

## Pentosan Polysulfate Sodium (W/W 43%)

<b>Cat. No.:</b>	HY-A0203A	
<b>CAS No.:</b>	140207-93-8	
<b>Target:</b>	HIV	
<b>Pathway:</b>	Anti-infection	Pentosan Polysulfate (Sodium)
<b>Storage:</b>	4°C, sealed storage, away from moisture	
	* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)	

### BIOLOGICAL ACTIVITY

<b>Description</b>	Pentosan Polysulfate Sodium is an orally bioavailable, semi-synthetic medication with anti-inflammatory and pro-chondrogenic properties. Pentosan Polysulfate Sodium also is a potent and selective anti-HIV agent. Pentosan Polysulfate Sodium is used for the treatment of interstitial cystitis <sup>[1][2][3]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	HIV-1
<b>In Vitro</b>	<p>Pentosan Polysulfate Sodium has been shown to inhibit HIV-1 activity with an ED<sub>50</sub> of 0.19 µg/mL in MT-4 cells. It inhibits HIV-1 antigen expression in HUT-78 cells at an ED<sub>50</sub> of 0.02 µg/mL, and complete inhibition of HIV-1 antigen expression is obtained at a concentration of 4.0 µg/mL<sup>[2]</sup>.</p> <p>Pentosan Polysulfate Sodium suppresses NF-κB, decreases the proinflammatory actions of TNFα, and decreases high glucose and advanced glycation end products (AGEs) stimulated MCP-1 production<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
<b>In Vivo</b>	<p>Pentosan Polysulfate Sodium has been shown to decrease interstitial inflammation and glomerulosclerosis in 5/6 nephrectomized rats. Pentosan polysulfate treatment preserves renal function, significantly reduces albuminuria, and markedly decreases the severity of renal lesions, including tubulointerstitial inflammation. Pentosan Polysulfate Sodium also reduces upregulation of TNFα and proinflammatory genes in aging diabetic kidneys<sup>[3]</sup>.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

### REFERENCES

- [1]. Schuchman EH, et al. Pentosan polysulfate: a novel therapy for the mucopolysaccharidoses. PLoS One. 2013;8(1):e54459.
- [2]. Baba M, et al. Pentosan polysulfate, a sulfated oligosaccharide, is a potent and selective anti-HIV agent in vitro. Antiviral Res. 1988 Sep;9(6):335-43.
- [3]. Wu J, et al. Inhibition of inflammation by pentosan polysulfate impedes the development and progression of severe diabetic nephropathy in aging C57B6 mice. Lab Invest. 2011 Oct;91(10):1459-71.

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

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