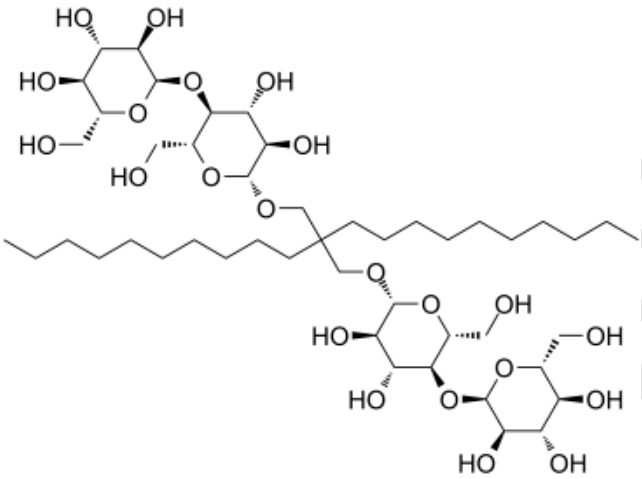
Lauryl maltose neopentyl glycol (LMNG)

Cat # NB-19-0055



Description

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

Codes	NB-19-0055-1G, NB-19-0055-5G, NB-19-0055-25G
Sizes	1g, 5g, 25g
Synonyms	2,2-didecylpropane-1,3-bis-β-D-maltopyranoside, LMNG
CAS number	1257852-96-2
Formula	$C_{47}H_{88}O_{22}$
Molecular Weight	1005.19
Purity (HPLC)	Min 98%
Note	For research use only.

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Description

In vitro :

Preparing stock solutions (Volume of Solvent) :

Mass / Concentration	*1 mg*	*5 mg*	*10 mg*
1 mM	0.9948 mL	4.9742 mL	9.9484 mL
5 mM	0.1990 mL	0.9948 mL	1.9897 mL
10mM	0.0995 mL	0.4974 mL	0.9948 mL

Methanol : 125 mg/mL (124.35 mM; Need ultrasonic)
DMSO : 57.5 mg/mL (57.20 mM; ultrasonic and warming and heat to 60°C)

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

In vitro :

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.