# Cyclosporin A (CSZ.22): sc-51856



The Power to Question

## **BACKGROUND**

Cyclosporin A, also known as CsA, is a compound that is isolated from the fungus Tolypocladium inflatum. Discovery of Cyclosporin A in 1971 marked the beginning of a new era in immunopharmacology. Cyclosporin A was the first immunosuppressive drug that enabled selective immunoregulation of T cells without excessive toxicity. Cyclosporin A is widely used in organ transplant surgery to reduce the risk of organ rejection. Specifically, Cyclosporin A blocks the activity of calcineurin, thus preventing the transcription of IL-2 and reducing the activity of the immune system. In addition, Cyclosporin A inhibits the opening of permeability-transition pores within the mitochondrion, allowing it to function as a neuroprotective agent that can reduce the amount of damage associated with head trauma and neurodegenerative diseases.

## **REFERENCES**

- Opelz, G. and Döhler, B. 2001. Cyclosporine and long-term kidney graft survival. Transplantation 72: 1267-1273.
- Ma, W., Mishra, S., Gee, K., Mishra, J.P., Nandan, D., Reiner, N.E., Angel, J.B. and Kumar, A. 2007. Cyclosporin A and FK506 inhibit IL-12p40 production through the calmodulin/calmodulin-dependent protein kinaseactivated phosphoinositide 3-kinase in lipopolysaccharide-stimulated human monocytic cells. J. Biol. Chem. 282: 13351-13362.
- Unal, M. and Yücel, Y. 2008. Evaluation of topical Cyclosporine A 0.05% for prevention of rejection in high-risk corneal grafts. Br. J. Ophthalmol. 92: 1411-1414.
- Trammer, B., Amann, A., Haltner-Ukomadu, E., Tillmanns, S., Keller, M. and Högger, P. 2008. Comparative permeability and diffusion kinetics of Cyclosporine A liposomes and propylene glycol solution from human lung tissue into human blood ex vivo. Eur. J. Pharm. Biopharm. 70: 758-764.
- Taniai, N., Akimaru, K., Ishikawa, Y., Kanada, T., Kakinuma, D., Mizuguchi, Y., Mamada, Y., Yoshida, H. and Tajiri, T. 2008. Hepatotoxicity caused by both tacrolimus and cyclosporine after living donor liver transplantation. J. Nippon Med. Sch. 75: 187-191.
- Piot, C., Croisille, P., Staat, P., Thibault, H., Rioufol, G., Mewton, N., Elbelghiti, R., Cung, T.T., Bonnefoy, E., Angoulvant, D., Macia, C., Raczka, F., Sportouch, C., Gahide, G., Finet, G., André-Fouët, X., et al. 2008. Effect of cyclosporine on reperfusion injury in acute myocardial infarction. N. Engl. J. Med. 359: 473-481.
- Chen, T.L., Wang, J.A., Shi, H., Gui, C., Luo, R.H., Xie, X.J., Xiang, M.X., Zhang, X. and Cao, J. 2008. Cyclosporin A pre-incubation attenuates hypoxia/reoxygenation-induced apoptosis in mesenchymal stem cells. Scand. J. Clin. Lab. Invest. 15: 1-9.
- 8. Acott, P.D., O'Regan, P.A., Lee, S.H. and Crocker, J.F. 2008. *In vitro* effect of Cyclosporin A on primary and chronic BK polyoma virus infection in Vero E6 cells. Transpl. Infect. Dis. 10: 385-390.
- 9. Ko, H., Hambly, B.D., Eris, J.M., Levidiotis, V., Wyburn, K., Wu, H., Chadban, S.J. and Yin, J.L. 2008. Dentritic cell derived IL-18 production is inhibited by rapamycin and sanglifehrin A, but not Cyclosporine A. Transpl. Immunol. 20: 99-105.

#### **SOURCE**

Cyclosporin A (CSZ.22) is a mouse monoclonal antibody raised against Cyclosporin A of *Tolypocladium inflatum* origin.

## **PRODUCT**

Each vial contains 100  $\mu g$   $lgG_1$  in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

#### **APPLICATIONS**

Cyclosporin A (CSZ.22) is recommended for detection of Cyclosporin A of *Tolypocladium inflatum* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

## **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

## **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com