Cubipol Amine HEPES

Product	Catalog No.	Package size
Cubipol Amine HEPES (10x50 mg)	18796	10x50 mg
Cubipol Amine HEPES (1 g)	18797	1 g
Cubipol Amine HEPES (10 g)	18798	10x1 g
Cubipol Amine HEPES (50 g)	18799	50 g

Product Description

The use of a Cubipol Amine 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 Amine HEPES based products contain the copolymer and a 50mM 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 Amine 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 Amine 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 Amine 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.

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Technical Details

Name	Cubipol Amine sodium salt in 50 mM HEPES, pH 7.5
Solubility	>10% (H_2O)
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 Amine 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 (CycIAPols).
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.

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