

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat FKBP12 in Western blots. In Western blots, no cross-reactivity with other FKBP family members is observed.
Source	Monoclonal Rat IgG _{2B} Clone # 422513
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human FKBP12 Gly2-Glu108 Accession # P62942
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage 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. Proline isomerase activity was demonstrated but not used for quality control. 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

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.