

# EUROLIMUS™

Sirolimus Eluting  
Coronary Stent System



3 Years  
Shelf life

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Sirolimus Eluting Coronary Stent System

## Coating

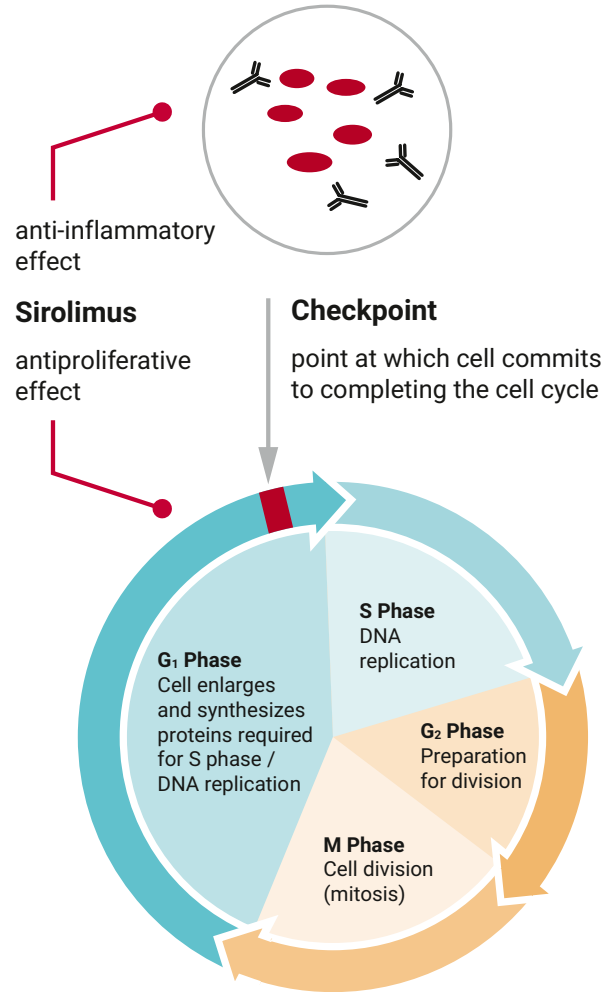
The Eurolimus is a drug eluting stent delivery system. The stent is coated with the active pharmaceutical ingredient sirolimus ( $1.4 \mu\text{g}/\text{mm}^2$ ) within a biodegradable PLGA matrix.

### Sirolimus

- Sirolimus is a drug with an antiproliferative and anti-inflammatory effect which is used to coat coronary stents.
- Sirolimus is the generic name of the natural product rapamycin, produced by strains of the bacterium *Streptomyces hygroscopicus*.
- Sirolimus inactivates the TOR protein and thus blocks transition from the G1 phase to the S phase in the cell cycle and therewith triggers an antimigratory and antiproliferative effect on vascular smooth muscle cells.
- Sirolimus does not differ from other limus drugs in its cell target structures mTOR and FKBP-12.
- Sirolimus also inhibits the pro-inflammatory immune cell activation.

### Biodegradable Polymer

The coating consists of a biocompatible and biodegradable PLGA 85/15 poly(lactide-co-glycolide) copolymer. The biodegradable polymer has outstanding characteristics allowing a durable but thin coating layer on the stent surface.



## Stent Design

### Ultra Thin 65 $\mu\text{m}$ Strutdesign

#### 65 $\mu\text{m}$ Struts

- Lower Crossing Profile
- Easier Crossability
- Less Vessel Injury



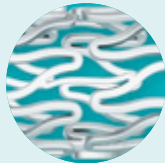
#### 9 Crown Structure

- Excellent Vessel Coverage
- Reduced Local Force
- Homogeneous Drug Distribution



#### Interlinks

- Middle to Middle Design
- Slimmer, More Flexible Links
- Increased Deliverability and Increased Vessel Adaption



#### Crossing Profile

- Low profile (0.97 mm for expansion- $\varnothing$  3.0 mm)
- Capability to pass even long and tortuous lesions

### Asymmetrical Coating Thickness

#### Drug dose: $1.4 \mu\text{g}/\text{mm}^2$

Increase of the drug delivery efficiency due to the asymmetrical coating.

#### Matrix Thickness

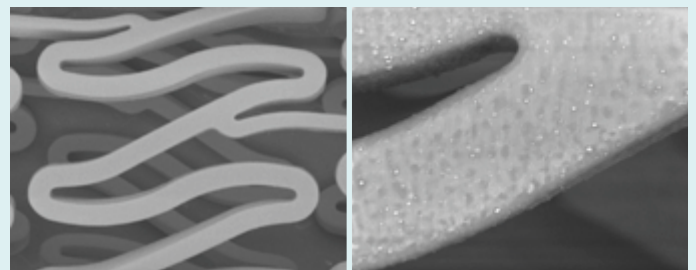
↓ Abluminal Side:  $\sim 5 \mu\text{m}$

Cross Section

↑ Luminal Side:  $\sim 3 \mu\text{m}$

### Coating Integrity

Coating remains intact up to a maximum post dilatation expansion of 4.5 mm.



