

## DESCRIPTION

|                                                                                                                                                                                                         |                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                     |
| <b>Specificity</b>                                                                                                                                                                                      | Detects both Human FKBP12 and FKBP12 <sup>F36V</sup> mutant in direct Elisas              |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>2B</sub> Clone # 1049713                                        |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                |
| <b>Immunogen</b>                                                                                                                                                                                        | E. coli-derived human FKBP12 <sup>F36V</sup> protein<br>Gly1-Glu108<br>Accession # P62942 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm       |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                              |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                           |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

FK506 binding protein, 12 kilodalton molecular weight (FKBP12), also called FKBP1, was originally characterized as a peptidyl-prolyl isomerase that catalyzes the transition between cis- and trans-proline residues critical for proper folding of proteins. The macrolide immunosuppressants FK506 (Tacrolimus) and rapamycin bind to FKBP12 with high affinity, while the structurally related compound cyclosporine binds with a much lower affinity (1). The binding of these drugs causes FKBP12 to become a potent inhibitor of calcineurin phosphatase activity (2) and TOR kinase activity (3). The inhibition of protein phosphatase activity is highly selective for calcineurin (2), making the FK506/FKBP12 complex a useful tool in the study of this enzyme. Knockout mice lacking FKBP12 are morphologically normal, but develop cardiomyopathies that may be related to dysregulation of ryanodine receptors (4).

## PRODUCT SPECIFIC NOTICES

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