



6-Trehalose monooleate

Cat. No.:	OB0626WX-3679
Appearance:	Solid
Purity:	≥95%
Identity:	Confirmed by NMR and HPLC.
Size:	1 mg; 5 mg; 10 mg; 25 mg

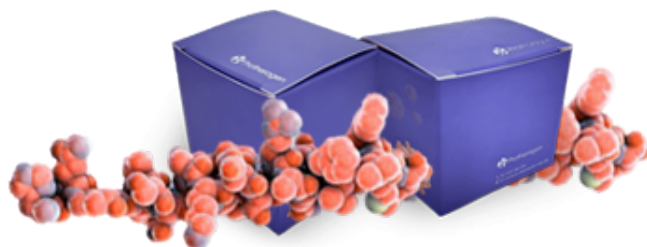
This product is for research use only and is not intended for diagnostic use.

Product Overview

Description	6-Trehalose monooleate is a bio-inspired glycolipid surfactant composed of a disaccharide core esterified with a mono-unsaturated oleic acid tail. This amphiphilic molecule serves as a specialized structural component in lipid nanoparticles designed for the ex vivo delivery of immunosuppressive compounds, regulating payload release within specific dermal layers, while also functioning as an effective stabilizer to prevent protein aggregation in aqueous formulations.
Synonyms	α-D-glucopyranosyl-α-D-glucopyranoside, 6-(9Z)-9-octadecenoate; 6-TMO; trehalose monooleate; 6-O-Oleoyltrehalose; 338733-38-3
CAS No.	338733-38-3
Compound CID	101218988
Formula	C ₃₀ H ₅₄ O ₁₂
Formula Weight	606.7

Specification

Solubility in Other Solvents	Chloroform: 0.1-1 mg/mL; Methanol: 0.1-1 mg/mL
IUPAC Name	[(2R,3S,4S,5R,6R)-3,4,5-trihydroxy-6-[(2R,3R,4S,5S,6R)-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxyoxan-2-yl)methyl (Z)-octadec-9-enoate
InChI	InChI=1S/C30H54O12/c1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-22(32)39-19-21-24(34)26(36)28(38)30(41-21)42-29-27(37)25(35)23(33)20(18-31)40-29/h9-10,20-21,23-31,33-38H,2-8,11-19H2,1H3/b10-9/t20-,21-,23-,24-,25+,26+,27-,28-,29-,30-/m1/s1



InChI Key	MLVMMWOWJSIKLS-WYVBACLFSA-N
Canonical SMILES	<chem>O[C@H]([C@H]1O)[C@H](O[C@@H]([C@H]1O)COC(CCCCCC/C=C\CCCCCCCC)=O)O[C@@H]2[C@H](O)[C@@H](O)[C@H](O)[C@@H](CO)O2</chem>
Stability	1 year
Storage	Storage at -20°C.
Applications	6-Trehalose monooleate is utilized in lipid and biomaterial research involving a mphiphilic carbohydrate-based lipid derivatives. It supports studies of lipid as sembly, formulation stabilization strategies, and interactions between glycolipi d components and lipid-based systems.