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## The Coating makes the difference

### Homogeneous Drug Distribution

The alliance of a fully biodegradable polymer, together with sirolimus's efficiency to prevent restenosis, assures homogeneous drug distribution and uniform release kinetics. Such combination is expected to demonstrate long term efficacy as well as extremely low rates of late stent thrombosis.

### Polymer Degradation / Drug Release

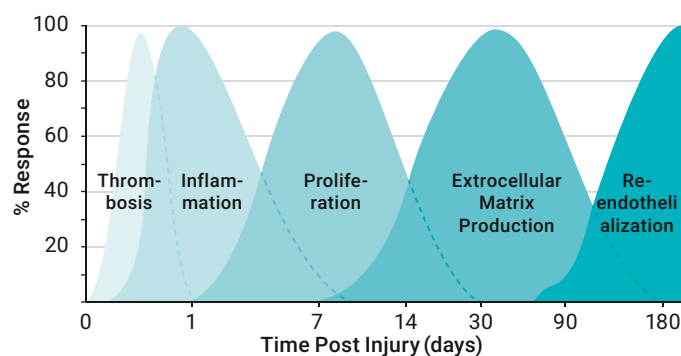
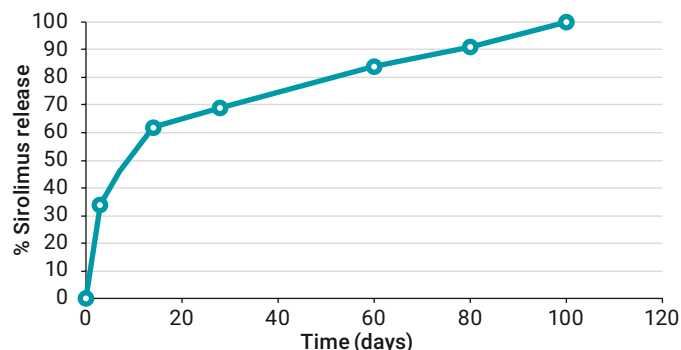
The Eurolimus coating allows a simultaneous polymer resorption and drug release within 3–4 months, to match the procedure-triggered biological response.

### Degradable Polymer Formulation PLGA 85 / 15 PLGA 85/15 poly(lactide-co-glycolide) Copolymer

The copolymer and the homopolymers are generally considered as **non-toxic** and **biocompatible**.

The degradation products lactic acid and glycolic acid are metabolites of the natural cellular metabolism are fully assimilated.

Both substances are decomposed to carbon dioxide and water over 3–4 months.



## Clinical Insights



**2 European Centers**  
Italy & Greece



**367 Patients**  
25.6 months  
± 5.7 months follow-up



**Location of Target Lesions**  
LAD 42.32 %  
RCA 35.68 %  
LCX 21.37 %  
LM 0.62 %

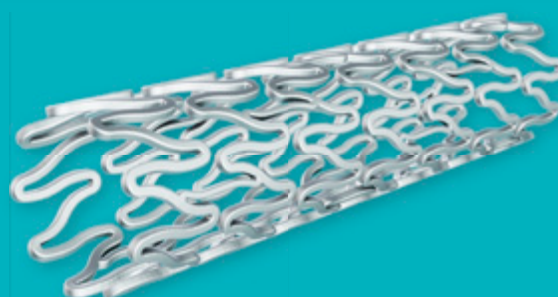


**End Points**  
Stent Thrombosis 0.27 %  
MACE 5.72 %\*  
TLF 3.00 %  
\* all TLR, TVR & NON-TVR events resolved by PCI

## 3 Years Shelf life

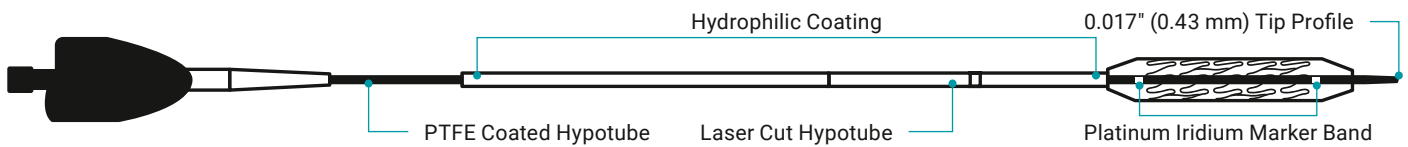


**Dry sterilization**  
**No start of polymer degradation**  
**100 % repeatability of drug release**  
**Shelf life of 3 Years**



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## Sirolimus Eluting Coronary Stent System



