SANTA CRUZ BIOTECHNOLOGY, INC.

FK-506 (5E608): sc-71121



BACKGROUND

FK-506, also referred to as Tacrolimus or Fujimycin, is a 23-membered macrolide lactone with similar yet more potent immunosuppressant activity than cyclosporine. FK-506 is used for primary or rescue immunosuppression in patients after a solid organ transplantation. Clinically relevant FK-506 side effects include nephrotoxicity, neurotoxicity, diabetes mellitus, and hypertension. Therapeutic drug monitoring (TDM) of FK-506 levels is a prerequisite for therapy. Whole blood is the matrix of choice for FK-506 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. FK-506 and steroid administration in larger doses reduce serum transaminase levels of transplant recipients.

REFERENCES

- Tanaka, J., et. al. 2005. The immunosuppressive agent FK-506 enhances the cytolytic activity of inhibitory natural killer cell receptor (CD94/NKG2A)expressing CD8 T cells. Transplantation 80: 1813-1815.
- Xiao, H., et. al. 2005. Establishment of a cell model targeted to NFAT signal transduction pathway for preliminary screening of FK-506-like immunosuppressants. Sheng Wu Gong Cheng Xue Bao. 21: 759-765.
- 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.
- 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.
- 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.
- 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 (5E608) is a mouse monoclonal antibody raised against FK-506-BSA conjugate.

PRODUCT

Each vial contains 200 μg IgM in 1.0 mL PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

FK-506 (5E608) is recommended for detection of conjugated and nonconjugated FK-506 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of FK-506: 25 kDa.

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.