Data Sheet (Cat.No.TSH-00515)

TargetMol

Poloxamer 124 (L44)

Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Poloxamer 124 (L44) is a block copolymer of polyoxyethylene and polyoxypropylene with an average molecular weight of 2200. Poloxamer 124 (L44) exhibits oral toxicity in albino rat studies with an LD50 of 5 g/kg and causes eye irritation. Poloxamer 124 (L44) forms thermoreversible hydrogels and is used in pharmaceutical formulation research and biomaterials studies investigating surfactant-mediated drug solubilization, hydrogel phase transition behavior, and polymer-based delivery systems in biological environments.
Targets(IC50)	Others
In vivo	Methods:Rats were intragastrically administered with 0.17 mg/mL Poloxamer 124 (L44) at a rate of 3 mL/h for 1 hour. Lipid transport in the lymphatic system and lipid recovery rate in the intestinal lumen were determined. Results:Poloxamer 124 (L44) markedly reduced the transport of triglycerides and cholesterol as well as phospholipid output in the rat lymphatic system, while exerting no obvious impact on digestive and absorptive functions. The recovery rates of intestinal lumen lipids and cholesterol remained unchanged [3]. It suggests that Poloxamer 124 (L44) can interfere with lipoprotein assembly and/or the efflux of lipoproteins from intestinal mucosal cells.

Solubility Information

Solubility	H2O: 160 mg/mL,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Reference

Singh-Joy SD, et al., Safety assessment of poloxamers 101, 105, 108, 122, 123, 124, 181, 182, 183, 184, 185, 188, 212, 215, 217, 231, 234, 235, 237, 238, 282, 284, 288, 331,
333, 334, 335, 338, 401, 402, 403, and 407, poloxamer 105 benzoate, and poloxamer 182 dibenzoate as used in cosmetics. Int J Toxicol. 2008;27 Suppl 2:93-128.

Li Y, et al., Ultra-high-performance liquid chromatography coupled with quadrupole time of flight mass spectrometry method for quantifying polymer poloxamer 124
and its application to pharmacokinetic study. J Sep Sci. 2021 Oct;44(20):3822-3829.

Tso P, et al. Effect of hydrophobic surfactant (Pluronic L-81) on lymphatic lipid transport in the rat. Am J Physiol. 1980 Nov;239(5):G348-53.

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