

Streptavidin

Cat. No.:	HY-P3152
CAS No.:	9013-20-1
Target:	Others
Pathway:	Others
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

Streptavidin

SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 1 mg/mL (Need ultrasonic)
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BIOLOGICAL ACTIVITY

Description	Streptavidin is a -60 kDa homotetramer. Streptavidin binds four molecules of biotin with the highest affinity. The binding affinity of biotin to streptavidin is one of the highest reported for a non-covalent interaction to date, with a K_D - 0.01 pM ^[1] . Streptavidin has an immunosuppressive role ^[2] .
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In Vitro	Streptavidin (2-200 µg/mL) significantly suppresses the proliferation of Lewis T cells to WF by 76%-83% compared with untreated responders ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[1]
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Cell Line:	Lewis T cells
Concentration:	2-200 µg/mL
Incubation Time:	
Result:	Inhibited the proliferation of Lewis T cells to WF stimulators by 76%-83% compared with untreated responders, lower concentrations of 0.1 and 0.2 µg/mL did not significantly inhibit T-cell proliferation.

In Vivo	Streptavidin (8-80 mg/kg) treatment is effective in prolonging rat cardiac allografts in the high-responder WF-to-Lewis combination ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
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Animal Model:	Lewis rats ^[2]
Dosage:	8, 12, 20, 40, 60, or 80 mg/kg

Administration:	Administered IP for 5 consecutive days after transplantation was combined with a single dose of 0.5 mL antilymphocyte serum (ALS) on day 0
Result:	Prolonged cardiac allograft survival from MST of 7.3±0.5 and 8.4±0.5 days in naive and ALS-treated controls, respectively, to 15±1, 20±3, 16±3, 17±3, and 23±2 days, respectively.

REFERENCES

[1]. Keleabetswe L. Mpye , et al. The effects of temperature on streptavidin-biotin binding using affinity isothermal titration calorimetry. AIMS Biophysics. 2020, 7(4): 236-247.

[2]. P Witkowski, et al. Effect of streptavidin on cardiac allograft prolongation is due to host T-Cell suppression. Transplant Proc. Jan-Feb 2005;37(1):116-8.

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

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