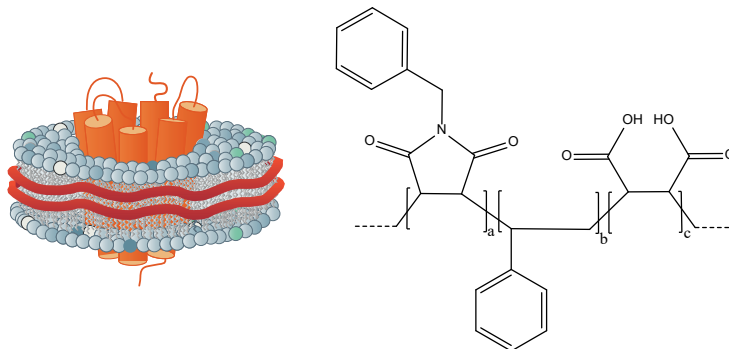


SMALP BZ40



Product	Catalog No.	Package size
SMALP BZ40 (10 x 50 mg)	18641	10 x 50 mg
SMALP BZ40 (1 g)	18642	1 g
SMALP BZ40 (10 x 1 g)	18643	10 x 1g
SMALP BZ40 (50 g)	18644	50 g



Product Description

The use of poly(styrene-co-maleic acid-co-40%(N-benzyl)maleimide) copolymer (BZ40-SMA) for stabilization of membrane proteins can provide bicelles with membrane proteins from native membranes in the absence of detergents. This is achieved by wrapping around a patch of a lipid bilayer to form a disc-like particle or nanodisc. The SMALP BZ40-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 to be very effective for protein solubilization.

Cube Biotech's SMALP BZ40 is a highly purified electroneutral copolymer, with a molecular weight (Mw) of ~5.500. After dissolving the lyophilized copolymer powder with membrane protein-containing buffer, the concentration should range from 1.0 to 5.0%. Copolymers provide a hydrophobic surface facing the lipids and a hydrophilic surface on the outside. This setup makes nanodiscs highly soluble in aqueous solutions and allows the solubilization of membrane proteins in the absence of detergents. This 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 SMALP BZ40 and membrane protein can be used in many biophysical assays, such as SDS-PAGE, SEC, Western Blot, UV/Vis spectroscopy, and many chromatographic procedures.

Reconstitution of the copolymer solution:

SMALP BZ40 copolymers are delivered as a lyophilized 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 different application protocols.

Technical Details

Name	Poly(styrene-co-maleic acid-co-40%(N-benzyl)maleimide) copolymer, sodium salt in 50 mM HEPES, pH 7.5
Solubility	>10% (H ₂ O)
Color	White to slightly yellow
Odor	Odorless
pH (dissolved)	7.5 ± 0.3

Shipping & Storage

Shipping temperature	Ambient temperature
Long-term Storage (lyophilized copolymer)	-20 °C for several years
Short-term Storage (dissolved copolymer)	2-8 °C for several days

Additional Information

For SMALP BZ40 protocols, please visit our webpage at: <https://cube-biotech.com/products/membrane-protein-stabilization/synthetic-nanodisc-products/>

Disclaimer**Patent Pending**

The purchaser is licensed under those patents to use the SMALP BZ40; for the manufacture of lipid particles and to use SMALP BZ40 so manufactured for the purpose of research and development of proteins, including their production (including purification and solubilization), screening, testing, analysis, characterization (including structural analysis and characterization), including for the purpose of drug screening, but not for the purpose of delivery of agents to humans or other animals for therapeutic, diagnostic, prophylactic purposes, which uses are specifically prohibited.