### Stent Specifications

Type of design	Open-cell, 3 interlinks
Design detail	9 crowns
Material	Cobalt Chromium L605
Expansion range	2.25 mm – 4.00 mm
Strut thickness	0.0026" (65 µm)
Strut width (main segment)	0.0028" (72 µm)
Strut width (interlink)	0.0023" (58 µm)
Shortening	< 2 %
Mechanical recoil	< 5 %
Metal coverage	< 18 %
Matrix thickness	3 – 5 µm
Drug / Polymer	Sirolimus / PLGA
Drug load	1.4 µg / mm <sup>2</sup>

### Delivery System Specifications

Usable length	138 cm	
Length guidewire lumen	27 cm	
Recommended guide catheter	5F (min. I.D. 0.056")	
Material	Balloon	Polyamide
	Distal shaft	Polyamide, multilayer tube Hydrophilic coating
	Proximal shaft	Stainless steel, PTFE coated
Shaft size	Proximal	1.9 F
	Distal	2.8 – 3.0 F, depending on balloon-Ø
Folding	3-fold balloon	
Marker bands	Embedded Platinum / Iridium	
Tip entry profile	0.017" (0.43 mm)	
Max. guidewire	0.014" (0.36 mm)	

### Compliance Chart

Pressure (MPa / bar/atm)	Balloon Ø (mm)						
	2.25	2.50	2.75	3.00	3.25	3.50	4.00
	Compliance (mm)						
0.6 / 6	2.21	2.24	2.68	2.92	3.18	3.40	3.92
0.7 / 7	2.23	2.46	2.71	2.96	3.22	3.45	3.96
0.8 / 8	2.25	2.50	2.75	3.00	3.25	3.50	4.00
0.9 / 9	2.27	2.53	2.78	3.03	3.28	3.55	4.04
1.0 / 10	2.29	2.56	2.81	3.06	3.32	3.59	4.09
1.1 / 11	2.32	2.59	2.84	3.09	3.35	3.62	4.12
1.2 / 12	2.34	2.62	2.86	3.12	3.38	3.65	4.15
1.3 / 13	2.36	2.65	2.89	3.14	3.41	3.69	4.19
1.4 / 14	2.38	2.68	2.91	3.17	3.44	3.72	4.23
1.5 / 15	2.40	2.71	2.94	3.20	3.47	3.76	4.27
1.6 / 16	2.42	2.74	2.97	3.22	3.50	3.80	4.31
1.7 / 17	2.45	2.78	3.00	3.25	3.53	3.84	4.36
1.8 / 18	2.47	2.82	3.03	3.28	3.56	-	-
1.9 / 19	2.49	2.86	3.07	-	-	-	-
2.0 / 20	2.51	-	-	-	-	-	-

Nominal Pressure 0.8 MPa / 8 bar | ■ Rated Burst Pressure | - Do not exceed

### Product Ordering Information

Stent Length (mm)	Balloon Diameter (mm)						
	2.25	2.50	2.75	3.00	3.25	3.50	4.00
8	EULI 2.25-08	EULI 2.50-08	EULI 2.75-08	EULI 3.00-08	EULI 3.25-08	EULI 3.50-08	EULI 4.00-08
10	EULI 2.25-10	EULI 2.50-10	EULI 2.75-10	EULI 3.00-10	EULI 3.25-10	EULI 3.50-10	EULI 4.00-10
13	EULI 2.25-13	EULI 2.50-13	EULI 2.75-13	EULI 3.00-13	EULI 3.25-13	EULI 3.50-13	EULI 4.00-13
16	EULI 2.25-16	EULI 2.50-16	EULI 2.75-16	EULI 3.00-16	EULI 3.25-16	EULI 3.50-16	EULI 4.00-16
18	EULI 2.25-18	EULI 2.50-18	EULI 2.75-18	EULI 3.00-18	EULI 3.25-18	EULI 3.50-18	EULI 4.00-18
23	EULI 2.25-23	EULI 2.50-23	EULI 2.75-23	EULI 3.00-23	EULI 3.25-23	EULI 3.50-23	EULI 4.00-23
28	EULI 2.25-28	EULI 2.50-28	EULI 2.75-28	EULI 3.00-28	EULI 3.25-28	EULI 3.50-28	EULI 4.00-28
33	EULI 2.25-33	EULI 2.50-33	EULI 2.75-33	EULI 3.00-33	EULI 3.25-33	EULI 3.50-33	EULI 4.00-33
38	EULI 2.25-38	EULI 2.50-38	EULI 2.75-38	EULI 3.00-38	EULI 3.25-38	EULI 3.50-38	EULI 4.00-38
43	EULI 2.25-43	EULI 2.50-43	EULI 2.75-43	EULI 3.00-43	EULI 3.25-43	EULI 3.50-43	EULI 4.00-43
48	EULI 2.25-48	EULI 2.50-48	EULI 2.75-48	EULI 3.00-48	EULI 3.25-48	EULI 3.50-48	EULI 4.00-48

■ Available on special request



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