

PublisherInfo		
PublisherName	:	BioMed Central
PublisherLocation	:	London
PublisherImprintName	:	BioMed Central

Natural calcineurin inhibitor

ArticleInfo		
ArticleID	:	4667
ArticleDOI	:	10.1186/gb-spotlight-20030103-01
ArticleCitationID	:	spotlight-20030103-01
ArticleSequenceNumber	:	19
ArticleCategory	:	Research news
ArticleFirstPage	:	1
ArticleLastPage	:	2
ArticleHistory	:	RegistrationDate : 2003-1-3 OnlineDate : 2003-1-3
ArticleCopyright	:	BioMed Central Ltd2003
ArticleGrants	:	
ArticleContext	:	130594411

Jonathan B Weitzman

Email: jonathanweitzman@hotmail.com

FK506 is an immunosuppressive drug that inhibits the phosphatase activity of calcineurin, thereby interfering with normal signal transduction pathways. In an Advanced Online Publication in *Nature Cell Biology* Shirane and Nakayama from *Kyushu University* in Japan, describe a role for the mitochondrial FK506-binding protein 38 (FKBP38) in preventing apoptosis (*Nature Cell Biology*, 23 December 2002, DOI:10.1038/ncb894). They fished out FKBP38 in a yeast two-hybrid screen for Bcl-2-interacting proteins. FKBP38 co-immunoprecipitates with Bcl-2 and the related Bcl-X_L protein. It also interacts with calcineurin, in a FK506-independent manner, and inhibits its phosphatase activity. FKBP38 regulates the cellular localization of Bcl-2 and Bcl-X_L, targeting them to the mitochondria and preventing apoptosis.

References

1. Calcineurin is a common target of cyclophilin-cyclosporin A and FKBP-FK506 complexes.
2. *Nature Cell Biology*, [<http://www.nature.com/naturecellbiology>]
3. Kyushu University, [<http://www.kyushu-u.ac.jp/english/index-e.htm>]
4. Isolation of a cDNA encoding a novel human FK506-binding protein homolog containing leucine zipper and tetratricopeptide repeat motifs.