Revision 1

Store at -20C

#11826

FKBP4 Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Hm Mk	Endogenous	56	Rabbit	#Q02790	2288

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

FKBP4 Antibody recognizes endogenous levels of total FKBP4 protein. This antibody does not cross-react with other FKBP proteins.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Met440 of human FKBP4 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

FKBP4 (also known as FKBP52) is a member of the immunophilin protein family. FKBP4 does not demonstrate appreciable immunosuppressant activity typical of this family, despite its ability to bind the immunosuppressants FK506 and rapamycin (1,2). While FKBP4 plays an important role in immunoregulatory gene expression in B and T lymphocytes, its role in regulating steroid hormone receptor signaling and cytoskeletal dynamics is garnering significant interest. FKBP4 contains two peptidyl-prolyl cis-trans isomerase (PPIase) domains, the first of which is implicated in steroid receptor signaling while the second interacts with tubulin and other cytoskeletal components. The maturation of cytoplasmic steroid hormone receptors into a functional conformation requires multiple chaperone and co-chaperone components, including HSP90, p23, and FKBP4 (3,4). FKBP4 interacts with HSP90 to facilitate the folding of androgen, glucocorticoid, and progesterone steroid hormone receptors. Indeed, the functionality of these receptors is impaired in the absence of FKBP4, and research studies have found that null mice demonstrate signs of androgen insensitivity syndrome (5). In addition, FKBP4, which is expressed at high levels in the brain, interacts with hyperphosphorylated Tau and antagonizes Tau's ability to promote microtubule polymerization (6). FKBP4 can also suppress amyloid β toxicity in Drosophila by processing APP (Alzheimer's Amyloid Precursor Protein) to unfold aggregates (7).

Background References

1. Peattie, D.A. et al. (1992) *Proc Natl Acad Sci U S A* 89, 10974-8.
2. Wu, B. et al. (2004) *Proc Natl Acad Sci U S A* 101, 8348-53.
3. De Leon, J.T. et al. (2011) *Proc Natl Acad Sci U S A* 108, 11878-83.
4. Ebong, I.O. et al. (2011) *Proc Natl Acad Sci U S A* 108, 17939-44.
5. Sivils, J.C. et al. (2011) *Curr Opin Pharmacol* 11, 314-9.
6. Chambraud, B. et al. (2010) *Proc Natl Acad Sci U S A* 107, 2658-63.
7. Sanokawa-Akakura, R. et al. (2010) *PLoS One* 5, e8626.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey

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Limited Uses

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