Poly(styrenyl acetal trehalose)

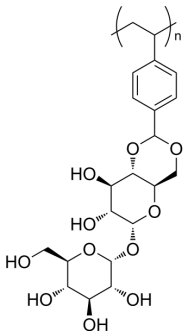
Cat. No.: HY-150502

Molecular Formula: $C_{23}H_{34}O_{11}$

Target: Biochemical Assay Reagents

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Poly(styrenyl acetal trehalose) (pSAT) is composed of trehalose side chains linked to a polystyrene backbone via acetals. Poly(styrenyl acetal trehalose) stabilizes a variety of proteins and enzymes against fluctuations in temperature, and does not trigger the innate immune response. Poly(styrenyl acetal trehalose) can be used in synthesis of protein-polymer conjugates for reduced renal clearance of the biomolecule[1].

In Vivo

Poly(styrenyl acetal trehalose) (10 mg/kg; IV, single dosage) does not induce liver or kidney damage, and is safe in terms of acute toxicity in mice[1].

Poly(styrenyl acetal trehalose) (1 mg/kg; IP, twice, at the 0 and 14 day) does not induce the increase of pro-inflammatory cytokines and IgG[1].

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

Animal Model:	Female CD-1 mice (6 weeks, n = 6)[1]
Dosage:	10 mg/kg
Administration:	IV, single dosage
Result:	Did not induce liver or kidney damage, and was safe in terms of acute toxicity.

Animal Model:	Female CD-1 mice (6 weeks, n = 6)[1]
Dosage:	1 mg/kg
Administration:	IP, twice, at the 0 and 14 day
Result:	Did not lead to IgG production. Led to a slight increase in the IgM level for weeks 1 and 2 but dropped to the negative control level by week 3. Did not induce the increase of pro-inflammatory cytokines.

REFERENCES

[1]. Ko JH, et al. Safety and Biodistribution Profile of Poly(styrenyl acetal trehalose) and Its Granulocyte Colony Stimulating Factor Conjugate. Biomacromolecules. 2022 Jun 29.

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