

**FXR1 (D10A2) XP<sup>®</sup> Rabbit mAb**

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

<b>Applications:</b> W, IF-IC	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 78-80, 82-84	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P51114	<b>Entrez-Gene Id:</b> 8087
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**Product Usage Information****Application**

Western Blotting  
Immunofluorescence (Immunocytochemistry)

**Dilution**

1:1000  
1:50

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

FXR1 (D10A2) XP<sup>®</sup> Rabbit mAb recognizes endogenous levels of total FXR1 protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly574 of human FXR1 protein.

**Background**

Fragile X syndrome is a genetic disorder characterized by a spectrum of physical and behavioral features and is a frequent form of inherited mental retardation (1). X-linked FMRP (FMR-1) and its two autosomal homologs, FXR1 and FXR2, are polyribosome-associated RNA-binding proteins that are involved in the pathogenesis of fragile X syndrome (1-3). Each of the fragile X proteins can self-associate, as well as form heteromers with the other two related proteins (3). FMRP can act as a translation regulator and is a component of RNAi effector complexes (RISC), suggesting a role in gene silencing (4). The *Drosophila* homolog of FMRP (dFMRP) associates with Argonaute 2 (Ago2) and Dicer and can coimmunoprecipitate with miRNA and siRNA (5). These results suggest that fragile X syndrome is related to abnormal translation caused by defects in RNAi-related pathways. In addition, FMRP, FXR1, and FXR2 are components of stress granules (SG) and have been implicated in the translational regulation of mRNAs (6).

**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. Cady, 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.
6. Linder, B. et al. (2008) *Hum Mol Genet* 17, 3236-46.

**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 **IF-IC:** Immunofluorescence (Immunocytochemistry)

**Cross-Reactivity Key**

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

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