Poloxamer 407 (F127)

Cat. No.: HY-D1005

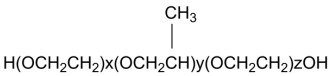
CAS No.: 9003-11-6

Target: LPL Receptor

Pathway: GPCR/G Protein

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	H_2O : 110 mg/mL (Need ultrasonic)
In Vivo	1. Add each solvent one by one: PBS Solubility: 50 mg/mL (Infinity mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	Poloxamer 407 (F127) is a nonionic surfactant that is 100% active and relatively non-toxic to cells at low concentrations, and frequently used with dye AM esters such as Indo-1 AM, Fura-2 AM, Calcein AM, Fluo-3 AM, Fluo-4 AM, Quest Fluo-8™ AM and Quest Rhod-4™ AM, etc. to improve their water solubility. Poloxamer 407 is also a lipoprotein lipase inhibitor[1][2].
In Vitro	Guidelines (Following is our recommended protocol. This protocol only provides a guideline, and should be modified according to your specific needs). 1. Dissolve 1 g of Poloxamer 407 (F127) in 10 mL distilled water to make a 10% (w/v) stock solution, or 2 g of Poloxamer 407 (F127) in 10 mL DMSO to make a 20% (w/v) stock solution. These may require heating from 40 to 50°C for about 30 minutes. Store solution at room temperature. Do not refrigerate or freeze the Poloxamer 407 (F127) solution since it may precipitate. If precipitation is observed, the precipitates can be dissolved by heating to 37°C and vortexing before use. 2. Dilute the 10% or 20% Poloxamer 407 (F127) stock solution into the cell-loading buffer such as Hanks and 20 mM Hepes buffer (HHBS) at 1:1000 to 1:500 dilution to achieve a 0.02 to 0.04% working solution. 3. The DMSO stock solution of AM ester is then diluted into the 0.02 to 0.04% working solution to achieve a final AM ester concentration between 1 μM and 10 μM. The final concentration of Poloxamer 407 (F127) is normally kept at or below 0.08%. 4. The cells are incubated at a desired temperature for between 10 minutes and 1 hour. In general it is desirable to use the minimum amount of AM ester needed to achieve adequate fluorescence signal to noise levels. 5. After labeling, the cells are washed with HHBS or fresh medium before starting the experiment. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Poloxamer 407 (F127) (0.25 g/kg; i.p.; every other day for 7 weeks) induces hypertriglyceridemia but decreases atherosclerosis in Ldlr$^{-/-}$ mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Ldlr$^{-/-}$ mice[2]
Dosage:	0.25 g/kg
Administration:	Intraperitoneal injection, every other day for 7 weeks
Result:	Mice tended to have a lower body weight and had smaller epididymal fat pads compared to the saline controls, and had reduced atherosclerosis.

CUSTOMER VALIDATION

- Dig Dis Sci. 2022 Jul 4.
- Research Square Preprint. 2023 Jul 5.

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REFERENCES

[1]. Peng X, et al. Poloxamer 407 Induces Hypertriglyceridemia but Decreases Atherosclerosis in Ldlr-/- Mice. Cells. 2022 May 30;11(11):1795.

[2]. Antunes FE, et al. Gels of Pluronic F127 and nonionic surfactants from rheological characterization to controlled drug permeation. Colloids Surf B Biointerfaces. 2011 Oct 1;87(1):42-8.

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