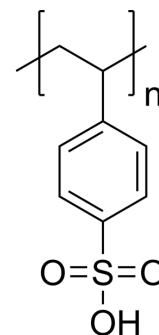


Polystyrene

Cat. No.:	HY-148163
CAS No.:	28210-41-5
Molecular Formula:	(C ₈ H ₈ O ₃ S) _x
Target:	Others
Pathway:	Others
Storage:	Solution, -20°C, 2 years



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 250 mg/mL (Need ultrasonic)
----------	--

BIOLOGICAL ACTIVITY

Description	Polystyrene can form Polystyrene microplastics (PS-MPs), a hazardous material with potential toxicity. Polystyrene microplastics is harm to zebrafish heart and induces male reproductive toxicity in mice ^{[1][2]} . MCE provides Polystyrene products in solution packaging.
In Vitro	Polystyrene can be made into microplastics (PS-MPs). 0.5 μm, 4 μm, and 10 μm-particle-size PS-MPs can enter into three kinds of testicular cells (GC-1 cell line) in vitro. PS-MPs causes a decrease in sperm quality and testosterone levels in mice ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	<p>Polystyrene (PS-MPs' particle sizes 3-12 μm; p.o.; 21 d) shows adverse effect on zebrafish activity and oxidative stress, metabolic changes and contraction parameters in the heart tissue^[1].</p> <p>Polystyrene (PS-MPs' particle sizes of 4 μm and 10 μm; p.o.; 24 h) results PS-MPs accumulated in the testis of mice, and (PS-MPs, particle sizes of 4 μm and 10 μm; p.o.; 28 d) induces spermatogenic cells abscised and arranged disorderly, and multinucleated gonocytes occurred in the seminiferous tubule^[2].</p> <p>Polystyrene (PS-MPs' particle sizes of 0.5 μm, 4 μm and 10 μm; p.o.; 28 d) induces testicular inflammation and the disruption of blood-testis barrier in mice^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

CUSTOMER VALIDATION

- J Hazard Mater. 2024 Jun 7:475:134854.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Dimitriadi A, et al. Adverse effects polystyrene microplastics exert on zebrafish heart - Molecular to individual level. J Hazard Mater. 2021 Aug 15;416:125969.

[2]. Jin H, et al. Polystyrene microplastics induced male reproductive toxicity in mice. J Hazard Mater. 2021 Jan 5;401:123430.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA