Millipore®

Expert Pharm/BioPharm
Products & CTDMO Services

MilliporeSigma

LIPIDS

for Pharmaceutical Applications

Your global partner for the manufacturing of synthetic lipids.

A GMP-scalable manufacturing process which consistently yields a high-quality lipid is essential to the successful development and manufacture of lipid-based drug product. We are highly specialized in synthesizing top-quality GMP lipids for pharmaceutical applications and cell and gene therapy, focusing on tailored manufacturing to meet your specific needs. We also offer an off-the-shelf lipids with optimized stability, solubility, and handling characteristics.

Our global manufacturing network, including facilities in Western Europe, enables the GMP manufacture of synthetic lipids that meet high quality and regulatory standards. Committed to consistently high product quality, reliability of supply, and short delivery timelines, we assist you through all phases of clinical development and commercialization to meet your development milestones.

Our Millipore® CTDMO Services support your custom lipid synthesis needs at every phase of development, from non-GMP samples all the way to commercially-validated GMP material.

Our SAFC® portfolio of lipids allows you to purchase off-the-shelf, high quality lipids to readily test and use in your formulations.

Lipids Excellence

- Support in every phase of development
- cGMPs and site standards that follow the concepts of ICH Q7
- Consistent and high product quality from grams to tons
- An excellent track record of customer and FDA audits
- Strong expertise in lipids analytics, including analytical method development, and stability-studies
- Phase-appropriate regulatory support and technical expertise
- Custom manufacturing including new chemical synthesis route finding
- Bovine Spongiform Encephalopathy (BSE) & Transmissible Spongiform Encephalopathies (TSEs) free certificates

MilliporeSigma is the U.S. and Canada Life Science business of Merck KGaA, Darmstadt, Germany.

A strong track record:

30+ years of experience synthesizing high quality excipients and **custom manufacturing of lipids** including proprietary ones. Benefit from our flexible manufacturing capacity allowing synthesis of gram scale samples up to 80+kg batches.

Our team of experts has extensive and recognized experience in synthesis route scouting with scale up in mind to support you through your clinical development towards commercialization.

Our SAFC® portfolio with off-the-shelf lipid products:

Neutral lipids	Ionizable lipids	Cationic lipids	PEG lipids	Phospholipids	Others
Synthetic cholesterol Cat. No. **104672**	**(R)-DODMA** [3] Cat. No. **500244**	**(R,S)-DOTAP Cl** [3] Cat. No. **589692 (R)**	**mPEG 2k DSG** Cat. No. **572495**	**DOPE** Cat. No. **587762**	**Palmitic acid** Cat. No. **W50230**
Isomeric mixture 1,3- and 1,2-GDO Cat. No. **588085**	**ALC-0315** [1,2] Cat. No. **586224**	**(R)-DOTAP Cl** [1] Cat. No. **CH2900029**	**mPEG 2k DMG** Cat. No. **603801**	**DPPC** Cat. No. **P3726**	
Tripalmitin[1] Cat. No. **W50222**		**(R)-DOTMA Cl** Cat. No. **597890**	**ALC-0159** [1] Cat. No. **586054**		

SAFC®
Pharma & Biopharma Raw Material Solutions

[1] Indication or license restriction.
[2] Dual sourcing capabilities.
[3] Upon request, please contact us.

Didn't find what you're looking for?

Contact us to discuss custom manufacturing of alternative lipid solutions to meet your needs at: **SigmaAldrich.com/Lipids-CDMO**

Learn more about our Millipore® CTDMO services here:
SigmaAldrich.com/MilliporeCTDMOServices

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

© 2026 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved. MilliporeSigma, the Vibrant M, Millipore, and SAFC are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.

MS_FL1434EN Ver 2.0
70022
05/2026