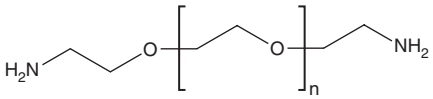
PRODUCT INFORMATION

PEG diamine

Item No. 21174

CAS Registry No.: 24991-53-5
Formal Name: α-(2-aminoethyl)-ω-(2-aminoethoxy)-poly(oxy-1,2-ethanediyl)
Synonyms: PEG-*bis*-amine, Polyoxyethylene-*bis*-amine
MF: $(C_2H_4O)_nC_4H_{12}N_2O$
Purity: ≥95%
Supplied as: A liquid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PEG diamine is supplied as a liquid. A stock solution may be made by dissolving the PEG diamine in the solvent of choice, which should be purged with an inert gas. PEG diamine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of PEG diamine in these solvents is approximately 33 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of PEG diamine can be prepared by directly dissolving the liquid in aqueous buffers. The solubility of PEG diamine in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

PEG diamine is a PEGylated building block.[1,2] It has been used as a linker to conjugate folic acid (Item No. 20515) to 1,2-distearoyl-*rac*-glycero-PE (1,2-DSPE) as a component in the formation of doxorubicin-containing liposomes with anticancer activity.[1] PEG diamine has also been conjugated to oleanolic acid (Item No. 11726), which improves oleanolic acid-induced inhibition of cell proliferation by 677-fold in HepG2 hepatocellular carcinoma cells.[2]

References

1. Lee, R.J. and Low, P.S. Folate-mediated tumor cell targeting of liposome-entrapped doxorubicin in vitro. *Biochim. Biophys. Acta* **1233(2)**, 134-144 (1995).
2. Jannus, F., Medina-O'Donnell, M., Rivas, F., *et al*. A diamine-PEGylated oleanolic acid derivative induced efficient apoptosis through a death receptor and mitochondrial apoptotic pathway in HepG2 human hepatoma cells. *Biomolecules* **10(10)**, 1375 (2020).

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