-block-poly(ethylene glycol)-Biotin (PLGA-PEG-BIO, PLGA-PEG-Biotin) is a functional amphiphilic block copolymer (ABC) which has biotin group at the end of PEG block and is used to prepare nanoparticles and micelles for targeted drug delivery. PLGA-PEG-Bio is one of the most commonly used biodegradable ABC polymers for drug delivery. Biotin can bind to avidin and streptavidin with high specificity and affinity.

(2780)
- PLGA Molar Weight: 1000, 2000, 3000, 4000, 5000, 10000
- PEG Molar Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g
PLGA-PEG-COOH
Poly(lactide-co-glycolide)-block-poly(ethylene glycol)-carboxylic acid (PLGA-PEG-COOH) has a carboxylic acid group at the PEG ends, which is used in the preparation of targeted nanoparticles (micelles) for differential delivery and controlled release of drugs. (2786)
- PLGA Molecular Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g

PLGA-PEG-DBCO
Poly(lactide-co-glycolide)-poly(ethylene glycol) with dibenzocycloctyne (PLGA-PEG-DBCO) is a linear heterobifunctional PEGylation reagent with a PLGA and a DBCO for Cu-free chemistry. PLGA-PEG-DBCO can go Click Chemistry reaction without a need of any metal catalysts. The strain-promoted 1,3-dipolar cycloaddition of cyclooctynes and azides, also termed as the Cu-free click reaction, is a bioorthogonal reaction that enables the conjugation of two molecules in aqueous solution. DBCO reagents can be used to label azide-modified biomolecules spontaneous without the need for toxic Cu catalysts. The reaction of azides with strained alkynes, such as cyclooctynes, readily forms a triazole product without the need for a toxic catalyst. PEGylation can increase solubility and stability and reduce immunogenicity of peptides and proteins. It can also suppress the non-specific binding of charged molecules to the modified surfaces.

- PLGA Molecular Weight: 5k, 10k
- PEG Molecular Weight: 2k, 5k
- Package size: 100mg

PLGA-PEG-FITC
Poly(L-lactide-co-glycolide)-PEG-FITC (PLGA-PEG-FITC) is a fluorescein-labeled amphiphilic block copolymer. PLGA-PEG is one of the most commonly used biodegradable and biocompatible ABC polymers for micelle-based drug encapsulation, drug solubilization and drug delivery. (2770)
- PLGA Molecular Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 50mg

PLGA-PEG-Folate
Poly(lactide-co-glycolide)-block-poly(ethylene glycol)-Folate (PLGA-PEG-Folate, PLGA-PEG-Folic acid, or PLGA-PEG-FOL) is a functional amphiphilic block copolymer (ABC) which has Folic acid group at the end of PEG block and is used to prepare nanoparticles and micelles for targeted drug delivery. PLGA-PEG is one of the most commonly used biodegradable ABC polymers for drug delivery. Folate receptors are cellular surface markers for numerous solid tumors and myeloid leukemias.

Folate targeted drug delivery has emerged as an alternative therapy for the treatment and imaging of many cancers and inflammatory diseases. Due to its small molecular size and high binding affinity for cell surface folate receptors (FR), folate conjugates have the ability to deliver a variety of molecular complexes to pathologic cells without causing harm to normal tissues. Complexes that have been successfully delivered to FR expressing cells, to date, include protein toxins, immune stimulants, chemotherapeutic agents, liposomes, nanoparticles, and imaging agents. This review will summarize the applications of folic acid as a targeting ligand and highlight the various methods being developed for delivery of therapeutic and imaging agents to FR-expressing cells. (11424)
- PLGA Molecular Weight: 5000, 10k, 20k
- PEG Molecular Weight: 2000, 5000
- Package size: 50mg, 100mg

PLGA-PEG-IA
Poly(L-lactide-co-glycolide)-b-poly(ethylene glycol)-iodolacetyl (PLGA-PEG-IA) is a functional amphiphilic block copolymer with iodolacetyl group at the end of PEG. Iodolacetyl (IA) is a thiol (-SH) reactive group that can be used to modify biomolecules or other materials via their available thiol groups. Iodine group can be easily replaced by thiol group to form a stable carbon thiol bond. PLGA-PEG-IA is used to prepare micelles or nanoparticles with iodolacetyl group on the micelle surface for bioconjugation via thiol substitution. Hydrophobic drugs is encapsulated in the PLGA core for targeted drug delivery. (9268)
- PLGA Molecular Weight: 10K, 5K, 2K
PLGA-PEG-MAL
Poly(lactide-co-glycolide)-PEG-Maleimide (PLGA-PEG-MAL, PLGA-Maleimide) is a functional amphiphilic block copolymer with maleimide group at the end of PEG. PLGA-PEG-MAL can self assemble into micelles/nanoparticles. Maleimide on the micelle surface can conjugate with thiol, SH, sulfhydryl or mercapto group to form a disulfide bond. Hydrophobic drugs is encapsulated in the PLGA core for targeted drug delivery.

