

Cubipol PEG HEPES



Product	Catalog No.	Package size
Cubipol PEG HEPES (10x50 mg)	18791	10x50 mg
Cubipol PEG HEPES (1 g)	18792	1 g
Cubipol PEG HEPES (10 g)	18793	10x1 g
Cubipol PEG HEPES (50 g)	18794	50 g

Product Description

The use of a Cubipol PEG 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 PEG 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. Cubipol PEG 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 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 Cubipol PEG 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 PEG 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 copolymer 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 PEG sodium salt in 50 mM HEPES, pH 7.5
Solubility	>10% (H ₂ O)
Color	white to light yellow
Odor	Odorless
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 PEG HEPES protocols, please visit our webpage.

Cube Biotech also offers MSP nanodisc products and other nanodisc copolymers such as styrene maleic copolymer (SMA), Diisobutylene-maleic acid (DIBMA), Poly(acrylic acid-co-styrene (AASTY), and Ultrasolute™ Amphipol (CyclAPols).

For protein affinity purification, Cube Biotech offers dedicated agarose resins, magnetic beads and prepacked cartridges. Also available are a range of ultrapure detergents and buffers for extraction and purification of proteins.

Disclaimer

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