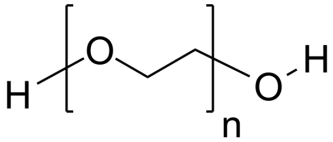
PEG300

Cat. No.:	HY-Y0873
CAS No.:	25322-68-3
Molecular Weight:	300
Target:	Biochemical Assay Reagents
Pathway:	Others
Storage:	4°C, sealed storage, away from moisture



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (333.33 mM; Need ultrasonic)

H_2O : ≥ 50 mg/mL (166.67 mM)

* "≥" means soluble, but saturation unknown.

BIOLOGICAL ACTIVITY

Description

PEG300 (Polyethylene glycol 300), a neutral polymer of molecular weight 300, is a water-soluble, low immunogenic and biocompatible polymer formed by repeating units of ethylene glycol[1][2].

In Vitro

The FDA has approved polyethylene glycol (PEG) for use as a vehicle or base in foods, cosmetics and pharmaceuticals, including injectable, topical, rectal and nasal formulations. PEG shows little toxicity, and is eliminated from the body intact by either the kidneys (for PEGs < 30 kDa) or in the faeces (for PEGs > 20 kDa). PEG lacks immunogenicity, and antibodies to PEG are generated in rabbits only if PEG is combined with highly immunogenic proteins[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs).

The final concentration of PEG300 can go up to 50% in the formulations for intravenous and intramuscular injection without any toxic effects. When administered orally, the highest concentration of PEG300 can reach up to 90%[4][5].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell. 2021 Sep 2;184(18):4753-4771.e27.
- Signal Transduct Target Ther. 2023 Sep 25;8(1):366.
- Nat Microbiol. 2023 Jan;8(1):121-134.
- J Hepatol. 2023 Jan 18;S0168-8278(23)00015-6.

- Nat Commun. 2024 Jan 4;15(1):252.

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REFERENCES

[1]. J.Billingham, et al. Adsorption of polyamine, polyacrylic acid and polyethylene glycol on montmorillonite: An in situ study using ATR-FTIR. Volume 14, Issue 1, March 1997, Pages 19-34.

[2]. Lee CC, et al. Structural basis of polyethylene glycol recognition by antibody. J Biomed Sci. 2020 Jan 7;27(1):12.

[3]. Harris JM, et al. Effect of pegylation on pharmaceuticals. Nat Rev Drug Discov. 2003 Mar;2(3):214-21.

[4]. Xiaoqin Wang, et al. Injectable silk-polyethylene glycol hydrogels. Acta Biomater. 2015 Jan;12:51-61.

[5]. Ellen Weisberg, et al. Beneficial effects of combining nilotinib and imatinib in preclinical models of BCR-ABL+ leukemias. Blood. 2007 Mar 1;109(5):2112-20.

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