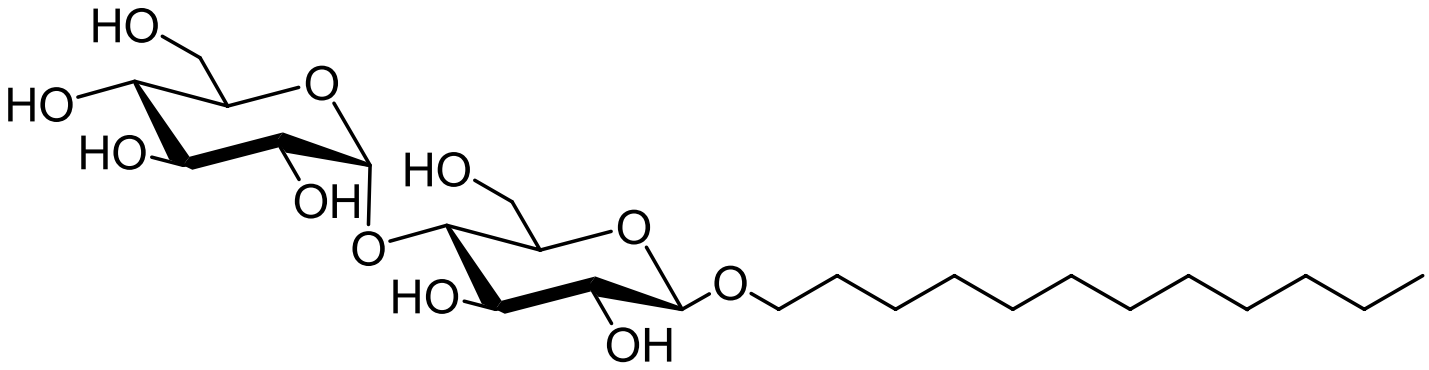
Technical Data Sheet

n-dodecyl-β-D-maltopyranoside

Catalog Number	850520	**Physical state**	Powder
Purity	> 99%; contains <2% α isomer	**Transition temp.**	No data
CAS	69227-93-6	**CMC**	~0.2 mM
Synonyms	n-dodecyl-β-D-maltoside; DDM; lauryl maltoside; dodecyl 4-O-α-D-glucopyranosyl-β-D-glucopyranoside	**pK_a**	No data
Molec. Formula	$C_{24}H_{46}O_{11}$	**TLC mobile phase**	C:M*, 80:20, v/v
MW	510.615	**Exact Mass**	510.304
Percent composition	C 56.45% H 9.08% O 34.47%		
Stability	Store in <-20°C freezer for up to one year		
Solubility	Soluble in ethanol, methanol, water and chloroform		
Web link	850520		

*C, chloroform; M, methanol



Description:

Non-ionizing detergents, such as n-dodecyl-β-D-maltopyranoside, help solubilize membrane proteins (Reisinger and Eickacker, 2008). To determine the structure of a membrane protein**,** it must keep its native structure when extracted. DDM can preserve the activity of such diverse membrane proteins as Bacillus multidrug resistance ATP protein (Matar-Merheb et al, 2011), bacteriorhodopsin (Sasaki et al, 2011) and a G-protein coupled receptor (O'Malley et al, 2011) among others. Also, DDM is used as a reference for surfactants (Hovers et al, 2011).

References:

• Reisinger V, Eichacker LA (2008) Isolation of membrane protein complexes by blue native electrophoresis.
Methods Mol Biol. 424: 423-31
• Matar-Merheb et al (2011) Structuring detergents for extracting and stabilizing functional membrane proteins.
PLoS One. 6(3): e18036
• Sasaki et al (2011) Sensitive detection of protein-lipid interaction change on bacteriorhodopsin using dodecyl β-D-maltoside.
Biochemistry. 50(12): 2283-90
• O'Malley et al (2011) The morphology and composition of cholesterol-rich micellar nanostructures determine transmembrane protein (GPCR) activity.
Biophys J. 100(2): L11-3
• Hovers et al (2011) A class of mild surfactants that keep integral membrane proteins water-soluble for functional studies and crystallization.
Mol Membr Biol. 28(3): 171-81

Related products: Detergents

MSDS: Available at www.avantilipids.com for Product Number 850520

Avanti Polar Lipids, Inc., 700 Industrial Park Drive, Alabaster, AL 35007-9105, U.S.A.
Phone •(800) 227-0651 •(205) 663-2494 •Fax (800) 229-1004 •(205) 663-0756
Email •orders@avantilipids.com •Technical Questions: technical@avantilipids.com
•Inquiries: info@avantilipids.com •Analytical: analytical@avantilipids.com

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