

Cubipol



Product	Catalog No.	Package size
Cubipol (10x50mg)	18701	5 g
Cubipol (1g)	18702	1 g
Cubipol (10x1g)	18703	10 g
Cubipol (50g)	18704	50 g

Product Description

The use of a Cubipol 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 Cubipol 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 to be very effective for protein solubilization. Cubipol HEPES from Cube Biotech is a highly purified copolymer, with a molecular weight (Mw) of 7.200 Da. After dissolving the lyophilized copolymer powder with membrane protein-containing buffer, the concentration should be in the range of 1.0 to 5.0%. Copolymers provide a hydrophobic surface facing the lipids and a hydrophilic surface on the outside. This setup makes copolymer nanodiscs highly soluble in aqueous solutions and allows the solubilization of membrane proteins without 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 Cubipol 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

Cubipol HEPES copolymers, as delivered, are lyophilized from a solution containing 50 mM HEPES, pH 7.5. Each aliquot contains 50 mg of copolymer, 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	Cubipol, 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 Cubipol protocols, please visit our corresponding product websites under: <https://cube-biotech.com/products/membrane-protein-stabilization/copolymer-nanodisc-products/cubipol/>

Disclaimer

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