

FK-506 (FK1): sc-51900

BACKGROUND

FK506, also referred to as Tacrolimus or Fujimycin, is a 23-membered macro-lactone with similar yet more potent immunosuppressant activity than cyclosporine. FK506 is used for primary or rescue immunosuppression in patients after a solid organ transplantation. Clinically relevant FK506 side effects include nephrotoxicity, neurotoxicity, diabetes mellitus, and hypertension. Therapeutic drug monitoring (TDM) of FK506 levels is a prerequisite for therapy. Whole blood is the matrix of choice for FK506 TDM. The whole blood target level range aimed for in clinical practice falls between 3.0 and 20.0 ng/ml and depends on the patient's liver function, the type of organ transplanted and the amount of time that has passed after transplantation. FK506 and steroid administration in larger doses reduce serum transaminase levels of transplant recipients.

REFERENCES

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3. Cen, X., et al. 2006. An analog of a dipeptide-like structure of FK-506 increases glial cell line-derived neurotrophic factor expression through cAMP response element-binding protein activated by heat shock protein 90/Akt signaling pathway. *J. Neurosci.* 26: 3335-3344.
4. Hontanilla, B., et al. 2006. Nerve regeneration through nerve autografts and cold preserved allografts using tacrolimus (FK-506) in a facial paralysis model: a topographical and neurophysiological study in monkeys. *Neurosurgery* 58: 768-779.
5. Kato, T., et al. 2006. FK-506 may reduce early liver injury following living related liver transplantation. *Hepatogastroenterology* 53: 580-583.
6. Labrande, C., et al. 2006. Neuroprotective effects of tacrolimus (FK-506) in a model of ischemic cortical cell cultures: role of glutamate uptake and FK-506 binding protein 12 kDa. *Neuroscience* 137: 231-239.
7. Pardo, R., et al. 2006. Inhibition of calcineurin by FK-506 protects against polyglutamine-huntingtin toxicity through an increase of huntingtin phosphorylation at S421. *J. Neurosci.* 26: 1635-1645.
8. Teng, D., et al. 2006. Comparison of rapamycin versus FK-506 on expression of cytoprotective gen in the rat kidney allografts undergoing chronic allograft nephropathy. *Transplant. Proc.* 38: 2172-2175.
9. Zhang, W.G., et al. 2006. Favorable effect of chitosan sustained-release FK-506 incorporated conduits on axonal regeneration in rat sciatic nerve. *Zhonghua Yi Xue Za Zhi* 86: 1065-1068.

SOURCE

FK-506 (FK1) is a mouse monoclonal antibody raised against FK-506-BSA conjugate.

PRODUCT

Each vial contains 100 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FK-506 (FK1) is recommended for detection of conjugated and non-conjugated FK-506 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

SELECT PRODUCT CITATIONS

1. Xu, M., et al. 2019. Enhanced immunosuppression improves early allograft function in a porcine kidney transplant model of donation after circulatory death. *Am. J. Transplant.* 19: 713-723.

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.