

#4317 Store at -20°C

FMRP Antibody



✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, M, R, Mk	80 kDa	Rabbit**

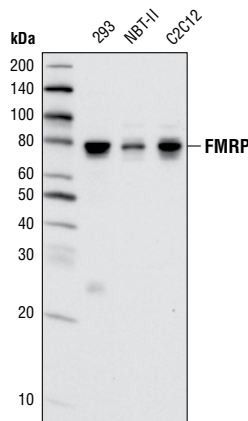
Background: Fragile X syndrome, a frequent cause of inherited mental retardation, often results from expansion of the CGG trinucleotide repeat in the gene that encodes the fragile X mental retardation protein (FMRP) (1). FMRP (also known as FMR1) and its two autosomal homologs (FXR1 and FXR2) all bind RNA and play a role in the pathogenesis of Fragile X Syndrome (1-3). Each of these related proteins can associate with one another as well as form homodimers (3). FMRP can act as a translation regulator and is a component of RNAi effector complexes (RISC), suggesting a role in gene silencing (4). In *Drosophila*, dFMRP associates with Argonaute2 (Ago2) and Dicer and coimmunoprecipitates with miRNA and siRNA. These results suggest that Fragile X syndrome is somehow related to abnormal translation caused by a defect in RNAi-related pathways (5).

Specificity/Sensitivity: FMRP Antibody detects endogenous levels of total FMRP protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to the sequence of human FMRP. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

- (1) Verkerk, A.J. et al. (1991) *Cell* 65, 905-14.
- (2) Siomi, M.C. et al. (1995) *EMBO J* 14, 2401-8.
- (3) Zhang, Y. et al. (1995) *EMBO J* 14, 5358-66.
- (4) Caudy, A.A. et al. (2002) *Genes Dev* 16, 2491-6.
- (5) Siomi, H. et al. (2004) *Ment Retard Dev Disabil Res Rev* 10, 68-74.



Western blot analysis of various cell lines using FMRP Antibody.

Entrez-Gene ID #2332
Swiss-Prot Acc. #Q06787

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.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:50

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.