

FKBP12 monoclonal antibody

Catalog: MB67051

Host: Mouse

Reactivity: Human, Mouse, Rat

BackGround:

FKBP12 (FKBP1A) is a prototypical member of the FKBP (FK506 binding protein) family of immunophilins, so named because of the ability of FKBP12 to bind to the immunosuppressive drug FK506 (tacrolimus). The protein is the smallest member in the family and contains only one peptidylprolyl isomerase (PPIase) core domain (FK domain) responsible for its PPIase activity, and its binding to FK506 and other compounds (e.g., rapamycin). When bound to FK506 or rapamycin, the protein:drug complex further binds and inhibits two important signaling molecules: calcineurin, a key enzyme in T cell activation; and the metabolic enzyme mTOR. The inhibition of these pathways has been functionally linked to immunosuppression. Through its binding properties, FKBP12 also plays regulatory roles in other pathways. For example, the ryanodine receptor (RyR), a type of Ca²⁺ release channel, exhibits leakiness in the absence of FKBP12 binding, leading to reduced muscle contractility. FKBP12 can also bind TGFBR1 and prevent ligand independent activation. The protein also mediates MDM2 degradation by binding and disrupting MDM2/MDM4 association, thereby inducing MDM2 self-ubiquitination and enhancing the sensitivity of cells to chemotherapy induced cellular apoptosis.

Product:

Mouse IgG1 kappa. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 12 kDa

Swiss-Prot:

P62942

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/1000 - 1/2000)

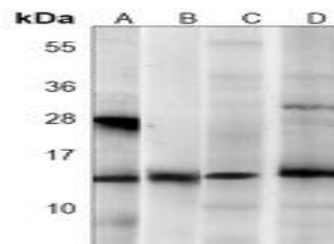
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of FKBP12 protein.

DATA:



Western blot analysis of FKBP12 expression in Jurkat (A), MCF7 (B), mouse brain (C), rat brain (D) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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