(2794)
- PLGA Molecular Weight: 2000, 5000, 10K, 20K
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g

PLGA-PEG-N3
Poly(L-lactide-co-glycolide)-b-poly(ethylene glycol)-azide (PLGA-PEG-N3, PLGA-PEG-azide) is a functional amphiphilic block copolymer with azide group at the end of PEG. Azide groups are useful for coupling via click chemistry reactions with alkynes. PLGA-PEG-N3 is used to prepare micelles or nanoparticles with azide on the micelle surface for bioconjugation via click chemistry. Hydrophobic drugs is encapsulated in the PLGA core for targeted drug delivery.

(2774)
- PLGA Molecular Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g

PLGA-PEG-NH2
Poly(L-lactide-co-glycolide)-block-poly(ethylene glycol)-Amine (PLGA-PEG-NH2) is a functional amphiphilic block copolymer (ABC) which has amine group at the end of PEG block and is used to prepare nanoparticles and micelles for targeted drug delivery. PLGA-PEG is one of the most commonly used biodegradable ABC polymers for drug delivery.

(2758)
- PLGA Molecular Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g

PLGA-PEG-NHS
Poly(lactide-co-glycolide)-block-poly(ethylene glycol)-succinimidyl ester (PLGA-PEG-NHS) is a functional amphiphilic block copolymer, which has amine-reactive ester at the PEG end for bioconjugation. PLGA-PEG is one the most commonly used biodegradable amphiphilic block copolymers for drug delivery applications. PEG is the hydrophilic part and PLGA is the hydrophobic part.

(2801)
- PLGA Molecular Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g

PLGA-PEG-OPSS
Poly(lactide-co-glycolide)-block-PEG-OPSS (PLGA-PEG-OPSS) is a functional amphiphilic block copolymer which has orthopyridyl disulfide group at PEG end. Orthopyridyl disulfide or pyridylthio functional group can selectively reacts with free thiol, SH, sulfhydryl or mercapto to form a disulfide bond. Micelles or nanoparticles from PLGA-PEG-OPSS can be modified via OPSS for targeted drug delivery.

(3479)
- PLGA Molecular Weight: 1000, 2000, 3000, 4000, 5000, 10k
- PEG Molecular Weight: 1000, 2000, 3000, 5000
- Package size: 100mg, 1g
Amphiphilic block copolymers comprised of poly(lactic acid-co-glycolic acid) and poly(ethylene glycol) are thermogelling materials with biodegradable blocks. The thermogel forming biodegradable delivery system has two major benefits: 1) First, thermogelation allows for delivery over the course of a period of time after introduction of what is initially a liquid; 2) The material safely biodegrades away once it is no longer necessary to lactic and glycolic acids as well as the water-soluble poly(ethylene glycol) block, which at molecular weights below 20KDa are safely eliminated from the body by the kidneys.

The thermogelation properties of poly(lactic acid-co-glycolic acid)-block-poly(ethylene glycol)-block-poly(lactic acid-co-glycolic acid) (PLGA-PEG-PLGA) copolymers have been extensively used in research for controlled delivery.

**PLGA-PEG-PLGA**

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<tr>
<td>PEG</td>
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<td></td>
<td>1g</td>
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</table>

**PLGA-PEG-RhB**

Poly(lactide-co-glycolide)-PEG-Rhodamine (PLGA-PEG-RhB) is a rhodamine-labeled amphiphilic block copolymer. PLA-PEG is one of the most commonly used biodegradable ABC polymers for micelle-based drug encapsulation, drug solubilization and drug delivery.

Poly (lactic-co-glycolic acid) (PLGA) is one of the most effective biodegradable polymeric nanoparticles (NPs). It has been approved by the US FDA to use in drug delivery systems due to controlled and sustained-release properties, low toxicity, and biocompatibility with tissue and cells.

<table>
<thead>
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<th>Molecular Weight</th>
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</table>

**PLGA-PEG-SH**

Poly(L-lactide-co-glycolide)-b-poly(ethylene glycol)-Thiol (PLGA-PEG-SH) is a functional amphiphilic block copolymer to prepare targeted micelles or nanoparticles. Thiol, or SH, sulfhydryl, or mercapto group selectively reacts with maleimide, OPSS, vinylsulfone and transition metal surface including gold, silver, etc.

<table>
<thead>
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<th>Molecular Weight</th>
<th>Package size</th>
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<tbody>
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<td>1000, 2000, 3000, 5000</td>
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<tr>
<td></td>
<td>100mg, 1g</td>
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</tbody>
</table>

**PLGA-PEG-VS**

Poly(L-lactide-co-glycolide)-b-poly(ethylene glycol)-vinylsulfone (PLGA-PEG-VS) is a functional amphiphilic block copolymer with vinylsulfone group at the end of PEG. Vinylsulfone groups are useful for coupling via Michael addition reactions with thiol. PLGA-PEG-VS is used to prepare micelles or nanoparticles with vinylsulfone on the micelle surface for bioconjugation. Hydrophobic drugs is encapsulated in the PLGA core for targeted drug delivery.

<table>
<thead>
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