


<div style="writing-mode: vertical-rl; transform: rotate(180deg);">Store at -20°C</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">#9974</div>	FK-506	 <div> <b>Cell Signaling</b>        TECHNOLOGY®     </div>
	10 mg	
		<b>Orders:</b> 877-616-CELL (2355) <a href="mailto:orders@cellsignal.com">orders@cellsignal.com</a>
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## Background

The calcium dependent protein phosphatase calcineurin is responsible for the de-phosphorylation of the transcriptional regulator nuclear factor of activated T cells (NFAT) and is essential for NFAT's nuclear translocation and activation (1,2). Calcineurin is a target of two common immunosuppressants, cyclosporin A (CsA) (3) and FK-506 (also known as tacrolimus and fugimycin) (4), both of which can inhibit antigen and mitogen triggered T cell activation. These drugs interact with the immunophilins cyclophilin and FKBP-12, respectively, and the immunophilin-drug complex binds to calcineurin to inhibit substrate binding (5). FK-506 can be up to 100-fold more potent than CsA in various models (6-8).

## Molecular Formula

C<sub>44</sub>H<sub>69</sub>NO<sub>12</sub>

## Molecular Weight

804.02 g/mol

## Purity

>99%

## CAS

104987-11-3

## Solubility

Soluble in DMSO and EtOH at 100mg/ml.

## Storage

Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

## Directions for Use:

FK-506 is supplied as a 10 mg powder. Store at -20°C. FK-506 is soluble in DMSO and EtOH at 100mg/ml, and stock solutions should be stored at -20°C. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used between 1 and 10 nM.

## Background References

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## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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