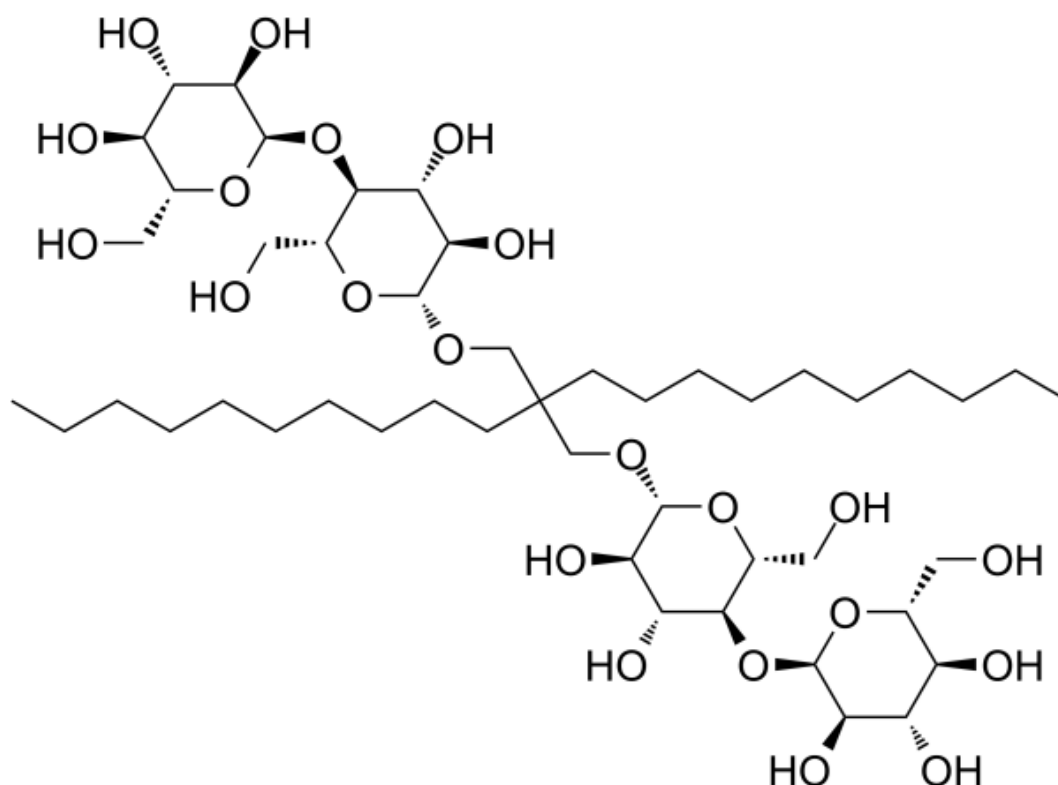


Lauryl maltose neopentyl glycol (LMNG)

Cat # NB-19-0055-1G size: 1g

Cat # NB-19-0055-5G size: 5g

Cat # NB-19-0055-25G size: 25g



Biological Activity

Lauryl maltose neopentyl glycol (LMNG) is a detergent that can solubilize and stabilize membrane proteins. Lauryl maltose neopentyl glycol extracts integral membrane proteins from membranes, and improves substantially the stability of various membrane proteins, including G protein-coupled receptors and respiratory complexes ^{[1][2]}.

In vitro: Lauryl maltose neopentyl glycol can yield essentially soluble membrane proteins at detergent concentrations that do not inhibit the cell-free reaction ^[2].

Product Information

Batch No.:	109467
Chemical Name:	2,2-didecylpropane-1,3-bis-β-D-maltopyranoside, LMNG
Batch Molecular Formula:	C ₄₇ H ₈₈ O ₂₂
Batch Molecular Weight:	1005.19
CAS No.:	[1257852-96-2]

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Physical Appearance:	White to yellow (Solid)
Purity (NMR)	≥98.0%
Storage:	-20°C, stored under nitrogen, away from moisture
	* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen, away from moisture)

Solvent and solubility

In Vitro	DMSO : 230 mg/mL (228.81 mM; Need ultrasonic)
	Methanol : 125 mg/mL (124.35 mM; Need ultrasonic)
	H ₂ O : 100 mg/mL (99.48 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		0.9948 mL	4.9742 mL	9.9484 mL
	5 mM		0.1990 mL	0.9948 mL	1.9897 mL
	10 mM		0.0995 mL	0.4974 mL	0.9948 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 5.75 mg/mL (5.72 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 5.75 mg/mL (5.72 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 5.75 mg/mL (5.72 mM); Clear solution

References

- [1]. Breyton C, et, al. Assemblies of lauryl maltose neopentyl glycol (LMNG) and LMNG-solubilized membrane proteins. *Biochim Biophys Acta Biomembr.* 2019 May 1;1861(5):939-957.
- [2]. Fogeron ML, et, al. Wheat germ cell-free expression: Two detergents with a low critical micelle concentration allow for production of soluble HCV membrane proteins. *Protein Expr Purif.* 2015 Jan;105:39-46.

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