

DIBMA 6



Product	Catalog No.	Package size
DIBMA 6 (10x50mg)	18751	5 g
DIBMA 6 (1g)	18752	1 g
DIBMA 6 (10x1g)	18753	10 g
DIBMA 6 (50g)	18754	50 g

Product Description

The use of a Poly(diisobutylene-alt-maleic acid sodium salt) copolymer (DIBMA 6 HEPES) for stabilization of membrane proteins could provide bicelles with membrane proteins from native membranes in absence of detergents, by wrapping around a patch of a lipid bilayer to form a disc-like particle or nanodisc. The DIBMA 6 HEPES based products contain the copolymer and a 50 mM HEPES buffer, adjusted to pH 7.5, so only dd water has to be added for direct application. The pH value has been selected being very effective for protein solubilization. DIBMA 6 HEPES from Cube Biotech is a highly purified copolymer, with a molecular weight (Mw) of 6.000 Da. After dissolving the lyophilized copolymer powder with membrane protein-containing buffer, the concentration should be in the range from 1.0 to 5.0%. Copolymers provide a hydrophobic surface facing the lipids, and a hydrophilic surface at the outside. This setup makes nanodiscs highly soluble in aqueous solutions and allows the solubilization of membrane proteins in the absence of detergents. The product can be used with phospholipids, such as dimyristoyl-glycero-phosphocholine (DMPC) or palmitoyl-oleoyl-phosphatidyl-choline (POPC) in combination with sodium cholate.

The complex from DIBMA 6 HEPES and membrane protein can be used with many biophysical assays, such as SDS-PAGE, SEC, Western Blot, UV/Vis spectroscopy, and many chromatographic procedures.

Reconstitution of Copolymer Solution

DIBMA 6 HEPES copolymers as delivered are lyophilized from a solution containing 50 mM HEPES, pH 7.5. Each aliquot contains 50 mg of polymer, 1 g, 10 g or 50 g respectively. Adding 0.5 mL double distilled water per 50 mg of polymer will restore the original solution with a copolymer concentration of 10%. This stock can be diluted further as required by the different application protocols.

Technical Details

Name	Poly(diisobutylene-alt-maleic acid sodium salt) copolymer, sodium salt in 50 mM HEPES, pH 7.5
Solubility	>10% (H ₂ O)
Color	White to slightly yellow
pH (dissolved)	7.5 ± 0.3

Shipping & Storage

Shipping Temperature	Ambient Temperature
Storage of lyophilized copolymer	-20°C for several years
Storage of dissolved copolymer	2-8°C for several days

Additional Information

For DIBMA 6 protocols, please visit our corresponding product websites under: <https://cube-biotech.com/products/membrane-protein-stabilization/copolymer-nanodisc-products/>

Disclaimer

Our products are intended for molecular biology applications. These products are not intended for the diagnosis, prevention, or treatment of a disease.