Product Data Sheet

Product Name: Poly(2-hydroxyethyl methacrylate) (MW 1000000)
Cat. No.: GC61914

Chemical Properties

Cas. No.	25249-16-5		
SMILES	OCCOC(C(C)(C)CC)=O		
Formula		M.Wt	1000000(Average)
Solubility	DMSO : 25 mg/mL (Need ultrasonic); Ethanol : < 1 mg/mL (insoluble)	Storage	4°C, away from moisture
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

Poly(2-hydroxyethyl methacrylate) (MW 1000000) is one of the most important hydrogels in the biomaterials world. Poly(2-hydroxyethyl methacrylate) is the basic component of contact lenses, and is also used in implantation of soft tissues, synthetic transplant for gristle and bone, regeneration of neurotic tissue, transmission of drug and etc[1].

Poly(2-hydroxyethyl methacrylate) (PolyHEMA) retains moisture content similar to the live tissue and is resistant to degradation and absorption by the host cells. It can be easily manufactured in a variety of shapes and can be readily sterilized[1]. Proliferation rate of the cells that had been cultured on Poly(2-hydroxyethyl methacrylate) is reduced; Poly(2-hydroxyethyl methacrylate) does not induce cell death in the hRPE cultures. Human retinal pigment epithelium (RPE) cells cultured on Poly(2-hydroxyethyl methacrylate) formed many giant spheroid colonies. The giant colonies are re-cultured and the presence of retinal progenitor markers and markers of hRPE cells are detected in cell cultures on Poly(2-hydroxyethyl methacrylate)[1].

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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References:
[1]. Fatemeh Nazemroaya, et al. Induced Retro-Differentiation of Human Retinal Pigment Epithelial Cells on PolyHEMA. J Cell Biochem. 2017 Oct;118(10):3080-3089.

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