

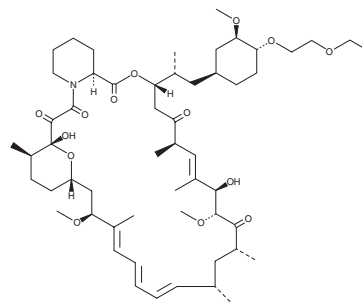
PRODUCT INFORMATION



Umirolimus

Item No. 23585

CAS Registry No.: 851536-75-9
Formal Name: 42-O-(2-ethoxyethyl)-rapamycin
MF: $C_{55}H_{87}NO_{14}$
FW: 986.3
Purity: $\geq 95\%$
Supplied as: A solid
Storage: -20°C
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Umirolimus is supplied as a solid. A stock solution may be made by dissolving the umirolimus in the solvent of choice, which should be purged with an inert gas. Umirolimus is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Umirolimus is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Umirolimus is a semisynthetic macrocyclic lactone and a derivative of rapamycin (Item No. 13346) that has immunosuppressive and anti-inflammatory effects.¹ It halts the cell cycle at the G_1 phase through an IL-2/mTOR-mediated pathway and inhibits proliferation of human smooth muscle cells. In a porcine overstretch model, coronary stents containing umirolimus for localized delivery to the vessel wall reduced stenosis by 50% and led to less thickening of the vessel wall than a bare metal stent. Rapamycin, and likely its derivatives, binds to the cytosolic FK-binding protein 12 (FKBP12) to inhibit the mammalian target of rapamycin (mTOR) pathway. Formulations containing umirolimus have been used in coronary stents for localized delivery to the vessel wall.

Reference

1. Grube, E. and Buellesfeld, L. BioMatrix® Biolimus A9®-eluting coronary stent: A next-generation drug-eluting stent for coronary artery disease. *Expert Rev. Med. Devices* **3**(6), 731-741 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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